WHOLE-BRAIN ART EDUCATION: EXPLORING STRATEGIES TO INCREASE EXECUTIVE FUNCTION SKILLS AND PROMOTE SELF-REGULATORY BEHAVIORS IN ELEMENTARY ART STUDENTS

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Abstract

Executive function (EF) skills are cognitive processes that include goal setting, organizing, prioritizing, flexibly shifting attention, accessing working memory, and self-monitoring behavior and progress (Meltzer, 2018). These skills are integral in promoting students' ability to self-regulate their learning, solve problems, and work independently. This study includes data collected from six students in a 5th-grade art class setting. An emphasis on building EF skills in early adolescent learners was applied in order to address diminished engagement, limited problem-solving skills, and lack of ownership. This study emphasizes the process of artistic creation and asks students to set a personal intention for each class to highlight the practice of planning and goal setting in art making. Data for this study was collected through audio-recorded and transcribed individual and group interviews, written self-report rating scales, goal setting worksheets, and photographs of student work. Students were also asked to participate in metacognitive reflections at several stages of their design process to record changes in student disposition toward their ability and toward the importance of EF strategies to their work habits. These strategies were implemented and examined to determine how the introduction, utilization, and scaffolding of EF strategies could influence motivation, shape a growth mindset mentality, and help students begin self-regulating their learning in an elementary art class.

Keywords: Executive Function, Self-Regulation, Self-Monitor, Metacognition, Self-Reflection, Goal Setting, Growth Mindset, Intrinsic Motivation, Identity, Constructivism, Art Education, Learner-Centered Art Education, Project-Based Art Education, and Early Adolescent Learners.

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CHAPTER I: INTRODUCTION

Background to the Problem

Self-regulation, as defined by Pintrich (2000), is a students' level of "independence in learning as an active, constructive process whereby learners set goals for their learning and attempt to monitor, regulate and control their cognition, motivation, and behavior, guided and constrained by their goals and contextual features of the environment" (as cited in Saks & Leijen, 2013). Educational psychologists have identified several approaches to help students develop as self-regulated learners; however, many of these cognitive theories have not been applied to art curricula, especially at the young adolescent and elementary level. Central to the idea of regulation is the development of executive function skills which Meltzer (2018) breaks down into five main areas: goal setting, cognitive flexibility, organizing and prioritizing, accessing working memory, and self-monitoring. As these skills develop, students will be better able to come up with an inspirational idea or respond to a problem which is significant to them, make short and long-term plans for how to reach their goal, create work independently, and learn how to self-assess their progress and share their work with others.

Students' lack of ability to self-assess and set goals to regulate their learning directly impacts their ability to engage in the creative design processes needed to develop meaningful art projects in an independent capacity. Many of my young students enjoy making artwork regardless of the subject matter or materials presented to them. However, some of my students become unmotivated, disengaged, or resistant to

participate in their own art making when the task is challenging or does not relate to their respective interests. Still, some of the most engaged students in my classes have a difficult time determining how to begin, when to consider their work finished, and what could be done to improve their work. Students' sense of pride has become a reflection of the praise and reassurance obtained from others that they have "done a good job" rather than the personal satisfaction with the quality of their work due to their own investment and dedication. Educators have taught students how to follow directions and how to approach problems like a recipe in a cookbook and students have come to expect clearly sequenced steps to success instead of learning to confront challenges with creativity as an experimental and exploratory process that may not have a "right answer."

Problem Statement and Related Research Questions

Over the course of my career as an elementary art teacher I have noticed an increasingly prevalent pattern in my students' resistance to fully engage with their art processes, set attainable goals, determine steps needed to proceed in their work, and reflect on their progress and ability. As young elementary aged students approach middle school, they begin to exhibit clearly defined personality attributes that they express through clothing choice, selection of hobbies and extracurricular activities, choice of friends, and interests in popular culture. Though the students show diversity in aspects that define their personal identity, aside from a few select students who "go the extra mile," "push the envelope," or "think outside the box," many of them are more concerned with finishing their work to my satisfaction with as little effort as possible than applying

any considerable cognitive diligence to pursue independent ideas because of their own intrinsic drive. This raises the question of who students are creating their artwork for and why their artwork should matter.

I am aware that there are multiple methodologies in educational psychology that have evolved over the past century in the quest for best practice. I also acknowledge the ways in which many of these approaches embody their own theories and emphases on the best way to disseminate information to students. Many of these theories agree that learning is best attained when students are fully engaged in their education and are able to make meaningful connections with subject matter and/or artistic medium. As noted in the background to the problem, much of the research on cognitive theories that exists has not been examined specifically in using artistic processes. It is a missed opportunity to not explore cognitive strategies, and what can be revealed about them, when applied to an art curriculum. For this reason, I am interested in researching how to incorporate key components of various theories of cognitive development and artistic pedagogy to promote students' self-regulatory behaviors. Executive function skills, metacognition, and motivation play a major role in artmaking processes and in turn specific art making processes support cognitive development.

In my practice as an educator, I often ask myself questions regarding barriers in student performance. What holds these young people back from expressing themselves artistically and reviewing their work as critically as they do other aspects of their lives? How can we as art teachers capitalize on the unique opportunity we are provided to help students to, as Pintrich (2000) and Zimmerman (2013) explain, begin "self-regulating

their learning" (as cited in Saks & Leijen, 2013)? Additionally, how can we help them develop the strategies to balance cognitive ability and executive function (Meltzer, 2018) with "effortful control" (Liew, 2011) and motivation as they navigate adolescence to help them persevere through unanticipated challenges? The art room can provide a wonderful break in the rigor of the school day; however, art creation also presents its own set of obstacles for many children. In art, more so than in core subject areas, students' fine-motor skills also play a large part in their ability to realize their mental image and fulfill the expectation of their final product. "Tasks that activate the prefrontal cortex, an area of the brain associated with attention and EF, also activate areas of the brain considered integral to motor processing, particularly the cerebellum" (Cameron, Brock, Murrah, Bell, Worzalla, Grissmer & Morrison, 2012, pp. 1230-1231). In light of students' developmental stages, how can teachers help students be successful in realizing goals considering their emerging skill levels and physical and cognitive abilities?

I grew up in the age of Discipline Based Art Education (DBAE) which focused on teaching art through concrete, measurable objectives built around the elements and principles of art in a structured environment. This methodology limited the encouragement of artistic exploration in the classroom compared with earlier art education designs. This lack of freedom and academic choice is something I grew accustomed to as a student, and perhaps skewed the way in which I have conceived my curriculum in a pre-K through 5th grade art setting. For the past decade, it seemed to me that the students appreciated the clear expectations I set for them; and I worked well in providing a learning environment where students were able to accomplish art tasks

effectively in a short time period. However, this practice is imperfect as I have watched many students flourish while others struggle, and still some that remain apathetic towards their art making process altogether. As an educator I have struggled with providing a balance of instruction, support, and direction in my curriculum. It took many years before I came to accept that my interpretation of what was *effective* for me and the resulting outcome my students' projects was not necessarily effective for helping my students reach my expectation for them to learn to access creative thought processes or reflect on the meaning of their work.

Using explicit lesson directives and clear demonstrations for use of materials allowed my students to explore art supplies in a controlled setting and complete the projects I assigned. Students were proficient in reaching my project expectations in isolation, but *I* was expecting them to be innovative thinkers responsible for their own decision-making. I intended that through the processes I was presenting, students would learn techniques to help them become independent artists, but it takes more than understanding technique to build creativity and self-regulation in young learners. I expected my students to learn the way I learned and to use their working memory to apply the information and skills they were receiving to follow a process to create a product. However, I never taught them how to design a process or realize a vision of their own. I began wondering what was lacking that was causing students to require so much assistance and encouragement from adults before performing simple tasks and realized the problem may have been me.

I noticed that very rarely in elementary school do teachers permit students to think for themselves without first asking for permission. Students are taught to check with a teacher before performing routine daily tasks like getting a drink of water, using the bathroom, or sharpening a pencil. From the first day they enter school, we teach children that they need to raise their hand to gain permission to speak, share a thought, or respond to a peer. Of course, there are legitimate practical reasons and safety concerns as to why students cannot just leave the classroom without alerting an adult or impulsively call out answers during class discussions. However, this constant quest for allowance has resulted in many of my students becoming increasingly hesitant when working on their projects or proceeding with directions without constant affirmation and reassurance from me. In place of students' being intrinsically motivated or actively self-assessing, this lack of practice in initiative has led to the rise of common questions posed in the art room, as well as core subject area classrooms, such as, "what do I do now?" "am I finished?" "like this?" and, "is this good?" Constructing art lessons that provide specific strategies to aid students as they approach problems, instead of specific directions and rigid guidelines, can help to encourage utilization of self-regulatory strategies. These strategies enable students to think about their thinking and reflect on their artistic process thereby teaching students to think for themselves and reducing their reliance on the teacher.

Given that elementary students enter school with a variety of cognitive and physical abilities, and Meltzer (2018) suggests that focusing on improving executive function skills can promote metacognitive awareness and help to improve students' ability to set goals, organize, prioritize, shift flexibly, access working memory, and self-

monitor, how might focusing on developing executive function strategies promote self-regulatory behaviors through use of the design process in 5th grade art students?

This transition from a highly teacher-directed to a more student-centered approach brought another question into my investigation. Besides encouraging more choice and exploration in the art room, what else is required as teachers and students adjust from product to process focused to promote executive function and what does this transition involve?

Too often in education, teachers are asked to implement newly reformed curricula without ever being given the proper tools or training to understand how to go about appropriately relaying the information as it is intended. Teachers are constantly being asked to change their "teaching styles," which any seasoned teacher will tell you is a unique, personally reflective artform, cultivated over years of practicing their craft. Often this request is in response to a new program or approach handed to them from administration without question or to comply with a student's individualized education program (IEP) or accommodation plan for students with disabilities (504).

There are a number of reasons why teachers may not take a student-centered approach. It may be easier to resist change and remain in the comfort of a curriculum and pedagogy that has been carefully molded and rehearsed yielding reliable and consistent results in the past. I would be remiss if I did not admit to my own hesitations. Even an optimistic teacher who recognizes the potential benefits of change and who is willing to alter their teaching to meet the needs of their students, may feel lost in deciding how or where to begin. They may ask themselves, "I know I can teach a child art, but how can I

teach a child to think for themselves?" This need for art teachers to combine their expertise in teaching artistic processes and the study of cognitive development through careful examination of theories in developmental child psychology, educational philosophy, and quality learning systems (Ingalls Vanada, 2016) is integral in helping students and teachers find balance in a student-centered learning environment.

Theoretical Framework

The issue of students' lack of self-direction and self-regulation in learning is not a new concept. Educators and psychologists have been studying the way the brain works and have formulated long-standing child development and educational philosophies over the last century. Students tend to love to *play with things*. They love tinkering and exploring unknown objects, and this preference of hands-on embedded learning, as opposed to being presented with abstract concepts, is common in the constructionist theory of learning. Constructivist psychologists have emphasized the importance of placing the student in the center of their learning environment to encourage students to make connections to their world (Dewey, 1938) through social interaction and hands-on experimentation (Piaget, 1970; Bruner, 1960). As students construct knowledge in response to their surroundings, they are able to build new understandings from previously acquired information across domains (Vygotsky, 1934). In spite of this, many of these cognitive theories focus on improving skills in and through instruction in core subject areas and do not link a correlation to the importance of fostering creativity in an art

curriculum to the increase of executive function or development of metacognitive processes.

One way to help students begin to think about their thinking is to shift the focus and direction of the lesson from the teacher to the student. Transitioning to a student-centered and self-regulated learning environment that emphasizes and promotes practical skills and technique to access executive function, increase intrinsic motivation, and stimulate quality thinking processes may seem unfamiliar or difficult for teachers who are accustomed to a more teacher-directed or discipline-based practice. There is an element of letting go of preconceived expectancies for student work and an understanding that the process of creating projects may take longer with a result that may not seem successful in a traditional sense. A critical component students and teachers alike will need to remember when making this change is maintaining a mantra of "process over product." Teachers should anticipate that as students apply increased care and consideration in constructing their artwork they will learn more from the act of creating the work and in turn, be able to define strategies gained through "failures" as successes, because through a setback, students will have ascertained a new skill (Dweck, 1999).

The argument to transition educational practices from teacher-directed to learner-centered has been popular since the 1960s; however, many teachers today, even with access to these psychological studies, have not been able to change the way they present information to students for a variety of reasons. As mentioned above, it is conceivable that many educators are stuck in their methodology and may be unwilling to adjust their personal style to meet the needs of students. However, it is also likely that many teachers

are unable to perform this transition due to strict curriculum guidelines and state and federal mandates for assessments. This is why applying the research done by cognitive psychologists and educational theorists is so important in an art classroom. Art and the process of creative design allows for more flexibility in the allotment of time and reaching benchmark standards than core subject areas. Teachers may be more able to provide a flexible environment for learning where students can focus on accessing strategies to think about their thinking *without* a numerical grade or standardized test following their performance.

According to Dweck (2010), in order for students to believe they can learn and accept a growth mindset, they need to let go of trying to look smart and focus more on the value of learning something new, even if they are not mastering it, yet. For students to be able to find value in their learning and believe they can learn they must also start to think about their thinking and identify gaps in their understanding. This development of metacognitive processes, according to Medina, Castleberry, and Persky (2017) can be built through a cognitive apprenticeship which includes direct instruction, verbal and visual modeling of thought processes involved in investigation and problem solving, scaffolded sequencing, and building a social community in learning cooperation, motivation, and situated learning.

Significance of the Study

The purpose of this study is to investigate how using techniques from a variety of established student-centered approaches can help to develop executive functioning skills

and promote metacognitive awareness that Meltzer (2018) poses will help children with various cognitive and physical abilities improve their ability to set goals, organize, prioritize, shift flexibly, access working memory, and self-monitor and to examine the impact of shifting from a formative teacher-directed classroom to a curriculum which focuses on developing self-regulatory behaviors in pre-K-5th grade art students. Furthermore, this study will identify and address ways in which this transition will impact the role of the teachers and students in the art room.

This research is intended to benefit art teachers, especially those in the elementary art room, who are looking to address the needs of students who struggle with motivation, perseverance, self-confidence, and self-regulation. This study is directed at transforming the traditional relationship of students and teachers through self-reflective processes and a willingness to alter instructional practices to allow for meaningful investigation of authentic problems. This study promotes approaching the creative design process through cognitive learning methodologies with an emphasis on designing long-term projects that focus on process and emphasize the use of techniques and strategies to address executive function skills and metacognitive gaps. The implications of the study are to help students think about their thinking and the way in which they learn as well as transferring some of the responsibility of learning from the teacher to the student. Based on existing research, it is the intention of this study that by encouraging self-reflective and self-regulatory practices in the classroom and modeling ways in which students can engage in their artmaking, students will become more motivated to work on projects

which they help to design. This increased engagement is key to heightening students' self-confidence in their ability and belief that they can learn and succeed.

Limitations

The study is bounded by limiting the research to a selection of 5th-grade students during their regular art education period where students visit my classroom for 35 minutes once per week. For many students, I am the only art teacher they have ever had, some of the students in my 5th-grade classes are either new to my school or new to the school district so I am lacking the relationship basis and trust dynamic that I have spent years building with a majority of the students. Students who are new to my school may not feel comfortable opening up or participate fully and honestly in projects and activities that require them to identify challenges and failures they experience as they may fear how this will affect their grade or my opinion of them. Some students may feel open and comfortable in my art room; however, since it is only 35 mins, once a week, and I am one person, I will need to be cognizant that students are coming into my room as a transition and interruption to their normal school day and that though I am a familiar person to them, they may not trust me or share as much information with me as they would a regular education teacher whom they see every day.

This study is also limited in its focus on general education students and their performance in the art room. Classroom support staff are present in several of my classes across grade levels. Support staff and para-educators often have good intentions but can also influence student responses and reactions making it hard to know how much of the

students' work and words are authentic. For this reason, students with IEPs for severe learning disabilities, behavioral accommodations, or physical disabilities that make it impossible for them to participate without considerable help will be excluded from the study. This does not mean that all students with learning disabilities or accommodations will be excluded, just those that cannot work independently or predominantly independently to ensure results are authentic. However, since I am the sole person monitoring student dispositions and conversations I will need to be careful not to bring any prior bias as to student prior-knowledge, prior ability level, or impose any restrictions or allowances for students in the research group regardless of whether they have classroom accommodations.

Self-report data samples including interviews, audiotapes, surveys, questionnaires, and self-assessments, as well as anecdotal records and artifacts such as photographs and samples of student work will be collected from participants. Due to the nature of self-report data, student self-reflection may be exaggerated or not completely honest. Responses may also be narrow in focus, and due to the student participants' ages, may not always be elaborate enough or provide sufficient information. Student responses may be ambiguous and require interpretation by the researcher which could then be construed unintentionally. Because of these methods, ELL or ESL students may not be able to communicate responses clearly or effectively, so the results from these students will not be included specifically in the study.

Having worked in a pre-K through 3rd grade school for 11 years and also working with 4th and 5th grade students during summer art camps as well as the current school

year, I have identified patterns of behavior that I am considering a problem though not all students may be experiencing the same level of difficulty with using executive function skills to self-regulate. Also, I am a student who has benefitted from creating specific strategies for myself to follow; however, it took me years to build some of my own strategies that are highly specific to my learning needs and attention. I will only be working with the students in my 5th-grade class during the duration of the second and third trimesters, and I am relying on all of my students to be open to a growth mindset and be willing to openly participate in responses.

Definition of Key Terms

Adolescent/Adolescence:

Children who fall within the age range of 10-19 years. This study refers to young adolescent students as students in 5th grade who are between the ages of 10 and 12.

Creativity:

Creativity is "a process of knowledge construction that emerges from within a person and provides an experience rich with thought, emotion, challenge, insight, and hard work" (Gnezda, 2011, p. 50). "Creativity is a cognitive-emotional-manipulative experience that is accessible to all people. Creativity is cognitive because it is about innovating and developing ideas and occurs via specialized mental processes. It is emotional because emotions are integral (Clark,1992) and "loom large" (Roe, 1963) in the creative process. Self-reports and empirical research about creativity show a rather predictable sequence of emotional sensations that tends to occur as the process evolves. Creativity is

manipulative because idea development happens not only internally but also through interaction with a medium as an idea is being implemented" (Gnezda, 2011, pp. 47-48).

Constructivism:

According to Cullen et al. (2012), Dewey (1938), and Weimer (2002), "constructivist learners engage in inquiry-driven, project-based, collaborative, and reflective processes, which better develop their abilities as critical thinkers and creative problem solvers" (Ingalls Vanada, 2016).

Choice-based Education-

"Learners who control their artmaking are guided by intrinsic motivation to find and solve problem of their choosing. Choice-based teaching and learning promotes learner autonomy through arts-based practices focused on multiple studio centers. Teaching for artistic behaviors in a choice-based setting can sustain intrinsic motivation because students challenge themselves with ideas and art media of personal interest" (Douglas & Jaquith, 2011). "The essential contribution that arts education can make to our students and to our communities is to teach skills and concepts while creating opportunities to investigate and represent one's own experiences—generating personal meaning" (Gude, 2007).

Effortful Control (EC):

Effortful control, according to Rueda (2012) and Rothbart, Ellis, Rueda & Posner (2003) is defined as the ability to "inhibit a dominant (motor, vocal, emotional, or cognitive)

response and to activate a subdominant response. Effortful control is a behavioral and emotional regulatory process that requires students to focus on attention, social relationships and conflict resolution, and identify areas of remediation in a plan or goal setting activity (Lin, Liew & Perez, 2019, pp. 1-2).

Executive Function:

Executive function is defined by a students' ability to set goals, organize, prioritize, shift flexibly, access working memory, and self-monitor" (Meltzer, 2018). Executive function is a cognitive process by which people use strategies, consciously or unconsciously, to solve a problem or complete a task.

Flow:

Flow can occur when a person is fully immersed in the task of achieving a goal which requires all their skills. If a challenge is too easy, the person may become bored and lazy, if a challenge is too hard a person may become frustrated, and so, the person needs to learn to skills in order to achieve flow (Csikszentmihalyi, 1997).

Growth Mindset:

A goal of growth mindset interventions is to change the way students view their ability to learn new information and believe that their intelligence is not limited or fixed, but rather can be expanded with effort and practice but only comparing their current knowledge with their own prior knowledge and not the achievement of their peers. Blackwell et al.

(2007), Burnette et al. (2013), and Yeager and Dweck (2012) indicate that a growth mindset can instill a desire for students to take on challenges and build their perseverance to overcome challenges and failures instead of accepting that they are "not smart enough" to prevail (Yeager, et al., 2016; Dweck 2010).

Metacognition/ metacognitive awareness:

Metacognition is a students' self-awareness of their own understanding as well as gaps in comprehension and their ability to determine how to access strategies that would best help them reach their goal or solve a problem in occurrence with their specific learning profile (Meltzer, 2018).

Project-based Learning-

Blumenfield, Soloway, Marx, Krajcik, Guzdial, and Palincsar (1991) outline many questions that teachers face when designing and presenting lessons to their students and attempt to explain how project-based art education can address these concerns. In a project-based art education curriculum, teachers focus on designing project plans that include students setting their own goals, thinking about their designs, and understanding the concepts presented by the teacher without the teacher defining or constraining the visual outcome of the project. Project-based art education combines project prompts or material demonstrations by the teachers which are explored through a variety of materials, techniques, and subject matter chosen by the student artist.

Self-Monitoring:

Bagnato and Meltzer (2010) define self-monitoring as a students' ability to reflect on their cognitive and metacognitive processes and begin to recognize how to apply strategies and determine in what ways they need to adjust their approach while monitoring their own performance and outcome (Meltzer, 2018).

Self- Regulation (SR):

Self-regulation consists of a series of behavioral and cognitive processes that when applied intentionally by the student in goal-setting and problem-solving practices can promote learning through self-guided exercises that are influenced by the students' surrounding and put emphasis on initiative, process, effort and motivation, self-reflection, collaboration, and personal responsibility (Jones & Davenport, 1996; Liew, 2011; Saks & Leijen, 2013).

Quality Thinking Systems-

Quality thinking is considered "a balance of critical, creative, and practical thinking skills and dispositions, applied with depth and complexity" (Ingalls Vanada, 2016, p 9). According to Luftig (2000), "when taught for both skills and dispositional development, arts-based learning is uniquely suited for providing curricular balance to educational systems, while strengthening and deepening learning for students." In addition, Burnette and Norman (1997) and Costa (2006) claim that "an education which includes art and design holds the potential to advance students' innovative and reasoning skills but can also advance their abilities for independent thinking, self-initiation, collaboration, and finding creative solutions to problems" (Ingalls Vanada, 2016, p.6)

Assumptions Not to be Debated

As a way of proceeding it is important to point out what I am not going to debate in depth as well as which ideas and concepts will emerge throughout discussion of the art disciple in congruence with cognitive development. This argument is based on some narrowing assumptions to help drive the scope of my research.

Given that self-regulation is documented and defined as a person's ability to self-reflect on their understanding and progress, determine what needs to be done, and decide how to proceed (Baum, Owen & Oreck, 1997; Jones & Davenport, 1996; Saks & Leijen, 2013; Flavell, 1979), the importance of helping students work towards self-regulated learning and the benefits of developing self-regulation will not be debated.

In addition, executive function skills are defined and clarified in psychology as integral in helping students set goals, plan, organize, prioritize, shift flexibly, access working memory, and self-monitor (Lee & Carlson, 2015; Liew, 2011; Meltzer, 2010, Meltzer, 2018). Executive function skills are skills that are required for people to function in everyday life, from setting single attainable goals to multi-tasking. So, the benefits of developing executive function skills to improve student learning will not be debated.

Furthermore, learner-centered art education exists in many forms and is practiced through several methodologies (Burton, 2000; Gude, 2007, Ingalls Vanada, 2016; Blumefield et al., 1991), in light of research and for the purpose of this study, the notion that learner-centered environments help students develop creative problem-solving skills, learn more, and are more motivated when they are excited by what they are working on

and are able to design their own projects will not be contested (Bruner, 1960; Dewey, 1938; Piaget, 1970, Gardner, 2006).

The cognitive development of children begins long before they reach the doors of an elementary art room or any formal education environment. Parents are provided a luxury in educating their children that many teachers do not have—there is no curriculum to follow, no progress reports or benchmarks, and no personal data collection on the effects of their methods as compared to student progress. Parenting is an awe-inspiring job that entails so many factors and a great consideration of circumstances dependent on economic standing, cultural differences, personal and religious values, and a countless number of individual challenges. Though the implications of parenting style on child development has been studied in-depth in child psychology and commented on extensively on social media and parenting forums, this study will focus solely on the relationship between the teacher and students in the art classroom. For this reason, the effects of differing parenting styles on the development of EF skills or students' personal history will not be debated.

Assumptions to be Debated

In response to these assumptions, though self-regulated learning and executive function have been shown to increase students' intrinsic motivation, develop metacognitive skills, and improve students' ability to make meaningful connections with their work in core content areas, the direct implementation of strategies within these cognitive theories has not been directly studied through artistic practice in the elementary

art curriculum. In order to explore the possible benefits and challenges of utilizing these strategies and transferring these tactics to students, strategies to improve executive function skills to support self-regulatory behaviors through art making processes will be debated.

Summary

Acknowledging the issues students and teachers face in finding balance and trust in their relationship is essential in beginning to address these challenges and build strategies to help students begin to help themselves. Already included in this chapter, I have outlined my concern for students' lack in awareness of and engagement with their executive function processes and, therefore, their struggle with self-regulation. The theoretical framework acts as an introduction to historical literature that supports the basis of this study as well as the importance of continuing research in this area and adapting existing research to the area of art education. As indicated, this study is limited in several areas due to time and restriction in participant population and design.

The research surrounding self-regulation and executive function is extensive. Literature on general cognitive development and educational theory has been researched from several approaches which support and counter each other on several fronts. The literature review will outline the areas of study that emphasize executive function, self-regulation, motivation, growth mindset, identity, and metacognition. The literature review also outlines the ways in which these areas overlap and support each other despite

often being studied from opposing theories as well as ways these theories have been, and can be, used to enhance the design process.

The existing research and self-report measures were central in designing the methodology for this study. The methodology section aims to organize strategies intended to help students identify with the executive function processes involved in the creation of their artwork from the ideation to completion and reflection. This chapter explains how research is conducted, the types of data that are collected from participants, how this data is coded, analyzed and presented, and the possible limitations of conducting an inductive qualitative study reliant on self-report measures with adolescent students.

Following the explanation of research and data collection are the results concluded from this study based on student verbal, written, and visual data. Through the explicit instruction of strategies, the intention of this study is to help students improve in maintaining attention, shifting flexibly, setting goals, reflecting on process, driving self-motivation, and overall leading to self-regulated learning behaviors. Explanations of data presentation and examples of student work can be found in Chapter 4 as well as Appendices G-L. The results from this study will impact the way in which I proceed in building my personal teaching pedagogy and may impact the way teachers in similar environments approach art instruction—with an emphasis on process and thinking over product production.

CHAPTER II: LITERATURE REVIEW

Introduction

Finding balance in art education is a delicate endeavor before taking into consideration any history of theory or contemporary disposition on pedagogy. Each day, an art teacher may personally go through several major or minor adjustments; teachers fluctuate instantaneously between roles: expert, mentor, disciplinarian, critic, supporter, friend, organizer, problem solver, role model, etc. Each of these personas comes with its own emotional and physical demands that can leave many educators feeling over-exerted and exhausted. It is understandable that students rely on their teachers to help support them in regulating behaviorally, academically, socially, and emotionally, but eventually these adolescent students will grow up and require the skills and strategies to help themselves identify gaps in their understanding and define and solve problems independently (Jones & Davenport, 1996).

Theories of child development, cognitive development, and educational philosophies have compounded an overwhelming mass of information and evidence concerning the ways in which children learn and how to apply this extensive research to further student achievement in core subject areas. In recent years, art educators have been adding to this conversation as a push for including artistic practices (visual, musical, and theatrical) in standard lesson plans became popular. This collaboration arose in response to supporting the learning needs of students with multiple intelligences (Gardner, 2006; Baum, 2018) and various learning profiles. However, many art teachers understand that the purpose of art has far more value than simply helping to reinforce

academic learning. Art teachers have taken it upon themselves to develop methods in teaching and designing art curricula to help students place their artwork in a broader context of their world and respond to their environment to increase student motivation and foster meaningful connections to their artwork (Douglas & Jaquith, 2006; Gude, 2007). Still, even though the discussions on these topics overlap in several areas, and each has merit and the intention of increasing student self-efficacy and understanding to help students learn, there is little research in how cognitive and metacognitive strategies are used in the art room. It is important for teachers to recognize that although literature of temperament-based measures and cognitive neurological based measures are found in different areas of study, we in the arts need to embrace them as complimentary in order to address the needs of the whole learner (Liew, 2011) and help students begin to self-regulate their learning and access creativity.

Much of the literature surrounding the field of self-regulation can easily translate in to the arts, however, most of this research is based around either early childhood school readiness skills (ages 2-5) or high school and college level students' learning processes. For these reasons, it is critical to continue research into the area of developing EF skills to promote self-regulation among young adolescent learnings through the creative design process. This study is designed to help bring attention to this deficit and aims to provide research around ways to help students practice EF skills while working through their project designs in an effort to make utilization of goal setting, flexible shifting, and reflective practiced routine.

Creating artwork, at any age, is a multidimensional venture that requires the use of multiple processes, mental, behavioral, and physical, to achieve a desired result. Through this review I intend to highlight links in the following literature to demonstrate how designing art lessons with an eclectic approach and an emphasis on building cognitive strategies to increase executive function skills and self-regulatory behavior in early adolescent children can be achieved through focusing on project-based inquiry as it is used within the design process (Blumenfeld, Soloway, Marx, Krajcik, Guzdial & Palincsar, 1991) where students are given autonomy to experiment and explore through play (Gude, 2010) and experimentation with materials.

This chapter will look at the history of some cognitive and educational theories in the student-centered education realm and survey how learning is constructed in young adolescent students. The similarities and differences in the cognitive processes of self-regulation and executive function will be outlined and the ways they support one another in helping students think about their thinking as they work will be described. As you will see, these processes echo many of the key concepts at the center of constructivist and growth mindset theory. Next, I will explain the framework of some approaches to art education that have emerged in recent decades that focus on a student-centered approach built around increased choice to construct context for how and why educators are shifting away from a teacher-directed approach to art instruction and what these environments look like. The information offered through this review will provide a basis of understanding for exploring how each of these pedagogies intertwine and underscore how artistic processes engage cognitive development.

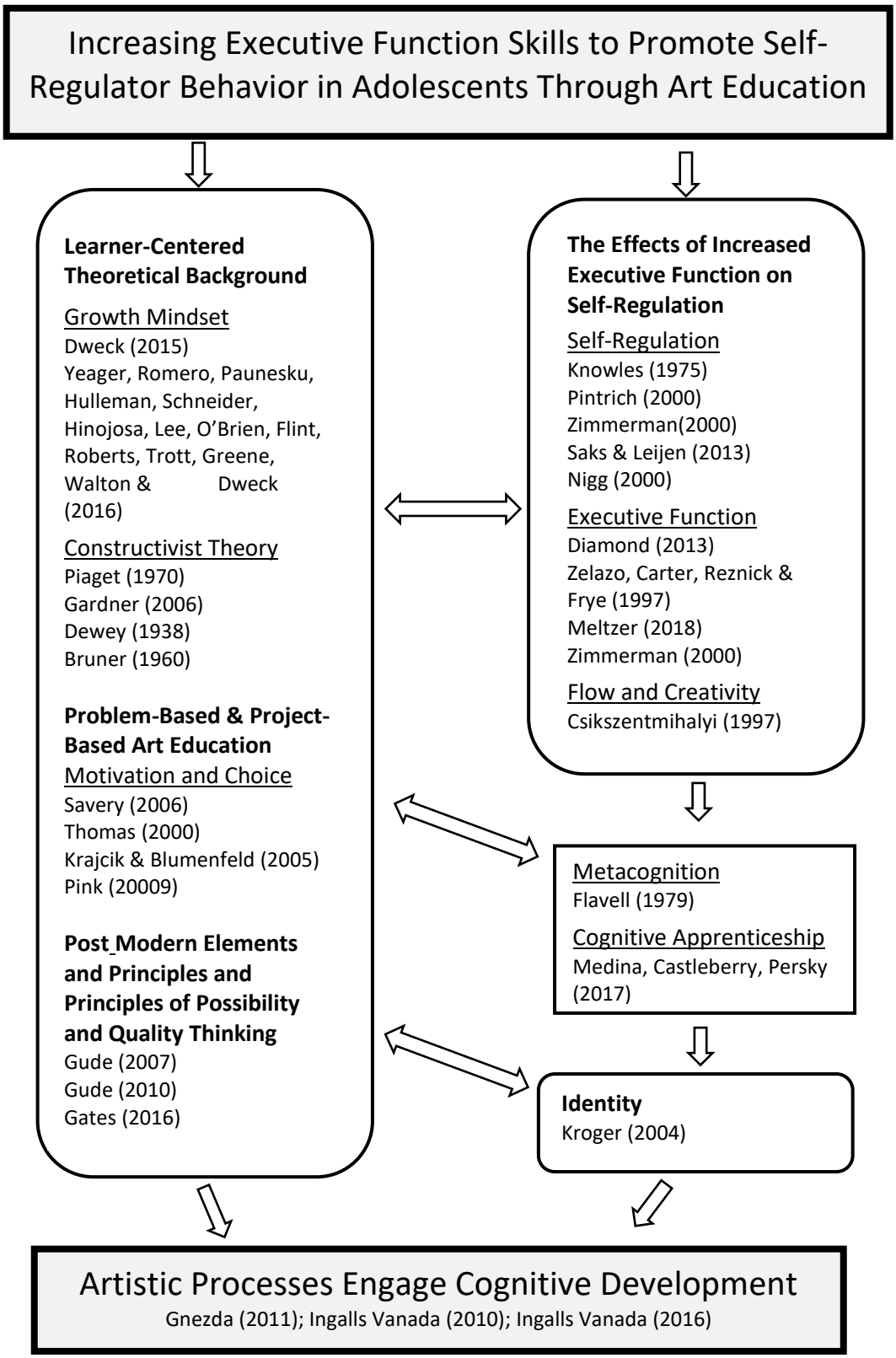


Figure 1. Graphic Organizer of Key Concepts and Organization of Literature Review

Cognitive and Educational Theories in Psychology

Constructionist Theory

The constructionist theory of learning is not a new concept in education. For almost a century, constructivist psychologists have emphasized the importance of placing the student in the center of their learning environment to encourage students to make connections to their world (Dewey, 1938) through social interaction and hands-on experimentation (Piaget, 1970; Bruner, 1960). As students construct knowledge in response to their surroundings, they are able to build new understandings from previously acquired information across domains (Vygotsky, 1934). Vygotsky (1925) also explored the ways in which art exists as a social construct in the *Psychology of Art* where he sought to uncover the role of psychology in aesthetics and began looking at art through what Plekhanov defined as "lived, historically conditioned social relations," contemplating the perspectives of both the creator and audience of art as part of the art's function (as cited in Guimares Lima, 1995, p. 412). The constructivist approach, which relies heavily on the students' experiences in their worlds needs to consider the diversity of the student population many art teachers are working with today.

Students come to the art classroom with a wide range of social, emotional, and cognitive skills as well as knowledge and understanding about techniques, materials, and the world around them and can build this knowledge through active participation in creating, performing, responding to, and making connections with art (www.nationalartsstandards.org). Dewey (1938) discussed the role of students' ability to transfer information or attitudes from one situation to another and the effect this has on

the students' understanding or acceptance of a new concept across domains. Students are not learning in isolation which is why it is important for educators to help students add to the knowledge they have already obtained to gain deeper meaning of the topic they are investigating.

Students are not engaging in this exploration alone. Teachers are integral in guiding children as they gather information and act as a facilitator for learning, being careful not to prescribe the methods in which these young artists must learn, but rather provide an environment that facilitates collaboration and investigation (Milbrant, Felts, Richards & Abghari, 2004). Vygotsky (1978) poses that the "zone of proximal development" is the gap between a student's actual developmental level and the level of their potential when assisted by the teacher. This "zone" is the area in which teachers need to work diligently and delicately to nurture self-esteem and help students approach their learning with a growth mindset (Dweck, 2015). Gnezda (2011) warns that teachers need to "be careful about our critical response to students' creative work. Rather than heavy handedly scrutinizing student work for faults, we can design evaluation procedures that are growth experiences and that help students recognize their strengths and reflect on their creative processes" (p. 51). It is important that students working in a constructivist setting believe they can improve and develop their capacities or the goals and tasks they set for themselves will be uninspired and stifle their ability to learn.

Growth vs. Fixed Mindset

Growth mindset, as opposed to fixed mindset, according to Blackwell et al. (2007), Burnette et al. (2013), and Yeager & Dweck (2012) "aims to increase students' desires to take on challenges and to enhance their persistence, by forestalling attributions that academic struggles and setbacks mean one is "not smart" (Yeager et al., 2016, p. 3). Researchers and psychologists such as Cohen et al. (2006), Stephens, Hamedani, & Destin (2014), Walton & Cohen (2007), Hulleman & Harackiewicz (2009), Yeager, et al. (2014), Eccles & Wigfield (2002), Elliott & Dweck (2005), Lepper et al. (1993), and Stipek (2002) have worked with Dweck to expand upon the initial definition of growth mindset as a belief that the individual has the ability to learn and that their intelligence is not limited by a fixed amount. This definition evolved into an assumption that "students can show greater motivation to learn when they are led to construe their learning situation as one in which they have potential to develop their abilities, in which they feel psychologically safe and connected to others, and in which putting forth effort has meaning and value" (Yeager et al., 2016, p. 2). Research backing this assumption was designed as an informative case-study in which evidence was collected in several methods of qualitative research including ethnographic observations of people's pursuit in achieving a set goal in a familiar setting, computer self-reflective questionnaires, and "rapid, iterative, randomized "A/B" experiments" (p. 2).

Control activities were also used to compare increase in growth-mindset though implementation of altered approach with the original approach and all data was collected and cleaned by a third-party organization to prevent partiality which validates the finding

that adoptions of a growth mindset can in fact help students in higher achievement of goals. Overall, the researchers were very careful in their administering of the study and considered many areas to address possible ethical or methodological limitations before instituting the study. Researchers involved in this study were careful to consider existing educational and psychological theory and incorporate aspects of problem-centered design through design-thinking while paying close attention to Dweck's original growth mindset theory. The researchers were also prudent to state the limitations of their study, possible difficulties for replication of this study in other environments, and state that they do not intend this iteration of growth mindset intervention to be the final procedure. However, this study in growth mindset relied on the responses from students entering high school and does not represent the way a growth mindset mentality could impact young adolescent students in the elementary school (Yeager et al., 2016).

If students in the art classroom fail to adopt a growth mindset, their belief that art is not something they are, or ever will be, good at could negate all other efforts in helping students learn to set goals and drive their own learning. Sternberg & Lubart (1999) suggest that,

> Art and design training are known to develop at least five attributes or dispositions (1) Tolerance of ambiguity; (2) Perseverance; (3) Willingness to grow; (4) Openness to experience; and (5) Willingness to take risks. Each of these mindsets are related to self-assuredness, independent thinking, courage of mind and spirit, and the ability to resist peer pressure, which are vital in the development of student agency and responsibility.

> In turn, student agency affects one's ability to manage ambiguity, failure, and adversity—key dispositions necessary for success in life and work (as cited in Ingalls Vanada, 2016, p. 7).

People possess implicit theories of intelligence and personality that can either embody a fixed entity theory or a malleable incremental theory in which students believe that they are who they are and cannot be changed or that they can grow and develop over time (Yeager & Dweck, 2012). As students age, their stance on implicit theories can solidify making the transition from fixed to growth mindset more difficult. Dweck (2006) tells us, "What students believe about their brains – whether they see their intelligence as something that's fixed or something that can grow and change – has profound effects on their motivation, learning, and school achievement" (as cited in Hochanadel & Finamore, 2015). The idea that something so personal as a student's own opinion of their learning can affect the trajectory of their education in the future can be a daunting concept for educators.

One main shift between Dweck's initial work with growth mindset (Yeager & Dweck, 2012) and the 2016 study was that researchers concluded it was best to introduce growth mindset without telling children that the fixed-mindset is incorrect or acknowledging that a fixed-mindset even exists. Research has shown that allowing for the option to opt out of a growth mindset validated the opinions of those who were hesitant to buy into the theory that they could indeed learn presenting success as the only option.

In addition, Yeager et al. (2016) suggests that growth mindset be presented in way that places focus on only comparing one's intelligence to their own prior intelligence instead of comparing their ability to the ability or deficiency of another person. Students with low self-confidence or self-esteem may be intimidated by the idea that their work is supposed to look like a teacher's example or like the student's next to them.

> To prepare students to benefit from meaningful work, therefore, teachers need to create a growth-mindset culture in the classroom. One way to create such a culture is by providing the right kinds of praise and encouragement. My research has shown that praising students for the process they have engaged in—the effort they applied, the strategies they used, the choices they made, the persistence they displayed, and so on—yields more long-term benefits than telling them they are "smart" when they succeed (Dweck, 2010, p.16).

This focus on the self and the requirement that students reflect on their own understanding to identify ways in which they can learn a task is essential when applying what is known as a student-centered approach to an arts curriculum.

Student-Centered Learning

The terms "student-centered," "child-centered," and "learner-centered" are all used and appear frequently in contemporary writing about constructivist approaches to education. Though, the student-centered approach is essentially a growth mindset approach set in constructivist theory whose name brings the focus of education to the

student instead of placing it on the construction of learning or presentation of information. Burnette & Norman (1997), connect constructivism with "learner-centered philosophies and project- and design- based pedagogy which are credited with activating a balance of students' creativity, analytical thinking, and practical skills and dispositions through hands-on learning (Ingalls Vanada, 2011; as cited in Ingalls Vanada, 2016, p. 8).

Opponents of a constructivist, student-centered approach, in favor of a more modernist teacher-directed approach, criticize the loose structure of instruction with concern that students will not set rigorous enough standards for themselves or become bored or frustrated when they lack the expertise to produce the high-quality image they might be able to create through more rigid and direct instruction (Burton, 2018). In terms of informational investigation, there is the concern that students will not know what to examine and so be remiss in exploring a subject with the same depth and detail as if the instructor presented the information to them. However, student-centered approaches can provide a great deal of support from the teacher in guiding student research and work, the difference being that the instruction is highly individualized and personal and requires students to tap into their executive function skills and begin to start self-regulating their learning as they explore topics that vary from their peers.

Taking Action: Artistic Pedagogies and Methodologies

Problem-Based vs. Project-Based Learning

Student-centered learning can be implemented in classrooms at a variety of grade levels and in many styles. Problem-based learning (sometimes referred to as PBL) is "an

instructional (and curricular) learner-centered approach that empowers learners to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem" (Savery, 2006, p.12). This approach to teaching is considered one of the most autonomous student-centered approaches due to the emphasis on critical thinking, analysis, collaboration, reflection, and the research, investigation, and resolution of real-world problems by the student. Problem-based learning puts the responsibility of designing learning communities with shared information on the students in cooperation with an educational tutor who acts as a facilitator and mentor to learning more so than a leader or provider of knowledge where the end goal is ill-structured or not clearly defined by the instructor. (pp. 12, 15).

Though problem-based learning has been adopted by many institutions to help prepare students for life after academia, problem-based learning is a mainly self-directed approach requiring a great deal of organization, motivation, and independent research on the part of the student which is not always suitable for elementary classroom settings. Savery (2016) acknowledges that the transition for students and teachers to a problem-based curriculum "requires significant instructional scaffolding to support the development of problem-solving skills, self-directed learning skills, and teamwork/collaboration skills to a level of self-sufficiency where the scaffolding can be removed" (p. 15). For these reasons problem-based learning, according to Barrows (1992) was initially developed as a teaching technique for Canadian medical students and is still primarily used by college, graduate, and medical institutions with a focus in the

sciences and mathematics where students are expected to have the foundation of knowledge and problem-solving skills to perform independently (Thomas, 2000).

Project-based learning (which is also often referred to as PBL and will be used for the purposes of this paper to discuss project-based learning) is another form of student-centered learning rooted in constructivism and "real-world activities" that places the learner at the center of the curricular design with an emphasis on "learning by doing," however, unlike problem-based learning, the teacher/instructor in project-based learning often guides students towards a desired end goal with suggested or specific procedures to help students set goals and achieve benchmarks while also allowing for choice and flexibility in process to maintain motivation (Krajcik & Blumenfeld, 2005, p. 317; Savery, 2006). PBL has roots in three alternative academic traditions including: Outward Bound wilderness expeditions which include Expeditionary Learning in "adventure and service-based education programs," problem-based learning at the post-secondary level as discussed previously, and "university-based research in cognition and cognitive science applications" (Thomas, 2000, p. 4). According to Blumenfeld et al. (1991), Krajcik, et al. (1994), and Krajcik, Czerniak, & Berger (2002), there are five main elements to PBL. Many of these criteria overlap with the key aspects of problem-based learning including the identification of an initial problem that drives exploration, participation in problem-solving processes and constructive investigation, emphasized importance of collaboration, and sharing of artifacts with peers and the community to help students verbalize and communicate their process and understanding and present their work in real-world setting (Krajcik & Blumenfeld, 2005, Thomas, 2000).

Project-based learning, however, is more directed at developing self-regulated learners than self-directed learners, which will be explored more in the following sections, in that it emphasizes a strong scaffolding by the educator to help students participate in learning that is above their independent academic level (Krajcik & Blumenfeld, 2005, p. 318) while still being attainable and allowing for student success. The driving questions that inspire inquiry, according to Krajcik (2002), should be feasible, worthwhile, contextualized, meaningful, and ethical (Krajcik & Blumenfeld, 2005, 321). Teachers in a PBL classroom often model the process and approach to inquiry and provide students with techniques that they can use in the future and provide feedback throughout the student work process (p. 324). This project-based approach to introducing curriculum could be viewed as an approachable transition for teachers familiar with a discipline-based or modernist practice who are interested in bringing more choice and autonomy into their lessons without completely releasing the responsibility of project design and goal determination to the students. For these reasons, this study as well as my art curriculum are centered around the transition from a more limited choice environment to a moderate choice art room in a project-based design setting.

As the level of student choice increases along the "Choice Spectrum" (see Figure 2, p. 38) the amount of autonomy and intrinsic motivation also needs to increase to ensure students are capable of designing and meeting the goals they set for themselves. Some evolution in this scale includes the freedom of choice for a set amount of time or classes in which students can explore interests that are outside the class project. Many companies during the first decade of the 21st century adopted the 20 percent time model

including conglomerates like Google, Atlassian, and 3M (who has been practicing a similar model since the early 1940s, which brought us the Post-it note). This 20 percent time model allotted 20% of the design team's time to explore ideas freely and develop code or design products aside from their expected job descriptions (Pink, 2009). Employers found that allowing employees the freedom to explore their passions through intrinsic motivation could be cost effective and allow for greater innovation in the creation of novel ideas which seem ordinary today such as: Google Maps, Gmail, Google News, Ad-sense, and Twitter (however, Google has since reported that it has retired or made considerable alterations to this policy).

Figure 2. The Art of Education: Choice Spectrum (https://theartofeducation.edu/2014/12/19/where-are-you-on-the-choice-spectrum/)

On the far end of this spectrum is Teaching for Artistic Behaviors (TAB) which allows for a free, self-directed, learning environment implementing a full choice curriculum. TAB, like problem-based learning is entirely self-directed, yet like project-based learning (PBL) still includes: problem-finding and problem solving, constructing knowledge, and increased emphasis on goal setting, planning, collaboration, reflection, representation, and sharing. However, TAB also aims to develop an appreciation for the

ambiguity of the process and an appreciation by students of their freedom to make choices (Douglas & Jaquith, 2009).

Similar to other research in the area of self-regulated and student-centered learning, Krajcik and Blumenfeld (2005) build their evidence of the benefits of project-based learning around work with middle school level students in science classes and do not address how project-based learning could apply to elementary or early adolescent learners. Thomas (2000) on the other hand, reviews several studies across elementary, middle, high school, and college level students, but all case studies are based in social studies, mathematics, or science course material. Though the curriculum material may not be closely related, the project-based approach to education in which students are allowed to "explore solutions to their own related questions or to engage in a design project to ask related questions in the unit" (Krajcik & Blumenfeld, p. 318) can be applied to projects in an art curriculum in which students can be involved in the design, planning, execution, and presentation of work that is individual and meaningful to each student as they work through the design process. For schools that participated in longitudinal case studies, Thomas (2000) reports that researchers found positive correlations between the implementation of project-based learning models and student motivation, problem-solving skills, metacognitive strategies, attitude towards learning (growth mindset), standardized test scores, student attendance, and teacher disposition of student ability while also noting a decrease in documented discipline problems.

Project-based and problem-based learning come with their own trials. Though the intention of student-centered learning is to help improve student interest and motivation

by actively engaging them in their learning, it can be difficult to get every student to "realize the value of the driving questions" so it is important to help students find common experiences to help them identify "anchoring experiences" to help them relate to the project (Krajcik & Blumenfeld, 2005, p. 322). Student-centered learning is designed to work across curricula and help students explore interests on multiple levels, though without "sufficient commitment of staff at all levels," proper "investment in the design, preparation and ongoing renewal of learning resources," "appropriate assessment methods which do not match the learning outcomes" and "evaluation strategies which do not focus on the key learning issues and which are implemented and upon far too late" it is difficult to fully and properly implement a student-centered approach (Savery, 2006, pp. 11-12).

Collaboration is also central to a student-centered classroom, however, "students do not naturally collaborate with other students" since many students have become accustomed to a "transmission-and-acquisition" style of learning in which the teacher presents students with all the information (Krajcik & Blumenfeld, 2005, 325), students have difficulty with retrieving pertinent information on their own, managing their time, and setting appropriate daily and long term goals (Thomas, 2000, p. 34).

This individualized and immersive approach to learning present in student-centered and constructivist learning pedagogy coupled with scaffolded support to help students close the gap between their independent skill level and their instructional level, may lend an opportunity for students to achieve what Csikszentmihalyi refers to as "flow." Flow is defined as a "state of effortless concentration and enjoyment" similar to

"being in the zone" wherein a student's full attention is devoted to a task (Csikszentmihalyi, 1997, p. 1). Conditions of flow include "(a) perceived challenges, or opportunities for actions, that stretch (neither overreaching, nor underutilizing) existing skills; a sense that one is engaging challenges at a level appropriate to one's capacities (b) clear proximal goals and immediate feedback about the progress that is being made" (Nakamura & Csikszentmihalyi, 2009, p. 90). Flow can occur when a person is fully immersed in the task of achieving a goal which requires all their skills. If a challenge is too easy, the person may become bored and lazy; if a challenge is too hard, the person needs to learn new skills in order to achieve flow.

In art education this concept is essential in helping students improve motivation and attention by encouraging them to investigate and invest time and effort in projects that are personal and meaningful to them instead of ones that are assigned by the teacher to which they feel no personal connection. This equilibrium is contingent on students possessing the appropriate skills and techniques to use tools to realize their mental imagery in physical space. As students are challenged their attention is engaged until they master a skill to a level that their mind can become detached from their actions. "The teleonomy of the self is thus a growth principle, the optimal level of challenges stretches existing skills" (Vygotsky, 1978, as cited in Nakamura & Csikszentmihalyi, 2009, p. 92) which pushes students to retrieve stored information and apply previously acquired skills in new and innovative ways.

In addition to these efforts, studies in cognition and cognitive science surrounding student-centered learning, specifically project-based learning, recognize the roles of

experts and novices and the skills required in the pursuit of problem-solving and project design. Bereiter & Scaardamalia (1993) and Glaser (1988) recognize "the importance of metacognitive and self-regulatory capabilities on the part of experts, but also the absence of planning and self-monitoring skills on the part of inexperienced and young problem solvers" (as cited in, Thomas, 2000, p. 7), which places the burden of helping students develop these expert skills on the shoulders of elementary, middle, and high school teachers. Through modeling appropriate metacognitive and reflective strategies, scaffolding of goal-setting and perseverance techniques, and differentiating learning objectives to help coach and prompt students with various academic and motivational levels, the classroom teacher is expected to teach these skills while simultaneously and continuously presenting curriculum specific instruction. Teachers and students will both need to alter their preconceived notions of "how" to teach and "how" to learn upon initial implementation of a project-based learning environment, however, finding a balance in this partnership does not need to be a set ratio. Pink (2009) states the danger of limited choice in expressing that "the opposite of autonomy is control─control leads to compliance; autonomy leads to engagement" which in turn leads to mastery (pp. 108-109). The exploration of project-based learning may require a sliding scale of support, freedom, and direction.

A Postmodern Approach to Art Education

Many practicing art teachers have taken it upon themselves to design new approaches to curriculum where they saw deficiencies. The solutions generally take a strong student-centered approach focused around an abundance of choice and a reliance

on self-regulation and executive function. Olivia Gude is a pioneer in helping students connect their art and art making processes to their worlds. Gude's design for a quality curriculum around core objectives including "stimulating free ideation, encouraging, experimental approaches to making, and supporting students in identifying and manifesting deeply felt idiosyncratic experiences" (Gude, 2010, p. 31). Gude has taken a strong stance against the traditional modernist approach to art education insisting that providing students with a menu of elements and principles is insufficient for providing a quality art education that can help students stay motivated and make meaningful connections to their work.

The postmodern curriculum challenges students to engage and respond to society, communicate personal identity, and explore ideas including: appropriation, juxtaposition, recontextualization, layering, interaction of text and image, hybridity, gazing, and representin' (Gude, 2004, pp.10-11). Gude's *Playing, Creativity, and Possibility* (2010) attempts to address this gap through introducing a "Spiral Workshop Curriculum" that revisits complex themes in concepts throughout creation. The principles of possibility: "Playing, Forming Self, Investigating Community Themes, Encountering Difference, Attentive Living, Empowered Experiencing, Empowered Making, Deconstructing Culture, Reconstructing Social Spaces, (and) Not Knowing" (Gude, 2007) are different than the postmodern principles in that they begin with a strong emphasis on play. This play is a hook that can grab even the most skeptical elementary teachers. Lowenfeld & Brittain (1965) explain "learning begins with creative, deeply personal, primary process play. Such play may be truly free, not directed toward mastering technique, solving a

specific problem, or illustrating a randomly chosen juxtaposition" (as cited in Gude, 2007). This focus on play, a non-goal oriented and non-problem-solving approach to art, can inspire a deeper understanding. Bringing the underrated practice of play into a formal school setting can provide students experiences of basic investigation and exploration of materials.

Gude's principles include a strong push for choice and would fall in the "abundant" section of the choice spectrum which is the area that can be most intimidating to many teachers operating in a limited to moderate environment and students who have limited practice in autonomy and self-regulation. "A teacher's awareness of why students might feel discomfort in engaging in artistic process can be a powerful tool for allaying hidden anxieties and for then using dialogue to collaboratively construct a safe space for incipient creative urges to be nurtured, rather than being denied and smothered" (Gude, 2010, p. 32). Gude (2013) does admit that most children will not know what to do with the kind of freedom choice-based programs offer without a highly supportive teacher (Gates, 2016, p. 16). In my opinion, this support can be best developed through a strong focus on helping students become aware of and learn how to access their executive function skills and an emphasis on the scaffolding, implementation, and utilization of strategies to promote self-regulation in the art room.

The Relationship Between Self-Regulation and Executive Function

Self-Regulation

The literature surrounding self-regulatory learning is extensive. For the purposes of this study, the focus on self-regulated learning (SRL) will be set with the intention of assisting students in heightening their independence in planning, achieving, and reflecting on academic goals that they set for themselves in the art room. This study will not be focusing on early childhood school readiness, developing or analyzing cross-curricular benefits (though this area of study would benefit students to explore further in the future), or using e-learning or computer-based curriculum for introducing or assessing changes in self-regulatory behavior (though these are very popular in the field of research on self-regulation). Information regarding self-regulation, for the purposes of this study, will be presented in the following order. First, the general differences between self-directed learning (SDL) and self-regulated learning (SRL) will be outlined. Second, some common characteristics of SRL will be introduced. Third, the areas of difficulty for students within SRL will be discussed. Lastly, SRL in relation to executive functioning (EF) will be discussed to help highlight the correlation between the skill sets that fall under the umbrella of EF and developing self-regulatory behaviors.

Self-Regulated Learning vs. Self-Directed Learning

Saks and Leijen (2013) propose that self-directed learning and self-regulated learning have been used interchangeably by academic literature and studies that do not focus specifically on self-directed or self-regulated learning as a main factor in their

research leading to misunderstandings and complications in measuring SDL and SRL. Before diving deeper into this topic, it is important to understand that these two approaches are not the same. Saks and Leijen (2013) outline the differences in SDL and SRL environments through a review of empirical studies and distinguish the ways each style can be implemented and assessed as well as the expectations for teachers and students in each environment. Though this article is written with specific reference to "e-learning context" much of the information provided applies to the relationship the student has with learning information and less about the modality of traditional classroom vs. e-learning and for this reason will be applied to this literature review.

First, "self-regulated learning is understood as learning and motivational processes that underlie students' assumption of personal responsibility to learn, which may or may not involve an instructor. And self-regulated performance as efforts of skilled learners to function at an optimal level often under difficult performance conditions" (Zimmerman, B., in Saks and Leijen, 2013, p. 191; personal communication, February 9, 2013). Self-regulated learning is described as a problem-solving and goal-directed exercise in which the student is influenced by peers, their environment, their instructor, and other external factors, but where learning is ultimately driven by the student (Jones & Davenport, 1996). Whereas, according to Loyens et al. (2008) in SDL the learner is required to define their own learning task with little to no assistance from the teacher (as cited in Saks & Leijen, 2013, p. 192).

In short, a self-directed student will need to self-regulate their learning, but a student who is learning self-regulation will not necessarily be asked or expected to self-direct. There are clear differences when comparing and contrasting SDL and SRL that need to be considered when formulating expectations for the classroom and the students in those learning environments. For the purpose of working with elementary school aged students in an art classroom, this study focuses on self-regulation as it applies to a students' ability to set goals and the process by which they go about meeting their goals.

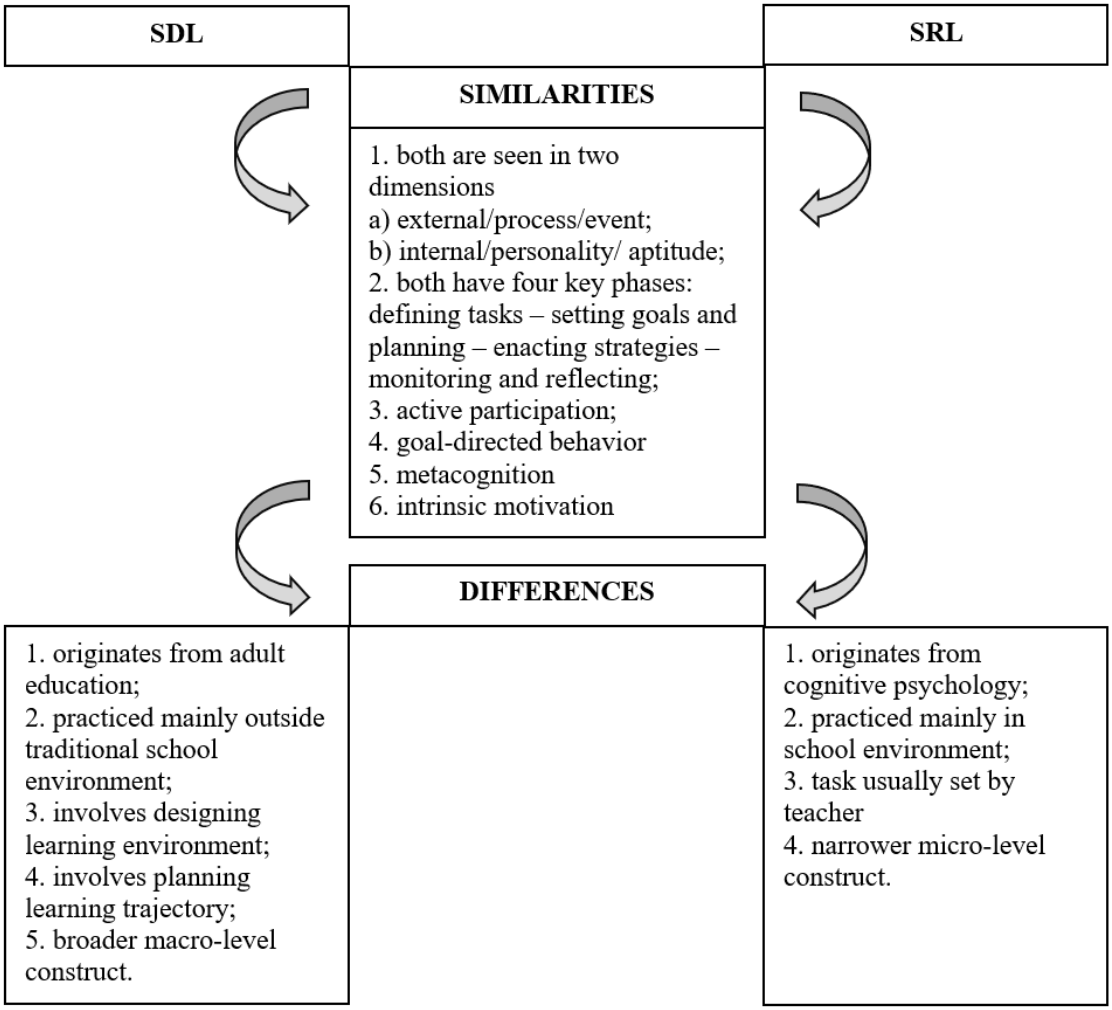


Figure 3. Similarities and differences of SDL and SRL (Saks & Leijen, 2012, p.193)

I have observed that self-regulation is a skill that does not come naturally to many students, especially young students who have not been given explicit instruction or exposure to the variety of tools, techniques, and strategies many adults have acquired through years of practice, trial, and error. SRL is a broad construct that ultimately overlaps with and includes an extensive list of processes that mutually influence each other including:

> executive functioning (Diamond, 2013), emotion-, mood-, and affect regulation (Gross, 2015), temperament (Rothbart & Derryberry, 1981; Rothbart, 2011), effortful control (Eisenbuerg, et al., 2013; Rothbart, 2011), ego under-control (J. H. Block & Block, 1980), reactive control (Derryberry & Rothbart, 1997), behavioral inhibition (Kagen & Snidman, 2004), impulse control and impulsivity (Madden & Bickel, 2010), risk-taking (Luciana, 2013), cognitive control (Botvinick & Cohen, 2014), working memory (Baddeley, 2012; D'Espositio & Postle, 2015; Kane & Engle, 2002), inhibition (Logan & Cowan, 1984; Nigg, 2000; Simpson et al., 2012), delay of gratification (Sethi, Mischel, Aber, Shoda, & Rodriguez, 2000), will/willpower (Ainslie, 2005), venturesomeness, constraint or conscientiousness (Sharma, Markon, & Clark, 2014), planfulness (Clausen, 1995), and more (Nigg, 2017, p.3).

Considerable efforts have been made to clarify and streamline definitions and term correlations between aspects of self-regulation by Nigg (2017), however Jones' and

Davenport's (1996) and Pintrich's (2000) definitions of self-regulated learning break SRL into digestible chunks.

Jones and Davenport (1996) contend that in SRL students must be able to set challenging goals that are realistic and able to be reached in both short and long-term settings, self-assess and self-reflect, and get feedback from others. Pintrich (2000) outlines four key phases of these self-regulated processes:

1. Planning and goal-setting, activation of perceptions and knowledge of the task and context of the self in relation to the task.
2. Monitoring processes that represent metacognitive awareness of different aspects of the self and task or context.
3. Efforts to control and regulate different aspects of the self or task and context.
4. Reactions and reflections on the self and the task or context

(Saks and Leijen, 2013, p. 192).

Self-regulated learning is the pinnacle of a student-centered approach in that at the forefront of student understanding is their ability to understand themselves. However, self-regulation is a task easier said than done in many cases.

Self-regulation does not just happen inside the child. It is a culmination of effort, environment, and awareness of emotion and cognitive processes. For this reason, Nigg (2017) advocates for a "domain general" meaning of SRL that includes self-control to cover tasks that are both emotionally and cognitively challenging. If the student lacks a growth mindset approach to learning, they will not be able to persevere past challenges or perceived failures (Hochanadel & Finamore, 2015) and likely reduce the amount of effort

they place in reaching a seemingly unattainable goal. "Duckworth, Peterson, Matthews, and Kelly (2007) "'…introduced the construct of grit, defined as trait-level perseverance and passion for long-term goals, and showed that grit predicted achievement in challenging domains over and beyond measures of talent' (Duckworth & Quinn, 2009, p. 166)" (as cited in Hochanadel & Finamore, 2015, p. 48). The child's ability to take setbacks or roadblocks as opportunities to learn and improve is an advanced and highly mature standpoint in relationship to one's own ability.

Table of Self-Regulatory Behavior Attributes

Maintains Attention • avoids distractions • works on task without explicit instructions from the teacher • exhibits concentration • comes back to task after interruptions • listens carefully engaged in work	**Self- Efficacy (Growth Mindset)** • continues even when the teacher is not looking • exerts effort throughout the activity • manages behavior to complete task • understands effort is as important or more important than ability
Collaboration and Discussion • ask for feedback from others • uses peer critique to improve work • is open to other points of view • works well in group situations • listens and observes while participating with peers and teachers • asks questions	**Inquiry** • is not afraid to ask for clarification of task • is motivated to find solutions to unanswered questions • asks questions about how their art relates to their world • investigates multiple ways to communicate ideas
Problem Solving • is able to identify the problem or gap in understanding • comes up with different or unique approaches to a challenge • identifies strategies that help them learn • finds multiple solutions	**Perseverance/ Resilience (Growth Mindset)** • does not stop when it gets hard • seems to enjoy challenges • follows task through to completion • is not stopped by criticism • learns from process regardless of product
Intrinsic Motivation • uses strategies to become a more effective learner • begins work without prompting • takes advantage of availability of choice in class environment	**Takes Risks** • volunteers in class discussion • willing to try new things • is willing to explore concepts without specific directions • tries new materials and techniques

Independence and Autonomy • takes responsibility for learning • generates ideas and is not discouraged by others' opinions • adjusts seating or location to promote work ethic	**Goal Directed** • sets independent challenging yet attainable goals • is motivated towards the goal • recognize the sequence of tasks needed • adjust goals and effort in response to situations
Reflection • evaluates thinking and process • reflects on ability and quality of work • describes personal judgement of performance • students select what represents their best work to include in their portfolios	**Preparation** • is ready to begin the exercise or task at the beginning • remembers information and instructions • creates project plans to organize ideas • organizes materials and ideas

Figure 4. Table of Self-Regulatory Behavior Attributes identified in (Jones & Davenport, 1996; Baum, Owen & Oreck, 1997; Pintrich, 2000; Zimmerman, 2013; Saks & Leijen, 2013; Burton, 2000; Liew, 2011, Yeager & Dweck, 2012)

The Role of the Student and Teacher in Self-Regulated Art Education

Art education is an important area for promoting self-regulation and encouraging students to design their own learning. As Caine and Caine (2016) attest "the arts promote diverse entry points into learning that activate the synergistic, connecting properties of the brain" (as cited in Ingalls Vanada, 2016, p. 15). Art education is fortunate in that often the arts are not held to the same rigid structures of curriculum that core subject areas are forced to comply with. Of course, there are state and national standards that need to be considered, however in my experience writing and implementing my curriculum, the arts have been fortunate in having much more flexibility in the way we are allowed to approach standard benchmarks. According to Bandura (1986) and Zimmerman (1989), "current learning theory emphasizes the importance of self-regulation for succeeding in any endeavor. Students are self-regulated when they are aware of their own learning processes and select useful strategies to complete a task" (as

cited in Baum, Owen & Oreck, 1997, p. 33). However, many art educators still embrace the formal modernist approach to art education which embodies a highly directive environment where students get little practice in exploring materials, setting personal goals, or selecting learning strategies (Burton, 2000). In this type of environment, it is easy to assume that students lack the "awareness of successful self-regulatory behaviors" (as cited in Baum, Owen & Oreck, 1997, pg. 33), which puts them at a disadvantage when faced with problems or challenges in their work.

Many students who lack self-regulatory behaviors often also experience problems with behavior management and filtering the stimuli in their environment into useful, inspirational, content. As students lose interest and motivation in their process, negative behaviors may become a distraction to themselves and their peers. Teachers often need to compensate for these behaviors by shifting from guide and facilitator to manager and controller. In order to keep students involved and engaged, teachers need to consider the student as an individual and devise a plan to help these students, who may be lower achievers or struggling learners, feel successful and supported. "Effective arts instruction encourages the development of unique individual strategies and multiple solutions to problems. Activities are performance-based, providing students with immediate feedback to evaluate their own learning" (Baum, Owen & Oreck, 1997, p. 39). According to Burton, Horowitz and Abeles (1999) artistic development embodies four dominant abilities: elaboration, originality, fluency, and resistance to closure (Burton, 2018, p. 340), which can be best achieved through a classroom that supports self-regulation and a student-centered approach.

Students' ability to self-assess and a teacher's ability to assess students in a learner-centered environment with an emphasis on self-regulation relies heavily on the use of self-report measures to determine understanding, progress, and overall learning which, as discussed, is highly individualized and personal. A predominant test in the SRL educational field to help students reflect on their learning is Pintrich, Smith, Garcia, and Palmer's (1991) "Motivated Strategies for Learning Questionnaire (MSLQ)" and Weinstein, Schulte and Palmer's (1987) "Learning and Strategies Study Inventory (LASSI)" (Saks & Leijen, 2013). Also used in self-report measures are structured interviews, teacher rating, observations, read-aloud and think-aloud protocols, and collection of artifacts (Saks & Leijen, 2013).

As pointed out in the methodologies section of Chapter 1, there are many concerns with the use of self-report measures including validity based on students' ability to accurately respond to and document their processes. However, it is common to use these methods of self-report measures in qualitative research, so the legitimacy of student responses and the administration of self-report measures as a suitable source of assessment will not be debated in this study. However, given that MSLQ and LASSI are mainly focused on assessing self-regulatory behavior in older adolescent and adult students in core subjects and in classroom environments where students practice a majority of their learning, the development and use of self-report measures in an elementary art classroom will be explored.

Motor Skills and Cognition

Children interact with each other and the materials in their environment as they develop cognitively. While thinkers like Piaget, Vygotsky, and Bruner have debated and investigated the developmental stages of the mind and body, they agree that developmental stages adjust as students grow, interact, and gain experiences. However, Saks and Leijen (2013) indicate that the arts "require that we think differently about the content, experiences, and operations of mind that give them distinction…these capacities include motor, sensory, affective, and cognitive modes of responding" (p. 335). This reliance on the need for fine over gross motor skills in the arts presents a difficulty for art teachers and students as they attempt to complete projects. Bart, Hajami & Bar-Haim (2007) and Sortor & Kulp (2003) claim that "fine motor tests typically include multiple tasks with visual, cognitive, and manual dexterity demands (e.g. drawing with a pencil to either copy an external image, or spontaneously generate an image) and spatial organization (e.g. building with blocks)" (as cited in Cameron, Brock, Murrah, Bell, Worzalla, Grissmer & Morrison, 2012, p. 1230). It is possible that fine motor tasks can tax the cerebellum, the area of the brain that is responsible for both EF and fine motor control making development of executive function skills and self-regulatory behaviors more difficult (p. 1231).

Students may experience frustration and lack of motivation to engage in projects if they struggle with simple fine motor tasks and so art, instead of being creative, can often be described by students as hard or a lot of work (labor intensive). Gnezda-Smith (1994) suggests that students' fine motor skills also play a part in their ability to work

independently. Her work proposes that students often measure the quality of their work through a lens of themselves as 'flawed individuals' and become disappointed when their product does not match the mental image they had when they originally thought of the idea (Gnezda, 2011). For these reasons, it is important to consider students' fine motor development when asking them to start self-regulating their learning as there may be cognitive "roadblocks" for students in planning if they believe that they will not be successful from the onset of ideation. In my observation over years of teaching elementary art, much of what young students perceive as "artistic ability" has very little to do with creativity and more to do with their ability to achieve representational realism or accurately copy with visual likeness.

Executive Function

Executive function (EF), like self-regulation, has been studied extensively in psychology and psychopathology regarding child development, cognitive development, and social emotional health as a top-down (deliberate and effortful) function which allows people to think before acting, resist temptation, maintain focus, manipulate ideas, and approach challenges (Diamond, 2013; Nigg, 2017; and Zelazo, Carter, Reznick, and Frye,1997). According to Barkley (2012), Brown (2006, 2014), Denckla (2007), and Meltzer (2007, 2014), emphasis on developing executive function skills in young students is key in helping children set goals, embrace cognitive flexibility, prioritize and organize information, access working memory, and self-monitor through metacognitive processes (Meltzer, 2018). However, the broad spectrum of executive function, like self-

regulation, also suffers from a lack of consistent terminology or definition across literature as it is often studied from different perspectives or explored myopically in terms of specific subfunctions without consideration of how these domains interact and support other functions (Nigg, 2017).

Zelazo, Carter, Reznick, and Frye (1997) approach EF as a "macroconstruct" and attempt to organize EF into a "Problem-Solving Framework" that considers EF subfunctions as they assist in identifying a problem, planning and setting goals, execution of goals, and evaluation of goal attainment or error detection. Consistent with this view, Diamond (2013) also breaks EF down into condensed categories including: inhibition (self-control and inference control), working memory (the ability to hold information in mind), and cognitive flexibility (thinking "outside-the-box," adjusting prior understandings to accommodate new information, or switching between mental processes). In this construct, students must be able to consider alternate perspectives in terms of spatial composition and empathy to consider creative possibilities. Rueda, Posner, and Rothbart (2005) describe EF in a hierarchical organization separated into "low-level" and "high-level" EF determined by developmental factors (Nigg, 2017). According to Nigg, the earliest EF subcategories to develop are working memory and response inhibition, or the ability to ignore distractions and pay attention to a task often referred to as "cognitive control" (p. 369). After these cognitive skills are attained, children are able to begin practicing cognitive flexibility or flexibly shifting between tasks. Once a student is able to hold information in their mind, focus on a task, and alternate between activities, high-level executive function skills like reasoning, problem

solving, and planning will be able to start developing throughout adolescence. “SR(L) is an adaptive change in internal state, emotion, thought, or action, whereas EF is a set of cognitive capacities that when implemented can enable SR to occur” however, because EF and SRL are so interrelated, when EF skills are used in pursuit of improving SRL they can be interpreted as the same function (Nigg, 2017, p. 368).

Due to extraneous factors such as stress, sleep deprivation, hunger, health issues etc., and the interrelatedness of EF and other cognitive functions, is difficult to assess the relationship between EF programs and increased EF functions (Diamond, 2013, p. 377). Meltzer (2018) indicates metacognitive assessments to measure EF, such as SMART\S and MetaCOG surveys, used to gauge whether EF strategies implemented in classrooms succeed in improving executive function. Diamond (2013) supports this claim adding computer-based programs such as CogMed computer training and other task-switching computer training programs which have also become prevalent in EF training. Additionally, curricular programs such as PATHS (Promoting Alternative Thinking Strategies) and CSRP (Chicago School Readiness Project), and Tools of the Mind may be effective in improving EF. These programs are typically used in a full executive function program. As with previously indicated program methods of assessment, this means these surveys require a full implementation and a considerable amount of time to administer and evaluate. According to Farran and Wilson (2011) some programs may show little to no evidence of improvement after the first year. In addition to this, Meltzer (2018) does not deal with art specific education and focuses instead on exploring how executive function improves academic success in core subject areas.

If students are deficient in EF skills the chance of them being able to adopt a growth mindset or become self-regulated learners is more difficult. "Successful intervention depends on identifying the readiness skills that predict long-term achievement and developing programs that can improve these skills early in the school trajectory" (Cameron, et al, p. 1229). Diamond (2013, p. 153) provides 5 principle findings of EF training and practice that have been found to be consistent regardless of the program chosen for intervention.

First, it has been reported by Flook et al. (2010), Karback and Kray (2009), and Lakes and Hoyt (2004), that the children who exhibit the most positive impact from intervention are students who previously showed the most deficiency in EF skills. Second, according to research by Karbach and Kray (2009), Raver et al. (2011), and Riggs et al. (2006), EF training in challenges requiring task switching or school curricula have shown a greater occurrence of skill transfer to other tasks requiring inhibition, verbal and visual working memory, and reasoning than computerized working memory training or computerized reasoning training. Third, Bergman Nutley et al. (2011), Holmes et al. (2009), and Klingberg et al. (2005) determined that tasks "need to be continually incrementally increased or few gains are seen" in students' ability to utilize EF skills. This claim is reflective of Csikszentmihalyi's views of achieving "flow" and Dweck's growth mindset theory. Fourth, Klingberg et al. (2005) claims repeated consistent practice is key. According to Diamond et al. (2007), Lillard and Else-Quest (2006), and Riggs et al. (2006), whether EF gains are seen depends on the amount of time students spend rigorously practicing these skills and how well EF skills are embedded in

the school curriculum throughout the day, not just in an isolated exercise. Finally, Farran and Wilson (2011) reported that after the first year of data collection limited to no evidence of EF benefits were observed. These findings are essential in supporting the limitation that solely implementing EF strategies in the art room alone during a constrained time frame may not be sufficient enough to show significant gains in students' adoption of these practices.

Diamond (2013) also reveals several limitations of existing research in EF. One such limitation is that there has been no investigation that distinguishes which students benefit from EF training and which do not aside from delineating the amount of practice students are getting as compared to a control. Furthermore, there is little evidence supporting what the adequate frequency of practice is, how long the effects of EF training last, or whether additional practice sessions need to be revisited and for how long. In addition to this, there are questions about the optimal dose of frequency by age and which EF interventions and processes would be most beneficial at what age.

Meltzer (2010) and Meltzer, Katzir, et al. (2014) denote "students' self-understanding about their learning profiles, as well as their strengths and weaknesses in academic and social situations, influence their selection of specific strategies on academic tasks" (as cited in Meltzer, 2018). For the purposes of this study I will be using Meltzer's list of EF skills as a primary focus in building self-regulatory behaviors in my art room keeping in mind Diamond's findings of the effectiveness of intervention programs. I will be placing particular focus on goal setting, self-reflection, and growth mindset to build SRL in art.

Metacognition

Beattie (1997) proposes metacognition can be broken down into a series of complex cognitive skills that involve monitoring, reflecting, and regulating thinking. Some of these specific skills according to Marzano, Pickering, and McTighe (1993) include: "awareness of own thinking; ability to make plans; awareness and ability to use necessary resources; commitment to task regardless of personal liking or enthusiasm; ability to control the attention needed for completing a task; ability to monitor own thinking and progress; sensitivity toward feedback; and ability to evaluate own thinking and progress" (as cited in Beattie, 1997, p. 96).

As mentioned in prior sections of this chapter, students' ability to use cognitive and metacognitive skills is essential to helping them progress through inquiry activities and participate in self-regulatory behaviors. Helping students build a metacognitive understanding of their ability and the knowledge of how and when to apply goals, strategies, and tools can aid in their success in learning and have a positive effect on their motivation to learn (White & Frederiksen, 2005). Metacognition and its effects on learning has been studied since the 1970's but it wasn't until the 1990's that psychologists started looking at the link to creative thinking.

> Jausovec (1994), for example suggested that metacognition plays a central role when solving open-ended problems. Feldhusen and Goh (1995) underscored the importance of metacognitive skills along with other skills such as critical thinking when studying and training creative thinking….Pesut (1990) suggested that creative-thinking skills operate in

> concert with self-monitoring and self-evaluation to sustain creative thinking. Runco and Okunda (1991) contended that performance on creative-thinking tests require not only the ability to generate ideas but also metacognitive skills (Hong, O'Neil & Peng, 2016, p. 34).

According to Runco (1992), though theories on the link between metacognition and creativity exists, there are not many studies that have actually investigated this relationship (Hong, O'Neil & Peng, 2016).

There is a great deal of responsibility placed on the art teacher to be aware of, be able to identify, and know how to apply, or help children apply, appropriate strategies to change a set pattern of thinking and foster incremental learning. Yeager et al. (2016) recognizes that in order for teachers to implement methods to foster growth mindset, encourage reflective behaviors, and introduce cognitive interventions, they must be knowledgeable in existing theory and frameworks of child development as it relates to learning. Schraw and Dennison (1994), Covington (1992), and Schunk and Pajares (2005) indicate that students' confidence in their ability to learn relies heavily on their metacognitive beliefs about their existing skill and ability when approaching a problem or task. Students with low self-esteem, and in turn limited growth mindset, have been shown to engage in "self-protection tendencies" in which students protect their fragile self-esteem by sabotaging their work so they have an excuse for failure that stretches beyond their effort. This can present in what Jones and Burglas (1978) coin "self-handicapping" such as procrastination, feigned illness, or work avoidance, or what Martin, Marsh, and Dedus (2001) and Norem and Cantor (1986a,b) deem "defensive

pessimism" in which student prepare themselves for the worst possible outcome thereby lowering their expectation of their ability so to avoid disappointment or embarrassment (Garcia & Pintrich, 1994; Kleitman & Jiang, 2014). Students who approach learning with the preconceived notion that they are incapable of understanding or accomplishing a task will be less motivated to invest effort, work independently, or benefit from reflecting on their process (Kleitman & Jiang, 2014).

Hong, O'Neil, and Peng (2016) attempted to examine this correlation through looking at the ways providing explicit instructions to use creative methods, metacognitive activities, and motivational tendencies affected creative performance that was measured in fluency, flexibility, and originality of solutions on homework assignments by 10th grade students in China. This study included self-assessment questionnaires, rating scales, and students' responses to problem-based questions. Though this study concluded with findings of some positive correlations and some negative correlations between the tested characteristics, it also concluded that more research needs to be conducted to support these initial results and the link between metacognition, creativity, and intrinsic motivation.

White and Frederiksen (2005) approached introduction to metacognition to 5th grade students though the use of a computer program they developed called "Inquiry Island," which walks students through different cognitive and metacognitive roles with a virtual facilitator to help them act out each role in their inquiry such as "Quentin Questioner," "Ivy Investigator," "Ingrid Inventor," "Pablo Planner" and others. The

intention of this metacognitive structure was to assist students in learning how to access and organize many of the characteristics needed to be self-regulated learners.

By presenting students with goal structures and asking them to decide which processes are needed to complete a task, engaging students in self-reflective activities and self-assessments, and providing advisors to help students adopt the roles of researchers, White and Frederiksen (2005) hoped to nurture learners who could create theories about "what they are doing and why as they engage in cycles of planning, monitoring, reflecting, and improving" (p. 215). Students in this group created a "problems and solutions" chart as an example of monitoring to help classmates when they felt stuck in their inquiry, a "productivity chart" to help keep track of goals and time management, and a "Toolkit" integrative poster organizing possible tools, when, and how to use them (p. 221). While use of this computer program to promote self-regulatory behaviors in early adolescent learners through collaborative inquiry showed significant improvements in metacognitive ability, it may not be realistic to use in an art classroom or a classroom with limited technology resources or time constraints. However, through adopting the methods of the virtual advisors and incorporating the use of self-assessments, rating systems, goal setting practices, reflection activities, and an emphasis on process and growth, art teachers can integrate many of these same skills and structures in their unit and lesson plans as students work through the design process and assist students in creating their own guides to inquiry and problem solving.

The Formation of Self

How can educators expect students to self-motivate, self-regulate, and make authentic work that is personal and profound when they are still at the beginning stages of developing a sense of who they are? "The process of self-definition is something which scholars have attempted to understand from a variety of perspectives— historical, socio-cultural and developmental" (Kroger, 2004, p.1). Fromm (1965), Erikson (1968), Marcia, (1966) and Kohlberg (1981) indicate that historically, adolescents were not forced to define their personal identity because identity was formed as a result of family, community, culture, religion, economic status, and societal expectations that were rarely challenged for generations (Kroger, 2004). Over decades in America, as religious and cultural practices diminished as predominant defining attributes of self, the need for individuals to form their own identity became more important and yet more ambiguous. This struggle with defining one's self has since become accepted as "a normative developmental task" (Erikson,1968, as cited in Kroger, 2004, p. 3) for individuals as they enter adolescence.

Cushman (1990) suggests that, though this may not be true for all countries where a strong sense of culture is intact, "at least in the United States absence of community, tradition and shared meaning has created the conditions for an 'empty self'" in which the lack of external pressure has caused adults and adolescents to seek identity through tangible consumer products where advertising has taken on the role of the community for creating social norms as well as aspirational narratives of self (Kroger, 2004, p. 3). Children may begin defining themselves through the lens of popular culture or common

interests with peers that are relevant in the moment, but which often change with maturity or social trends and rarely lend to sustainable characteristics of identity.

Kohlberg, on the other hand, explored identity indirectly through the formation of ego and the development of moral reasoning with an early driver of self-interest, to one that is fueled by social approval in adolescence, and only later to moral reasoning set in ethical principles. Kohlbergian theory proposes that as individuals reach late adolescence and form a "more autonomous self" they may make decisions based on the "universal respect for human life" and a consideration of circumstances and repercussions (Kroger, p. 93). Kegan expands these Kohlbergian views while also being influenced by Piaget in the notion that the formation of identity is a life-long cyclical process in which the self is constructed, deconstructed, and re-imagined at different stages of life. However, in this concept, an early adolescent learner is so "embedded in its own needs and interests" that they often are unable to separate themselves enough from their own views to formulate an outside perspective which in turn limits their ability to empathize with others (Kroger, 2004, p. 13).

Though the formation of identity is generally discussed as happening throughout adolescence and culminating in late adolescence with an individual who is, ideally, self-defined and self-actualized in their identity and potential, the process of identity formation is not concrete according to Marcia (1966, 1967) and Loevinger (1976), and can continue well into adulthood. Identity might be viewed as a "fluid construct" that is constantly evolving throughout adolescence and over the course of one's life (Pellish, 2012). Unlike Freud's theory that links identity formation to sexual maturation or

Erikson's which bases it on following life stages, Marcia (1967) and Loevinger (1979) define identity/ego/outlook maturation as an evolving process, building on Kohlberg's research, stating there is no clear biological timeline that defines the stages of identity but that these stages must build off of one another (Kroger, 2004).

Post-modern psychologists further explore this phenomenon through defining identity as "the existence of multiple identities that are assumed in different contexts" (Kroger, 2004, p.6) implying that we, in fact, all have a "range of identities" or "fragmented identities" which are determined by situational occurrences which require us to adapt ourselves and adopt other roles or behaviors as a response to external stimuli. These partial identities, though relevant, do not necessarily work together to form a whole, but rather can exist independently of one another and at times contradict one another. This can lead to a "sense of no self" according to Gergen (1991) suggesting that individuals who feel as if they are "two different people" or have conflicting identities based on environmental influences can be left without a strong sense of self (Kroger, 2004, p. 6). For example, a woman who becomes a mother may feel that she is losing her identity as the needs of the child and the new routines of her life begin to replace her old activities and relationships. Conversely, children and young adults who have not yet formed a sense of self may instead develop several identities as they try to compensate or conform to roles influenced by family members (religious beliefs, political opinions, traditional practices, parental aspirations), peer relationships (academic achievement, social pressures including drug and alcohol use, sexual activity, and behavioral dispositions), and their own interests and beliefs (Kroger, 2004, p. 124).

Students in the early adolescent and adolescent stages of development enter school with constant pressures to fulfill expectations set by parents, teachers, peers, friends, coaches, etc. while also searching for who they are and who they want to be. Blustein and Phillips (1990), Boyes and Chandler (1992), and Marcia (1966,1967) report that "identity achieved youths have scored consistently higher on measures of autonomy and are less reliant on the opinions of others to make their decisions. In terms of cognitive capabilities, these identity-achieved function well under stress and use more planful, rational and logical decision-making strategies" (Kroger, 2004, p. 40). For these reasons, encouraging students to explore their own identity is essential in helping them become self-regulated learners capable of planning, exploring, and reflecting on their own processes. According to Erikson's model, schools most equipped for helping students in later identity development implement a curriculum that addresses the changing needs of the student population academically and socially, and which provide students with opportunities to resolve conflicts and solve problems (Kroger, 2004). It is equally essential for educators to acknowledge the various stages of development and student readiness present within a classroom dynamic.

The art room can be an advantageous environment for helping students develop their sense of self and see themselves in different ways. The possibility of a more flexible curriculum can encourage students to explore their interests and intentions through creative outlets if these tasks are developmentally appropriate and consider formative identity traits. "When personal connections are made in the classroom, it becomes a natural way to process the events of one's life, a thinking tool toward the

budding of self-perception" (Pellish, 2012, p.19). With an emphasis on identity, students are asked to begin using metacognitive processes as they decide what they want to create, how they will achieve their goal, and what message they want their visual imagery to communicate. According to Pauley (2003) "Identity is a narrative of the self: it's a story we tell about the self in order to know who we are" (as cited in Pellish, 2012, p. 22) and it up to our students to begin telling their own stories.

How do Artistic Processes Engage Cognitive Development?

Ingalls Vanada (2016) explored ways to find a new method of assessing academic aptitude that did not deal with testing for a right answer and rather focused on building strong learner behaviors through placing the responsibility of the learning on the learner through a heuristic approach. In this study she aimed to report on how a learner-centered instruction pedagogy in the arts could help to develop "quality thinking systems," including students' self-beliefs, and encourages creativity and the importance of moving the impression of the arts from emotional toward critical (pp. 1-2). The author uses the phrase "quality thinking" to mean the act of thinking with a clear intention that leads to deeper understandings of themselves of the subject they are investigating. Ingalls Vanada sought to use arts education to promote balanced thinking through conducting a mixed model research study including qualitative and quantitative data based on students' quality thinking in middle school visual arts classrooms that were more or less learner-centered (p. 3) and containing a "balance of critical, creative, and practical thinking skills and dispositions, applied with depth and complexity" (p. 9).

Quantitative research results show that there was a positive correlation between learner-centered classrooms and overall balanced intelligences. An arts domain specific matrix based on Sternberg's "Rainbow Matrix" was developed by Ingalls Vanada to assess analytical, creative, and practical skills, analytical, creative, and practical dispositions, and overall quality thinking. Qualitative datum (notes, observations, informal interviews) were gathered using an "inductive, open-coding method through repeated readings and categorization of words and phrases" (Ingalls Vanada, 2016, p. 11). The study concluded in new assessment methods for measuring balanced thinking skills and a new theory of "Quality Thinking Systems" defined as a balance of critical, creative, and practical skills.

Quality Thinking Assessment Matrix

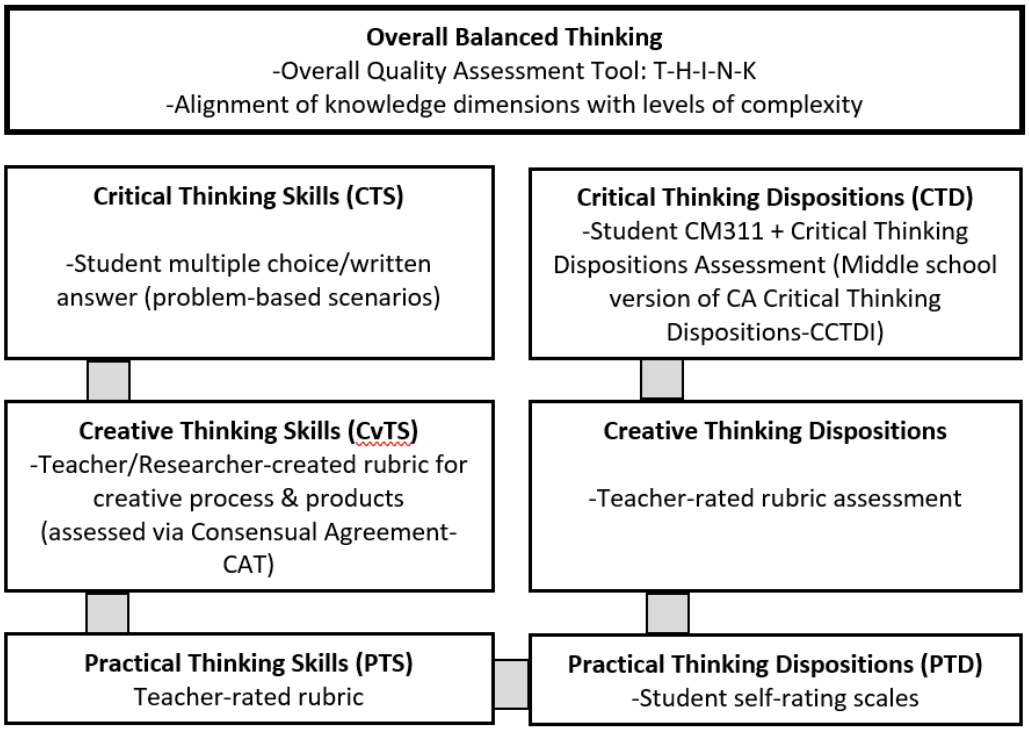


Figure 5. "Figure 2. The Quality Thinking Assessment Matrix" (Ingalls Vanada, 2016, p. 11)

Burnette & Norman (1997) determined "inquiry-based practices in the art classroom enhance students' thinking in areas of problem-solving, justifying choices with reasoning, and making connections" (as cited in Ingalls Vanada, p. 15). Ingalls Vanada (2016) placed these inquiry-based practices into her definition of what constitutes a "Quality Thinking System." This model begins with three main categories which filter into quality thinking systems to produce thinking outcomes. According to this model (see *Figure 6*), "(1) Dynamic classrooms, (2) Cultures of thinking and learning, and (3) Belief systems (self, teacher, school), led to three categories which describe the type of learning and thinking outcomes characteristic of more learner-centered classrooms as those that are more: (1) exploratory, (2) balanced, and (3) deep" (Ingalls Vanada, p. 15, p. 12). It is evident from this study that Ingalls Vanda began investigating the same essential question of the ways in which the arts engage cognitive development and helped to expose. I have found through this inquiry clear direct links between the theories of cognitive development, student-centered learning, and project-based education design that are interwoven throughout artistic processes.

I appreciate the links drawn between cognition and the arts in Ingalls Vanada's study and the inclusion of a chart outlining themes and evidence observed in classrooms which foster quality thinking versus those in teacher-directed environments. The observations noted classify teacher behavior and characteristics of a learner-centered classroom as well as the assumed outcome of practicing these behaviors which helps to define the role of the teacher as facilitator. Yet, there is little information on the tools

used to introduce these quality thinking systems in the classroom or any examples of assessment included in the new method.

Another aspect that is missing in Ingalls Vanada's study, but is essential to an art curriculum, is an emphasis on creativity. Through my review of these sources I have noticed that many of the studies and journals that helped to define the key concepts and terms that shaped my research either follow a strong cognitive approach or a creative student-centered approach but rarely consider both domains simultaneously. However, Gnezda (2011) uses the work of Roe and Clark to define creativity. In Gnezda's words,

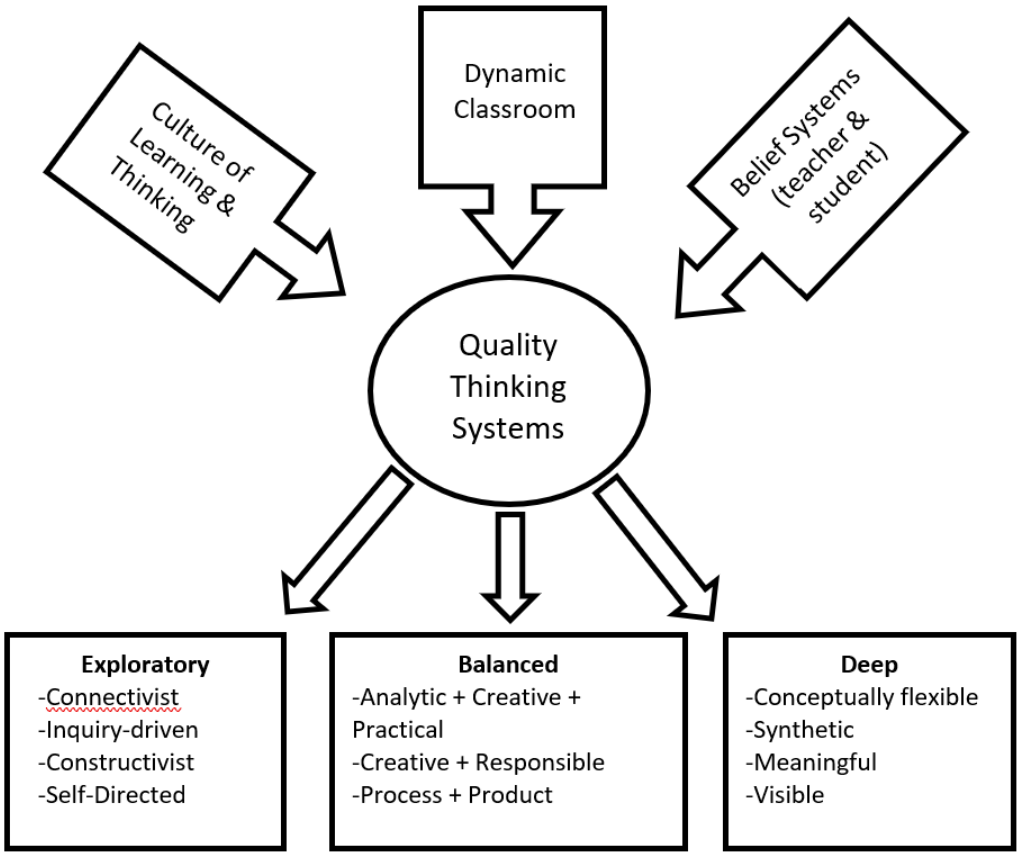


Figure 6. "Figure 3. Quality Thinking System Model"
(Ingalls Vanada, 2016, p. 12)

> Creativity is a cognitive-emotional-manipulative experience that is accessible to all people. Creativity is cognitive because it is about innovating and developing ideas and occurs via specialized mental processes. It is emotional because emotions are integral (Clark,1992) and "loom large" (Roe, 1963) in the creative process. Self-reports and empirical research about creativity show a rather predictable sequence of emotional sensations that tends to occur as the process evolves. Creativity is manipulative because idea development happens not only internally but also through interaction with a medium as an idea is being implemented" (Gnezda, 2011, pp. 47-48).

Creativity is a process that is often unrecognizable to many educators. Average thinkers, often regarded as good students, come up with ideas sooner giving them more time to complete their work. Creative brains function at low arousal levels for a long time, delaying idea selection, and limiting time to complete a project. Students at the beginning of their creative process often appear distracted, bored, or off task. Carl Jung described this period of low energy before creation as "apathetic inactivity" which causes students who are accessing creative processes to look unfocused before they begin (Gnezda, 2011, p. 49).

It is important during this stage in creativity to encourage students to use strategies in executive function to guide their goal setting and create a plan for their ideation. Gnezda (2011) also indicated that because creativity is frequently linked with

emotion and effort, marked by periods of "frustration and self-doubt," (p. 49) the artist is placed in a vulnerable situation.

Gnezda (2011) does not explicitly reference Dweck's growth mindset theory to help students through these volatile moments. However, she does caution teachers to allow students to reflect on their own process and consider criticism from themselves and their peers rather than offering negative teacher feedback to allow students to grow as artists. Self-regulated and student-centered learning is also not used specifically in the article, although Gnezda does point out the importance of making lessons goal-oriented and open-ended providing methods of teaching that are individual and personal for the student allowing the student to "engage in their own ideation processes and experience their own inspiration," acknowledging that students each approach creativity in different ways requiring various levels of support (Gnezda, 2011, p. 51). Students, even in short time periods common with elementary art classes, need teachers to respond to their process and touch base with them "perceiving what each needs, tailoring instruction to specific students and their projects, and providing encouragement as they progress through the stages of their full creative process" (Gnezda, 2011, p. 51). The omission of these specific key terms is important because, just as Ingalls Vanada (2016) created links between artistic processes and cognition, the connections in Gnezda's work could have been overlooked due to lack of specific terminology. Nevertheless, I found the concepts in *Cognition and Emotions in the Creative Process* to be important in tying the development of creativity as a cognitive process to both methods of applying cognition to the creative process and the way the brain functions.

Summary

Designing an art curriculum to teach self-regulatory behaviors through a focus on increasing executive function skills is a multi-dimensional process involving a key partnership between teachers and students. Though the literature surrounding these topics is typically written with a specific and narrowed focus, the concepts explored in both historical theory and contemporary approach put a strong focus on keeping the child at the center of their learning through active engagement and self-reflection. Students will construct knowledge in a deeper more meaningful way if they are interested and engaged in their work. Student engagement is heightened through the use of choice and the EF practice of intentional goal setting by the student to motivate them to adapt to focus on the process and persevere through challenges.

In order to help students meet these expectations, teachers must present, model, repeat, and encourage the use of strategies at several points along the ideation, planning, making, and sharing stages of the design process. For this reason, the following study aims to explore students' opinions and reactions to a student-centered approach to art education with an emphasis on developing executive function skills. Students will be asked to complete both verbal and visual self-report measures to record the effects of the use of strategy builders throughout their art making process and reflect on the way these strategy builders helped or hindered their independence and work.

CHAPTER III: METHODOLOGY

Design of the Study

Setting

This study takes place in the art room at Peter Muschal Elementary School (PMES), one of two publicly funded elementary schools in Bordentown, New Jersey. Bordentown also houses Clara Barton Elementary School (K-2nd grades) and MacFarland School (3rd -5th grades), located less than a mile from the original Clara Barton School House founded in 1852 as the first public school instituted in New Jersey (although the law to provide public education existed before Barton's program, no school was ever opened). One hundred years after Bordentown's first school opened, Peter Muschal Elementary School was established in 1952, educating students from Bordentown City and Bordentown Township. This brick building, once a kindergarten through sixth-grade school, has undergone many transformations since it opened as a one wing school house, including several additions completed in stages throughout the 1970s and late 1990s.

For more than a decade of my teaching career, Peter Muschal was home to only lower elementary grades Pre-K through 3rd grade, until recently when a redistricting effort restructured the school into a pre-K through 5th grade configuration. Though Peter Muschal has expanded in size and population since its founding, Bordentown Regional School District (considered Regional because students from Chesterfield, New Hanover, and Fieldsboro also attend Bordentown High School) is still very small compared to other districts in New Jersey containing only five school buildings. During the 2018-2019 school year, PMES consisted of 581 students (417 White; 70 Hispanic/Latino; 56 African

American; 37 Asian; and 1 Native Hawaiian/Other Pacific Islander). Of these students, 105 required various and sometimes extensive accommodations to meet their Individualized Education Programs (IEPs) that reached beyond the provisions of speech therapy (76 additional students were assigned IEP's specifically for speech and language development). Some of these students were enrolled in self-contained special education classrooms due to the nature or severity of their learning disability or behavioral classification. These specialized classes partner with general education classes for humanities, lunch/recess, and certain classroom activities or celebrations. A majority of these students however, participate in the inclusion program in which the special education homeroom teacher and general education homeroom teacher team teach as a group or pull out small learning groups for certain subject areas. In addition to the self-contained and inclusion classrooms, several other students were mainstreamed into regular education classrooms with the support of one or more educational support staff members. Along with these considerations, PMES also qualified for the State of New Jersey's free and reduced breakfast and lunch program and full day kindergarten due to the economic needs and income eligibility of the population.

The art room I am fortunate enough to call my home-away-from-home has original seafoam green Formica counters and cabinetry with a peeling wood finish. There is one sink located at the back of the classroom which is a bit too high for my young students to use, and heavy steel-based tables from the 1950s, which I have been successful in convincing my administration not to replace. My room is more or less square in shape packed with 11 rectangular work tables, one U-shaped table, my

obligatory teacher desk, and dual door metal cabinets for storage. Behind my desk, an area lovingly referred to as "my cave," is adorned with a wall of paper shelving and my small packed closet that is my treasure trove. The room is the size of a typical elementary classroom though it feels cramped and claustrophobic at times with the large furniture and as many as 28 students and sometimes up to 4 adults strategically situated at tables of 2, 3, and 4 students.

Figure 7. Photographs of Peter Muschal Art Room

Though I am fortunate enough for my supply budget to allow between $3.00-$4.00 per student per year, I have been unable to purchase a kiln or run a ceramics program in my school due to limited space and out of date electrical wiring. For these reasons, the lessons in my current curriculum rely mostly on 2-D creation and found object or paper sculptures to satisfy 3-D requirements.

For the purpose of this study, interviews were conducted in the art room to maintain continuity and consistency in location and because students were already comfortable and familiar with meeting me in this space. Interviews were conducted on a one on one and group basis depending on the interview intention. Interviews were conducted when the art class was empty aside from interview participants and researcher. Participants sat across from me at the horse-shoe shaped demonstration table. Interviews were digitally recorded to assist with transcription and validity. During the first group interview the device was demonstrated and explained to the student prior to recording so they were not distracted or curious about the recording during questioning.

Participants

Participants in this study were selected from one of my four, 5th grade art classes. This selected class is made up of 28 children: 22 students in general education and six students who join from the special education inclusion homeroom. The small group special education homeroom has eleven students (which are split between two cooperating homerooms), one general classroom aide and a one-on-one aide, in addition to the special education teacher. This study was comprised of a heterogeneous group of six students with regard to gender, race, behavioral dispositions, academic aptitude, and artistic skill levels to allow for comparisons in growth and attitude throughout the course of the study. Student participants included five students from the general education population and one special education student. However, to ensure the authenticity of

artwork and reflective responses, none of the students included in this study required the explicit assistance of an educational support staff member during their art period.

Participant	Age	Gender	Classroom Setting	Nationality	Observed Artistic Ability
V.G.	Age 10	Gender: F	General Education	Mayan/Guatemalan, Spanish, & Japanese	Exceeds Grade Level Expectations
L.L	Age 11	Gender: F	Special Education	American	Meets Grade Level Expectations
T.R.	Age 11	Gender: M	General Education	American	Approaching Grade Level Expectations
C.F.	Age 10	Gender: M	General Education	Chilean/American	Exceeds Grade Level Expectations
D.M.	Age 11	Gender: F	General Education	American	Meets Grade Level Expectations
K.P.	Age 11	Gender: F	General Education	Chilean/American	Meets Grade Level Expectations

Figure 8. Chart of Participant Demographics

Participant Introduction

I have taught V.G. for five years. She is an excellent student in all academic subject areas and excels at art. She is a quiet, modest, shy, quirky, and unique person who is independent and self-starting. V.G. often keeps to herself, is highly focused, and works completely on her own until she thinks she may be finished; only then will she ask for assistance or suggestions. V.G. speaks multiple languages including English, Spanish, Japanese, and French and is learning Czech. She is also an accomplished musician and athlete and participates in several clubs outside of school. V.G. is very creative and keeps a personal sketchbook in addition to her class and Art Club sketchbooks. Though I would consider V.G. one of the most talented young artists I have ever taught, she is still hesitant and seems nervous during our interactions.

Participant L.L. is new to the Bordentown school district and is a student in the self-contained special education classroom. Student L.L. joins the general education

partner class for humanities/specials, lunch, science, social studies, writing and band practices. Reading and math are taught in small group. Student L.L. is diagnosed with dyslexia which makes math, reading, and writing especially difficult for her. She also struggles with cognitive organization and focus. L.L. has displayed that she has a low self-esteem and lacks confidence in school despite her upbeat and positive personality. However, student L.L. is still highly motivated to learn and make improvements to her artwork. She frequently asks for suggestions and shows great effort to grow and succeed. Student L.L. is social with peers but tries her best to stay focused on her work.

Student T.R is an average student in most academic subject areas though he is always willing to work hard and displays effort on assignments. He has talked about how he knows he has struggles in some subjects but that he thinks art is one of his best subjects at school. I have taught T.R. for five years. He is an excited student who enjoys art class and works independently for most of the period. He very rarely asks for help or suggestions and when I touch base with him and ask if he needs any assistance he almost always responds that “he’s fine.” T.R. has a 504 for diabetes and has displayed signs of anxiety. He sometimes stutters when trying to explain himself or ask questions and uses a lot of fill words such as: ‘like’, ‘ummm’, and ‘I guess.’ It is also sometimes hard to understand him when he speaks because he speaks very quickly, softly, and often stops and starts ideas mid-sentence. However, despite these traits, T.R. always has a positive disposition, is highly confident in his artwork, and volunteers to share his work and thoughts with peers and teachers freely.

Student C.F. is a quiet creative student and has a twin with very different interests (video games, sports, friendships with boys) than himself. The two boys rarely interact at school and have different friend groups, though they themselves have a strong relationship. C.F. performs well in his academic subjects (but struggles with writing), plays an instrument, and creates funny cartoon characters like a French potato (wearing a beret and mustache) who is married to a cantaloupe melon. C.F. often expresses that he likes drawing these cartoons and has inside jokes with his close friends (mostly girls) about their adventures; however, when he is working on in-class assignments he has mentioned that he does not think things turn out how he wants them to and wishes he could make things look more realistic. C.F. can be very serious about his work but has also shown a silly playful side. This is my fifth year teaching C.F. and only recently that he has started to open up and talk to me allowing me to see a little more of his personality.

Student D.M. is an intelligent and reflective student who performs well in all subject areas at school though she still expresses a diminished self-confidence when creating her artwork. I have taught D.M. for five years and she has really started to open up and express herself this year. D.M. is smart, talkative, and caring, has bright purple hair, and takes ice skating lessons after school. D.M. has expressed that she is often disappointed with the outcome of her artwork even though she knows that she has put a lot of effort into her projects. D.M. often asks for help during her project creations and even after I try to demonstrate what to do on a separate paper she still is hesitant to try to

make adjustments. D.M. gets easily upset during her work time and often does not believe her peers when they tell her that she is doing a good job or that she is talented.

Student K.P is a shy, quiet girl who meets grade level expectations in all subject areas though she struggles with test taking and puts a lot of effort into making good grades. She plays an instrument and loves to sing. She participates in Select Choir and is very active in community events and has organized several fundraisers and non-profit events with the help of her mother to aide members of the community and people in need. K.P., despite being so shy and reserved, has spoken at district Board meetings in front of the board, community members, and teachers in support of keeping the arts funded in the district and at rallied in support of immigrant rights during the refuge crisis. K.P. is smart, helpful, and constantly looking for ways to improve on her work. She is a level-headed student who seems mature beyond her years and speaks in a soft, deliberate tone. I have taught K.P. for five years and she has always been a consistently hard worker and striving artist.

Though I felt it was important to select a diverse group of students, this study does not explore the effect of race, gender, academic proficiency in other subjects, or sexuality when addressing the development of executive function skills or ability to adopt self-regulated behaviors. Observations of student participants occurred during their regularly scheduled art class which meets for 35-minutes once per week from 2:50-3:25 PM. Observations were also conducted individually and in a small group setting during interviews throughout the course of the study.

The Role of the Researcher

This study is designed to reflect my roles as art teacher and researcher of my students' growth and the student reaction to implementation of learning strategies. I will be a participant in that I will also be self-reflecting and adjusting my teaching methods and curriculum to help facilitate self-regulation in the art room, however, this study will only focus on the students' dispositions, and in that way my participation will be restricted to teacher and researcher. Many of these students I have taught since kindergarten, however, due to the district restructuring and students who have moved into the district, some of the students are new to my class and others left for one year and are now back at PMES. Because I have had the majority of the students from kindergarten through 3rd grade, and now again in 5th grade, in general, my students know me, they know what to expect from my class, they are familiar with classroom procedures, and they know what I expect of them as students. However, this relationship is bound to change as students grow and age.

Within my school I have established strong relationships with many of the teachers, administrators, and staff members. I make an effort to give accurate accounts of student and class behaviors and academic challenges I witness so that I can work with general education teachers and school support staff to help students attain goals in and out of my art room. I design art lessons with cross curricular goals and frequently attempt to adjust my lesson sequence and objectives to reinforce student learning. I am aware of the roles the district's occupational and physical therapists play in helping students develop their fine and gross motor skills, which are essential in helping students

achieve success in many school subject areas, but notably, in the visual arts. I frequently seek their guidance and expertise and incorporate these suggestions and activities into my lessons to strengthen fundamental muscular development and coordination. Due to the intimate nature of the arts discipline, I have the opportunity to see students interact with their work in a way that is unique from other humanities teachers, which allows me to identify student interests, challenges, and personalities in a way that can get lost in the structure of other class environments.

Research Procedure

The design of this study is a within-site, single instrumental case study using multiple sources of information through purposeful maximal sampling to show different perspectives on the case through a collection of self-report data samples including: group and individual interviews recorded with audio transcription, written surveys and questionnaires, self-assessments and reflections, as well as anecdotal records and artifacts such as photographs and samples of student work. Student use of project planning guides for information organization, materials selection, and artistic intent were assessed through embedded analysis of changes in students' overall self-regulatory behaviors through examination of executive function skills. No special circumstances were created to accommodate for students in the study aside from additional meeting time to conduct interviews and questionnaires. All project planning, goal-setting, reflection, and artist statement or alternative assessment activities were administered to all students and used in the design of subsequent lessons, however, only the responses from participants were

recorded during the course of the study. Responses and artifacts were collected to help document student progress and as a reference when creating assessments and evaluating growth.

Ethical Considerations

The nature of this study does not put any students in a position where they would be injured, become at risk for failing to meet goals or expectations in their academic subjects, or become emotionally distraught over their role as a participant. This study aimed to record and interpret student reactions to the delivery of their art instruction and how their opinion of their ability changed (or did not change) over time. Due to the reflective nature of this study, some students may have been nervous to be honest or may have been anxious about how their responses might affect their grade. In recognition of this possibility, it was explained and assured to students that their responses were recorded for the sole purpose of aiding me in helping them learn and that answering negatively in interviews or on questionnaires would not in any way impact their grade in art or my opinion of them as a student. Students who participated in this study were not compensated for their time or participation in a monetary way.

As a researcher conducting this study, one bias I brought to the research is that I had already decided the mainly teacher-directed learning environment I had built, providing only limited to moderate choice, was not helping my students develop into the kind of thinkers that would be able to self-regulate their own learning. This was the central problem that drove my inquiry. Due to this assertion that my practice was lacking

in areas and required modification, I recognize that I approached this study from a standpoint of necessary change and transition. With this reasoning, I suggest that traditional teacher-directed art lessons may still have a place in an art curriculum at some age levels and for certain instructional activities, but that as adolescent learners grow and begin to form a more defined sense of self, students need to be given the opportunity to take responsibility for their actions and be included in the design of their learning to develop into self-directed young adults in the future. Based on research I had collected and investigated, I deduced there is sufficient evidence to suggest that many of the issues in the areas of low self-motivation, lack in self-confidence, and disengagement with artwork could be improved by altering my methodology and implementing some new approaches to projects that are less prescribed and included more time for student process.

Since projects allowing for more choice in a student-centered, project-based art room emphasize process over product, project outcomes would look very different from past projects and take a much longer time to complete. This meant less finished work would be sent home or displayed throughout the school. I had to make an adjustment to allow more time for ideation, planning, reflection, and critique in my lesson plans since I would not be walking students through creation step by step. Emphasis on the importance of reflection needed to be constantly communicated to the students and practiced in the classroom so identification of weaknesses or flaws could be seen as opportunities to change and improve instead of as failed attempts.

Another possible conflict I anticipated encountering was from students who may not respond positively to having more freedom in choice and execution of their artwork. The spoon-feeding of information has become a routine and an expectation for students in general education classes. For this reason, an uphill battle was foreseeable for some students (as well as for me) as instruction transitioned to the "process over product" teaching philosophy that would place more learning responsibility on the individual student.

Data Collection

This study was designed to be conducted while teaching in an elementary art education classroom with regular and special education students. I chose the participants carefully to represent a variety of ethnic, motivational, artistic, and academic levels in an effort to represent the diversity of the student population as a whole. The goal of conducting this study was to highlight the correlation between child cognitive development, advancing executive function skills and effortful control in young learners, and utilization of the creative design process. By combining aspects of behavioral self-report measures and questionnaires aimed to assess the cognitive development and effortful control of early-childhood learners for school-readiness or adult learners' self-direction in science, medicine, and mathematics courses, I strove to adapt these methods and measures and apply them to the early-adolescent learners in an elementary art curriculum.

Measure	Ages	Intent
Kochanska's Battery for Assessing Effortful Control & Shape and Stroop Tasks (Lin, Liew, & Perez, 2019)	***2-7 years***	**Behavioral Self-Regulation-** Assess ability to delay, wait, slowing down gross and fine motor tasks, suppressing and activating behavior, effortful attention, and volume control. Assess student ability to discern differences in shape size and orientation.
Conner's Kiddie Continuous Performance Test (Conners, 2006)	***3-7 years***	**Behavioral Self-Regulation-** Used in assessing executive function and effortful control used as a neuropsychological and diagnostic tool for Attention-Deficit/Hyperactivity Disorder.
Delay of Gratification Task (Mischel, Shoda, & Rodriguez, 1989)	***3-7 years***	**Behavioral Self-Regulation-** Assess young children's ability to delay immediate gratification to gain a reward.
Personal Responsibility Orientation (PRO) (Brockett & Himestra, 1991)	***18- adult***	**Self-Directed Learning-** Designed to indicate the similarities and differences between self-directed learning as an instructional method and learner self-direction as a personality characteristic.
Self-Directed Learning Readiness Scale or Learning Preference Assessment (SDLRS/LPA) (http://www.lpasdlrs.com/)	***14-19 years***	**Self-Directed Learning-** Used measure the complex of attitudes, abilities, and characteristics that comprise readiness to engage in self-directed learning.
Weinstein's Learning and Strategies Study Inventory (LASSI)	***14-19 years***	**Self-Directed Learning-** Used to predict academic performance and counsel students on study practices, note taking, time management, work habits, and attitudes toward school.
Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, and McKearchie, (1991)	***13-Adult***	**Self-Directed Learning-** Compares students', teachers' and parents' participation of student effort, strategy use, and academic performance
SMARTS curriculum (https://smarts-ef.org/)	***All Ages***	**Self-Regulated Learning-** Uses metacognition to teach executive function strategies to develop learning profiles.

Figure 9. Self-Regulation and Self-Direction Measurements

Formulating assessments inspired by tested performance-based questionnaires and rating systems, I measured students' dispositions regarding their attitude towards approaching learning, confidence in their ability to proceed through project work, and follow-up assessments incorporating reflective processes about learning and identification of ways to improve understanding and inquiry strategies in the future. Reflective assessments administered at various stages of production allowed students to visualize their learning and identify areas where they felt they were strong or independent as well as areas where they felt they required additional support or practice to achieve a desired level of success.

The issue addressed in this study is a current problem that occurs in general education classrooms and art classrooms all over the United States. On teacher forums and social media groups, educators of different disciplines ask for suggestions about many of the same issues. Teachers are looking for solutions to get their students to engage with their work instead of finding off-task behaviors to become involved in, put effort into their task, and to pay attention to directions. This problem is a real issue that many teachers express feeling frustrated and exhausted over. However, the methods to help teach students effortful control and executive function skills directly often take a considerable amount of time and training to implement and assess through performance-based tasks that are designed to measure increased regulation over time and are typically aimed at areas such as math, reading, and writing. Within current research, the art room has not been a setting often discussed as necessary, or advantageous, for implementation of strategies and assessment of students' ability to use and accentuate cognitive skills.

However, many of the skills required for students to be successful in their creative planning overlap with the expectations in core subject areas, and for this reason, determining ways in which to help students access their executive function skills and demonstrate effortful control through art making is critical.

Even though several measures exist for evaluating students' self-regulatory behavior such as Kochanska's Battery for Assessing Effortful Control and Shape and Stroop Tasks (Lin, Liew, & Perez, 2019), Conner's Kiddie Continuous Performance Test (Conners (2006), and Mischel's Delay of Gratification Task (Mischel, Shoda, & Rodriguez, 1989), these assessments are typically administered with students ages 3-7. Brockett & Himestra (1991), created a Personal Responsibility Orientation (PRO) intended for use with adult learners in a self- directed as opposed to self-regulated learning environment, and Self-Directed Learning Readiness Scale or Learning Preference Assessment (SDLRS/LPA) (http://www.lpasdlrs.com/) is a scale most commonly used for measuring self-directed adult learners as well, though an elementary form has been released. These measurements for self-regulation each have benefits for gathering data on self-regulation, however, all are difficult to fit into an adolescent art curriculum where students meet for 35-minutes once a week and focus on tasks which involve delayed gratification and motivation using toy and food reinforcement (which is not practical in an art setting) or online in-depth questionnaires not suitable for young students (Lin, Liew & Perez, 2019).

In addition to these measurement, two main assessment forms are used to assess general behaviors of self-regulation in high school and college aged students.

Weinstein's Learning and Strategies Study Inventory (LASSI) uses 10 sub categories to determine self-regulation including time management, motivation, concentration, attitude, anxiety, test strategies, selecting main ideas, information processing, and self-testing study aids (Cano, 2006). The second is Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, and McKearchie, 1991) that focuses mainly on value, expectancy, and affect. Though these scales help to map the types of questions used with young adult and adult learners about general behavior practices, these two self-report scales fail to address young adolescent development as well as self-regulation as used in an artistic or creative setting.

For the purpose of this study, I have adapted most of the questionnaires, surveys, discussion forums, and written response and reflection sheets from the SMARTS curriculum (https://smarts-ef.org/) which focuses on developing executive function skills in learners of all ages but lends predominantly to the upper elementary to high school aged students. The methods used in a full SMARTS curriculum require repeated daily practice of verbal metacognitive discussion and reflection to specifically point out strategies that students use in their weekly assignments and suggests at least 10 minutes a week be devoted purely to reflection of strategies. The SMARTS curriculum is a fully designed curriculum. For an art teacher to be able to pull these important executive function strategy builders into weekly lessons, the timeline of activities, the types of questions, and the general expectations of process need to be adjusted and tailored to fit into an abbreviated art curriculum.

Research Methods

The table below is included to help outline and introduce methods of verbal data collection, visual self-report measures, and visual collections of student artifacts. In helping students to begin building strategies towards self-regulatory behaviors, several methods of data collection were required and were implemented at various points in the study in accordance with student progress on projects. Verbal interview protocols and interview questions can be located in Appendix B. Written visual data examples can be found in Appendix C and student results as well as student artifacts are located in Appendix E and Appendices G-L.

Verbal and Visual Data Collection Methods

METHOD	REASON FOR IMPLEMENTATION
Verbal	
Moderated Semi-Structured Group Discussion	-Gain insight into strategies students already use to solve problems. -Gain a baseline for what students know about metacognition and how often they feel they use metacognitive strategies. -Gain insight on students' growth versus fixed mindset mentalities.
Informal Spontaneous In-class Discussion	-Short in-the-moment assessments of student progress and challenges -Informal discussions are meant to touch base on project processes and review daily goals -Lets students know they are accountable for their learning and that additional artistic freedom and choice does not mean lower expectations.
Individual In-Person Verbal Interview	-Help students identify and reflect on their art making, attitude towards art, motivation, and opinion about art instruction in a verbal format to help them express themselves without having the added pressure of needed to write and record. Verbal response formats help students expand and elaborate on ideas more so than when asked for written self-report responses.

Visual	
Initial Metacognitive Report	-*Artistic Survey* administered at the onset of the study will help to introduce the practice of reflection and metacognition.
Project Planning and Goal Setting	-Project planning and goal setting sheets will be used at the beginning of unit plans to help students organize ideas and materials. -Daily goal setting sheets will help students set an intention for their class period. -Goal setting reference sheet will help people to identify some possible goals during different stages in the project.
Reflection	-*Think, Pair, Share Critique* checklists will help students to ask themselves, and their peers, important questions to improve their work before completion. -*Artistic Process and Progress Scale* sheets will help student consider how they are progressing and use the visual organizing to compare their opinions over time. -*Artist Statement* worksheets or alternative assessment options will help students to reflect on their process and project outcome and help them verbally discuss their work in critiques.
Formal Summative Assessment	- *3-2-1* written summative assessment will help students look back on their work habits, areas for improvement, surprising revelations, and information gained from the project to indicate areas of importance for each student.
Student Work Samples	-Images of student work will help illustrate and record the process and result of reflection and strategy building.

Figure 10. Verbal and Visual Data Collection Methods

Visual and Verbal Data Collection

Visual Methods of Data Collection

Initial self-report data collection methods can act as an introduction to metacognitive processes by asking students to identify their strengths and weaknesses in their own words. Using emoji/emoticons, checklists, graphs, rating scales, or open-ended

questions, students can record their opinions of their own artistic ability and how they think other people view their ability in addition to what they think they could do to help themselves be better artists. Students were also asked to fill in a Venn Diagram of general strengths and weaknesses or characteristics they think could be a strength or a weakness. An example such as "taking your time on your work" would usually be seen as a strength, but if the student is one who also has trouble getting work finished on time it could be a strength *and* a weakness. Strengths and weaknesses were not limited to artistic domains. Students were prompted to include anything they viewed as a strength or weakness for themselves as students, artists, children, family members, etc. and could include daily practices (waking up early, being on time, being kind to friends and siblings, etc.), hobbies (sports, baking, playing video games, dancing, singing, etc.), or educational practices (remembering directions, completing classwork and homework on time, organization, reding, math, etc.).

This initial questionnaire served to help gather information about how students saw themselves as artists and learners and also gave me insight into students' self-esteem as well as their ability to recognize strategies that could help them to solve a problem or complete a task that interrupts their confidence. It is important to take an introductory inventory to assess where students fall on several measures of executive function as well as identify students with low self-esteem as these children may need additional support in setting goals and working through their problem plans, maintaining attention, and building growth mindset mentalities.

The *Artistic Process & Progress Scale* (see Appendix C: *Figures C2.1 & C2.2*) is meant to imitate a bar graph to help students visually compare their initial disposition to later responses using the same measure. This scale can be given during the middle of a long-term project and repeated after completion or solely given after students complete a project and associated goal setting and reflection activities. The purpose of having a visual comparison of student artistic dispositions is not only to help them think about their process and feelings towards their art making but also to help them track and compare (easily and independently) where and how their opinions changed over time.

The student *Project Plan* (see Appendix C: *Figure C3*), *Daily Project Goals* (see Appendix C: *Figure C4*) and *Goal Setting Checklist* (see Appendix C: *Figure C5*) worksheets aim to give students an opportunity to map out their process visually and incrementally and sets the intention for student accountability during weekly lessons. These self-report measures help students to reference what they intend to create, how they plan on making their work, and the steps they need to make it happen. Through participation in *Think, Pair, Share Critique Checklist* partner critiques (see Appendix C: *Figure C10)*, and completion of a guided *Artist Statement* (see Appendix C: *Figure C11*) or one of two alternative assessments including the *Tell Me About It! Alternative Assessment* (see Appendix C: *Figure C13*) or *Artist-Author Connection: Alternative Assessment* (see Appendix C: *Figure C14*), students will be able to summarize their process and communicate their work verbally and visually to their audience.

Written response assessments in the form of rating scales, questionnaires, checklists, and learner reports were also critical in recording student disposition and

growth. Pointing out what processes I wanted my students to contemplate helped them to begin considering the necessary executive function skills needed to attain self-regulatory behaviors. Students used *Project Planning* sheets (see Appendix C: *Figure C3), Daily Project Goal* sheets (see Appendix C: *Figure C4), Goal Setting Checklists* (see Appendix C: *Figure C5),* self-reflection assessments (see Appendix C: *Figures C1, C2.1, & C2.2),* artistic reflections during and after project completion (see Appendix C: *Figures C10 & C11)* and a *3-2-1 Summative Assessment* questionnaire (see Appendix C: *Figure C12)* in their written self-reflective processes.

Collection of student work sample artifacts including finished work and materials practice activities were used to indicate growth of skills and accomplishment of students' project plans according to their goals. By comparing student intention with product, the teacher and researcher is able to identify which goals students struggled with and where students require additional support. For the purpose of this time constrained study and the limited class time in general, it would be unrealistic to require students to complete still life compositions in every possible material provided. However, to allow for variety and exploration at least three materials exploration still-life compositions and one completed Eye-dentity project were required during the duration of this study.

Verbal Methods of Data Collection

Along with written data, verbal discussion and interviews are essential for building an understanding of student learning. Informal on the spot discussions happened throughout the class periods as questions arose and individual needs were addressed. In

the moment it is very easy to address needs instantly, but it takes reflection on the part of the teacher to identify which student needs are prevalent and design methods to address these concerns. Concerns may differ between groups or projects, however, deficiencies in executive function inhibiting self-regulation will likely be similar regardless of the project focus.

Group discussion was used in semi-structured open-ended formatting as well as unstructured formatting to gain insight into student viewpoints and guide subsequent questioning for interviews. The initial group open-ended discussion (see Appendix B: *Figure B2*), administered as a group interview, was recorded and transcribed. This group format allowed me to introduce the purpose of the study and students' roles as participants in my research while also collecting information from students about how they feel instruction impacts their motivation and learning in art. Students answers assisted in the creation of a list of challenges and possible solutions that was displayed in the art room for students to reference when they felt "stuck."

Informal class group discussions were used throughout the class periods to indicate what strategies students were using to accomplish a goal, solve a problem, or uncover knowledge of executive function skills students may already use in their learning. Frequency of responses helped to highlight the strategies students were familiar with and strategies students agreed were effective in problem solving and planning. Group discussions at the beginning of the study, informal class discussions, and progress reflection questioning allowed students to identify with their peers and build off one another throughout their work.

Student participation in verbal interviews one-on-one, during small group, and as a whole class setting helped to frame the presentation of lesson objectives and steer the trajectory of incremental project planning. Though students were asked to participate in several forms of self-report measures to facilitate data collection throughout the unit of study, informal and unstructured interviews conducted as casual conversations were essential in formulating an accurate view of student ability. Student self-confidence at the beginning of this process was determinate in the formulation of general and specific questions that would be administered through more structured interview processes. Students in group discussions were expected to share information as they felt comfortable and reply to the responses of other students to help fuel the conversation and outline a preliminary framework for the development of timeframes and realistic expectations of student growth.

According to Yeager, et. al (2016) asking students to identify how they became good at a task through practice or how they overcame an obstacle, can help them identify strategies they may already use. Furthermore, if students are unable or reluctant to address their own weaknesses, by asking students to give advice to someone else instead of focusing on themselves will increase student willingness to identify issues these "other people" may have and suggest ways to help them address the deficiency.

In person, single, semi-structured interviews were used to help students compare and contrast how they felt learning with heightened choice while following their own set goals compared to a more controlled teacher-directed learning environment (see Appendix B: *Figure B1*). Questioning was used to help students access their

metacognitive capabilities to determine preference. Students were asked whether they felt more in control of their learning, and in turn, felt that their understanding and interest was enhanced through heightened choice and self-regulatory behaviors, or conversely, whether they felt more supported and confident in a familiar directed environment in turn feeling as if they understood the expectations of the lesson or subject matter less than before. Questioning also revealed student opinions and perspectives on enjoyment of the subject as well as their willingness to put effort into their work.

Semi-structured self-reports are a more individual and specific way of measuring student learning and dispositions. The consistent nature of this measure can allow the researcher to compare responses between students as well as to past responses in other formats. The semi-structured interview used in the study (see Appendix B: *Figure B2*) asked specific questions about student opinions regarding their role in their artwork and what they think the teacher's role *is* and *should be*. By structuring these questions and delivering the interview one-on-one instead of addressing the questions in open dialogue, students were able to take the role of the teacher out of context and respond to me, the teacher, in the role of a researcher.

In person, single, unstructured, spontaneous narrative discussions were used to help students identify problems they may personally experience in their learning and to assist them in developing an approach when confronting personal roadblocks in their processes. Inductive methods were implemented to determine what students thought their biggest weaknesses were in their learning and help them investigate meaning behind their reactions when faced with a challenge. Unstructured interviews with students

helped me determine how to approach instruction and what strategies to emphasize in the lesson to help students achieve a growth mindset approach to learning and sustain motivation short and long term. Students were also prompted to reflect and discuss their artwork with peers and respond to the work of others with the help of guided critique checklists.

Limitations

Along with limitations previously stated regarding existing data collection and self-report measures, this study also has limitations. First, and most obvious, this study is geared toward 5th grade students in a general art education class. Some of the self-report measures and interview questions used in this study would not be appropriate for use with younger students because of the written demands and reliance on in-depth reflections and thought organization, nor would they be appropriate for adult learners as they are worded and structured to cater to an adolescent audience. These measures are also formatted to be quickly recorded for use in class without taking too much time away from demonstrations and studio work. Though written self-report measures were collected at the beginning, middle, and end of the study, the short time period of this study makes it difficult to see a true measure of student growth over time. Further research into long-term implementation of these strategies as well as overarching cross-curricular application needs to be conducted to measure lasting effects of these methods on students.

Data Analysis

Organization of Data.

Data was organized in a variety of ways depending on collection methods. Written self-report data such as project plans, reflection sheets, and artist statements or alternative assessments needed to be photocopied and collected in folders labeled with pseudonyms and filed in a locked cabinet to allow for comparison of responses. Oral reports such as group interviews and semi-structured individual interviews required audio recording and written notes taken at the time of discussion for immediate reference, recordings of these discussions were later transcribed. Photographs of student artifacts were taken and stored digitally in password protected folders using an artwork observation protocol. Photographs of work were used to compare students' ability to plan and set goals with effortful control and reasonable consideration of time. Student class responses and informal discussion responses were logged in a hand-written reflection journal and kept in a locked desk drawer.

Coding of Data

Self-Report Measures. Written self-report measures were coded to the students' responses based on frequency and indication of the value students placed on certain aspects of EF from the rating scales. Discrepancies in teacher/researcher interpretation of data and student opinion were recorded in graph form to show a relationship between how the student thought they were utilizing strategies, meeting expectations, or thinking about their thinking and how often the teacher recorded these behaviors.

Verbal Interviews. Semi-structured interviews were designed to follow specific protocols and were audio recorded and transcribed. Transcriptions of interviews were coded to determine participant responses as well as frequency of responses as they appear in individual participant and group discussion. Self-report indicators were used to help determine possible further discrepancies in participant and researcher interpretations and how these responses change over the course of the study.

Photographs. Photographs of student artifacts were taken and uploaded to secure student files. Photographs provide reference for comparison of student self-report data to final product result. History of student ability, consideration of occupational and physical therapy accommodations, and ability to meet self-set goals are all factors of consideration in objectively coding effort, ability, and self-regulatory behavior.

Observations and Discussions. Notes during observation and discussions were recorded in a reflective journal and categorized by student and whole class responses. Even though only select students are included as participants of the study, grade level concerns and questions were noted to take all students' challenges and frequently occurring "road-blocks" into consideration. Common themes identified in verbal discussion focus on EF processes (ability to set goals, organize, prioritize, shift flexibly, access working memory, and self-monitor) used and the degree to which they were used, self-efficacy through willingness to adopt a growth-mindset (try new things and work through challenges), self-regulate learning (set goals, problem solve, work independently,

self-reflect, identify strategies), and effortful control (motivation, effort, attention, emotional regulation).

Methods of Analysis

Coding and constant comparative methods were used to record data sets for students as well as to compare data between student results. Inductive analysis was used to find themes within the visual, verbal, and written data to help build an artistic learning profile in terms of EF and SR for each participant. Logged data, results, and artifacts can be found in Appendices E-L.

Timeline of the Study

Before beginning this study, I sought approval for my proposal on December 8, 2018 from a review board at Moore College of Art and Design before the study was presented and approved for IRB. After receiving approval, this study was then authorized by the building administrator of Peter Muschal Elementary School and permission slips were distributed to six carefully chosen participant candidates from a 5th grade homeroom on January 10, 2019. Permission was requested to be granted or denied in writing by January 17, 2019. During this time, I continued to research methods and strategies to help heighten effortful-control, improve self-efficacy, and emphasize executive function skills through art processes as well as how the development of identity in adolescents could influence the expectations of student readiness and the results of the study.

From the start of the 2018-2019 school year, students were asked to use basic executive function skills (though they were not specifically identified to the students as executive function skills) by verbally indicating goals for themselves through individual and group discussions and reflecting on their work through unstructured "turn and talk" mini critique discussions with a partner. Whole group critiques took place after completion of projects in which students shared "Artist Statements" and volunteered to contribute compliments, constructive criticism, and ask questions about peer work as an introduction to reflection and artistic communication. No verbal or written data was administered or recorded at the point prior to the official start of this study in February 2019. All six initial requested participants returned permissions signed by a parent/guardian and the student granting permission by January 20, 2019.

After collecting the *Research Site Support Form*, *Participants Rights for Students*, and *Parental Consent Form for Participants in Research*, students continued to work on Part 1 of the unit plan in which they explored materials and composition. Details for this lesson will be discussed further in Chapter 4 in terms of how these activities were used to scaffold understanding for Part 2 of the unit plan and onset of data collection. Once students completed "Part 1: Materials Exploration" portion of the unit plan, I was able to begin administering group interviews and self-report data collection questionnaires, which were coded by frequency of response and student indication of use of strategies. Students participated in informal class discussions and individual interviews as well during the course of the study. Photographs were taken of student artifacts which align with data collection matrices, in-progress, and completed project work samples.

In the following chapters each method of data collection will be explained in terms of collection, coding themes, and the impact the resulting information had on the way I approached instruction and the expectations I had for each student as they progressed through their work. Data will be presented by assessment and data collection type in a sequential order to help illustrate how EF concepts were introduced to students and show how questioning and unit activities were used to promote metacognition and SRL.

CHAPTER IV: RESULTS OF THE STUDY

Data Collection and Organization

Introduction

This study focused on the introduction and utilization of strategies to access executive function skills and heighten self-regulatory behaviors in 5th grade art students during their weekly 35-minute art class period. This study investigated how to apply existing research of EF and SRL as well as the consideration of developmental stages to help students be successful in planning and designing projects, realizing goals, and reflecting on work habits and project results while taking emerging skill levels and physical and cognitive abilities into consideration. Data collected from participants helped to steer the pacing of the unit and alter the design of the classroom environment to help students work both independently and collaboratively.

Setting the Stage

I began this year by making sure to give 5th grade students freedom in materials choice and responsibility in obtaining their own materials to promote a foundation of self-reliance as I transitioned my teaching to allow for more choice and autonomy. I also opened this year with oral questioning and discussion activities to encourage reflection to help students begin to think about how they feel about art, how they think other people view their art, and what they think could help them in developing their artistic abilities. This informal questioning was intended to introduce the idea of a self-reflective practice which continued and became more in depth over the course of the study. In establishing

a more balanced, less authoritative role with my students, students were required to use metacognitive practices to drive their choices and decisions. In order for students to operate independently and respond openly, key underlying elements of this study were trust and the building of a supportive art room environment. If I wanted students to share honest reliable responses, criticize their process and products constructively, and try new ideas, students needed to trust that they would not be penalized for taking risks or experiencing challenges in their process. It was important for me, as teacher and researcher, to maintain a feeling of support for my students while discouraging their constant pursuit for permission and approval as well as their reliance on explicit teacher directives.

I did not initially create a specific timeline for gathering data for the study because my students were still working through the materials exploration lessons in Part 1 of the unit plan (see Appendix C, *Figure C17*). For the unit, "Exploring Identity: A Materials Exploration and Illustration of 'Self' (see Appendix C, *Figures C17 and C18*), students were asked to complete a series of still-life drawings and paintings with a focus on composition, color, technique, craftsmanship, and time management in a variety of materials including: oil pastel, tempera paint, watercolor paint, chalk pastel, colored pencil, or graphite pencil, with optional extension activities including collage, digital drawing, and digital photo editing. These lessons were introduced by helping students find interesting compositions of the same item through use of a view finder or cropped digital photograph.

As a class, the importance of composition was discussed as well as how the size and position of a composition can change the focus of the artwork or communicate something different about the subject depending on how close or far you "zoom" in or out. As a class we also discussed how different compositions may be easier to execute with certain materials than others due to attempting fine details and textures on a surface that may not be evident when "zoomed out." This lesson included material and technique demonstrations to help students achieve blending, value, shadowing, and highlighting in their still life compositions. These lessons were presented as limited to moderate choice according to "The Art of Education: Choice Spectrum" (see *Figure 4*) and intended as a foundation for skills that could carry over into Part 2 of the unit.

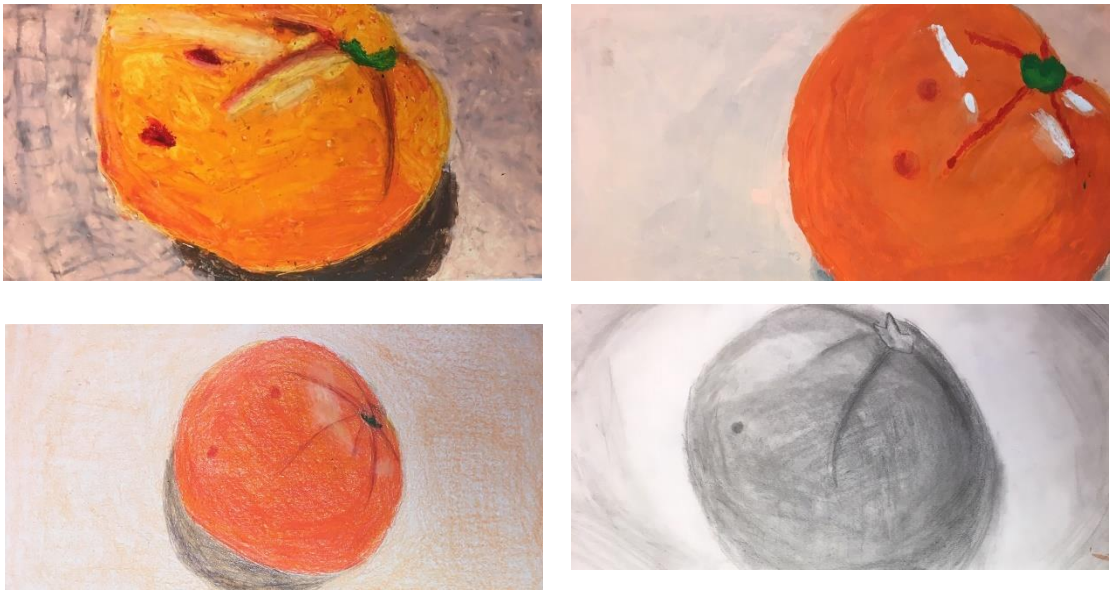
Students were expected to complete between three and six finished works containing a consistent subject matter, each in a different material with emphasis on technique. I attempted to allow my students to steer the pacing of their work so they could determine when a work was "completed" or when it required more attention, however, this created some issues with the timeline. Some students were more intrinsically motivated than others and therefore made progress more quickly on their work while other students only completed one or two still life compositions. Students were instructed to keep track of their process using the *Materials Pros and Cons Chart* included in the unit packet. Students were later reminded to use this chart as a reference and as part of their tool kit for reflective practices when choosing their materials for Part 2 of the unit. Time constraints due to short class times, once weekly lesson meetings,

disruption in the schedule due to bad weather, and class periods following pack-up for dismissal all also contributed to the slow progress of introductory lessons.

Figures G1a-G1e. V.G. Materials Exploration Still Life Compositions

Figures H1a-H1c. L.L. Materials Exploration Still Life Compositions

Figures I1a-I1c. T.R. Materials Exploration Still Life Compositions



Figures J1a-J1d. C.F. Materials Exploration Still Life Compositions

*Figures K1a-K1c***.** D.M. Materials Exploration Still Life Compositions

*Figures L1a-L1c***.** K.P. Materials Exploration Still Life Compositions

This series of activities was designed as the preparatory introduction to the main moderate choice lesson, and portion of the unit this study focused on, “Eye-dentity.” For this portion of the unit, students were asked to create a list of adjectives for themselves as well as gather adjectives from classmates in an “ice-breaker” activity to get them to start

thinking about their identity. Using their lists of characteristics, students needed to choose either themselves, an animal, or individual that they felt best represented them from their perspective, characterized how others saw them, or illustrated traits they wish they had or are working on. Students were then introduced to the "Project Planning" and "Goal Setting" worksheets (see Appendix C, *Figures C3 and C4*) to help them organize their ideas from their adjective list and brainstorming worksheets and create a plan towards completion of a finished product each art class period. Students were encouraged to reflect on the materials explorations they had completed and to reference their *Materials Pros and Cons* chart when choosing how they were going to compose and execute the subject matter of their choice. Students were asked to bring in or email me reference images they would need to look at during their project planning stage. Students also were advised to consider size, material, texture, and complexity in their project design and explain what their choices communicated about their personal identity.

Once students began Part 2 of the unit in which they were setting their own goals and working more independently on the creation of their artwork, I was able to begin gathering data about how students viewed their own artistic ability, strategies they thought were helpful to assist them in creation, and their opinions on the importance of goal setting, planning, metacognition, collaboration, growth mindset, motivation, classroom management, and instructional methodology.

Data Collection

As described fully in the Research Methods section of Chapter 3, data was collected both verbally and visually during the course of the study. Verbal data collection included: a moderated semi-structured group interview, informal spontaneous in-class discussion and observations, peer collaboration in critiques, and individual in-person verbal interviews. Visual data was collected through the use of an initial metacognitive baseline self-report questionnaire, project planning and goal setting worksheets, reflective practice rating scales, artist statements, and written summative assessments. These data collection types are supported by images of student artifacts.

Adjustments to Methodology

During the group interview participants suggested that seating should be adjusted to make it easier for students to collaborate and constructively criticize each other's works in progress. Based on the information gained from the group interview, seating was changed to seat students in groups and pairs depending on material choice (oil pastel, colored pencil, tempera paint, watercolor, colored pencil, graphite pencil, or chalk pastel) and project subject (animals with fur, animals with feathers. animals with scales, smooth skin, etc.) to allow for more meaningful collaboration and peer support as students worked through challenges. This intentional seating was a minor adjustment to lesson implementation as a result of student suggestions to increase motivation and collaboration. The following excerpt is taken from the moderated semi-structured group interview given towards the end of Part 1: Materials Exploration section of the unit plan.

I: So, what are things you think I could help you with most? Is it when you're coming up with an idea, or coming up with plans, or doing those specific things that you like tips on? What is it that you need most help with?

L.L.: Sometimes ideas.

K.P.: Maybe like blending because sometimes when I blend it gets all messed up.

L.L.: Or it's gets too light or too dark.

I: With all materials or just certain things?

K.P.: Just certain things.

I: Okay.

D.M.: Sometimes just like, specific things like blending and stuff, like they were saying and sometimes just like a plan kind of like what we're going to do or if it's just like go do it or something. Also, just like kind of like more, I don't know, kind of like just more people helping, like, yeah, helping but nor saying, "oh you should do it this way," but maybe more like "oh, you should try it like this."

I: So, working more in groups you mean, or with partners?

D.M.: Well, kind of just like if someone needs help, like if I'm sitting, like if--that's my spot right there--so if I'm sitting there and I'm like T.R. is this… what do you think I could do to make it like look more realistic?

I: What do you all as a group think? Do you want more time to collaborate with each other? We did a big critique at the end of our project last time which took a really long time, but I think you guys had some really good ideas. Would it be better to have like mini break-out sessions like that along the way?

T.R.: Mmmhmm

D.M: Yeah.

C.F.: Yeah.

L.L.: Yeah.

I: What do you think V.G.?

V.G.: Umm… I don't know I just think I am always having trouble figuring out when I am done and things. So... well…I think I'm done because I have like a lot of detail and I have basically like the figure drawn, but maybe I need to add more things, like with the pencil I needed a really really dark and a light, and I didn't have that so...

I:	So, for our next project, would it help you if you sit together with people depending on what materials you are using? So that you can kind of—
L.L.:	Compare and contrast.
I:	Would that be good?
C.F.:	Yeah.
T.R.:	Yeah.
L.L.	Maybe.
D.M.:	Yeah.
L.L.:	Like maybe even if they were doing the same fruit they could sit next to each other and they were both doing colored pencil they could sit next to each other because then they could compare, and contrast and they can say, oh your orange looks different than my orange and help each other make it better.
I:	So, seating by whatever the subject matter is too?
T.R.:	Or, like people who had like—like I was the only person doing a lemon and Jack was the only person doing grapes, so we could sit together and then we each have our separate fruits but then we…but once we're done with then we can keep going over it.

Figure 11. Excerpt from Group Interview Regarding Seating Adjustment and Collaboration

Also, after considering the frequency in which students mentioned practice, videos, tips, and instructional drawing references in the *Artistic Survey* and during the group interview I decided to allow optional phone access in addition to the required reference image for students to search and view instructional videos with tips on how to approach a material or how to draw a particular portion of their composition. Students could also use their phone to help them alter photos to black and white, crop to find interesting compositions, and listen to music using earbuds.

Students were held to the same phone expectations as in Part 1 of the unit which complied with school outlined rules for phone usage. Phones remained off until students entered the art room, all searches and music choices could be reviewed or monitored at

any time while students used their device during class time, and any student who was seen using their phone inappropriately or not for the intended purpose of the lesson would lose phone/device privileges for the remainder of the unit. This was not an initial strategy I planned to include to help students become more self-regulated in their learning or increase focus and motivation, however, it was apparent that students were craving explicit directions for techniques that I could not provide to each of them during the short time period. However, phone usage was limited to between five and ten minutes depending on how students were using the videos and how much work students were able to complete while also using their device.

In addition to these adjustments, the individual written summative assessment performed at the conclusion of the unit in the form of a *3-2-1* questionnaire was added to the study in order to help clearly define three things students recognized about their process, two things that surprised them as they worked, and the one thing that they really enjoyed about either the process of making their art or the result of the art making. During the course of collecting data it became apparent that in order for the study to reflect how students felt about their art making and what they perceived as important or challenging aspects of the design process, a final open-ended response needed to be collected to support the results of the culminating data collection.

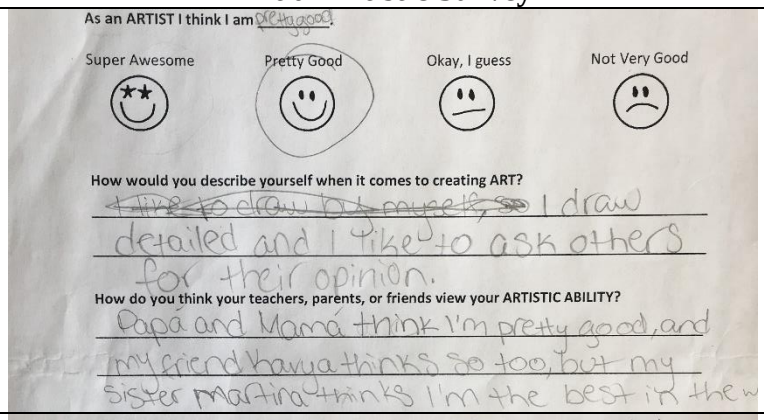
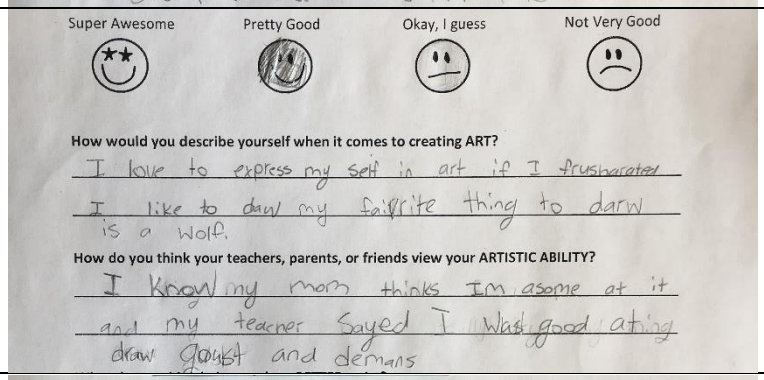
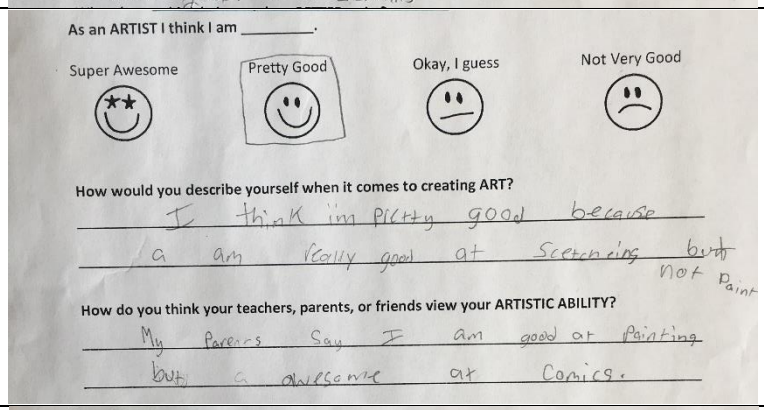
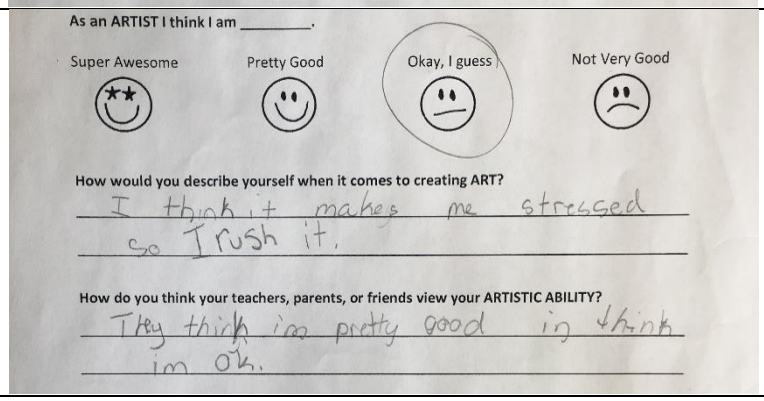
In the sections that follow, data will be presented sequentially and by data collection type. Data presentation will include verbal interviews (individual and group), self-report measures (initial surveys, mid- and post- rating scales), summative assessments (3-2-1), observations (informal in-class), and student artifacts (in-progress

and completed artwork, accompanying artist statements, and photographs of student responses).

Presentation of Data

Initial Artistic Survey

At the initiation of this case study and as an introduction to the new unit, students were asked to complete a written self-report measure in the form of an *Artistic Survey* (see Appendix C, *Figure C1* and Appendix E, *Figures E1a-E1f* for full artifacts) to gain insight into how they envisioned themselves as artists, how they thought other people viewed their artistic ability, and some things they thought were strengths and weaknesses for them. This survey also asked students to start thinking about what they think could help them improve as artists. This survey was distributed to the whole class (participants and non-participants) as part of the unit requirement but only results for participants were logged and coded as an initial baseline for student disposition and metacognitive awareness.

Participant	**Initial Artistic Survey**
V.G. *-Pretty Good* *-Likes drawing details* *-Likes asking for opinions* *-Mother, father, and friends all say she is pretty good. Sister says she is the best.*	 As an ARTIST I think I am pretty good. Super Awesome / Pretty Good / Okay, I guess / Not Very Good How would you describe yourself when it comes to creating ART? ~~I like to draw by myself, so~~ I draw detailed and I like to ask others for their opinion. How do you think your teachers, parents, or friends view your ARTISTIC ABILITY? Papá and Mamá think I'm pretty good, and my friend Kavya thinks so too, but my sister Martina thinks I'm the best in the w
L.L. *-Pretty Good* *-Likes to draw wolves* *-Mom thinks she is awesome. Teachers have told her she is good*	 Super Awesome / Pretty Good / Okay, I guess / Not Very Good How would you describe yourself when it comes to creating ART? I love to express my self in art if I frusharated I like to daw my fairrite thing to darw is a wolf. How do you think your teachers, parents, or friends view your ARTISTIC ABILITY? I know my mom thinks Im asome at it and my teacher Sayed I Was good ating draw goust and demans
T.R. *-Pretty Good* *-Thinks he is good at sketching but not painting* *-Parents say he is a good painting and awesome at comics*	 As an ARTIST I think I am _____. Super Awesome / Pretty Good / Okay, I guess / Not Very Good How would you describe yourself when it comes to creating ART? I think im pretty good because a am really good at Scetching but not Paint How do you think your teachers, parents, or friends view your ARTISTIC ABILITY? My Parents Say I am good at Painting but a awesome at Comics.
C.F. *-Okay, I guess* *-Thinks he rushes* *-Feels stressed* *-Others think he is pretty good even though he thinks he is ok.*	 As an ARTIST I think I am _____. Super Awesome / Pretty Good / Okay, I guess / Not Very Good How would you describe yourself when it comes to creating ART? I think it makes me stressed so I rush it. How do you think your teachers, parents, or friends view your ARTISTIC ABILITY? They think im pretty good in think im ok.

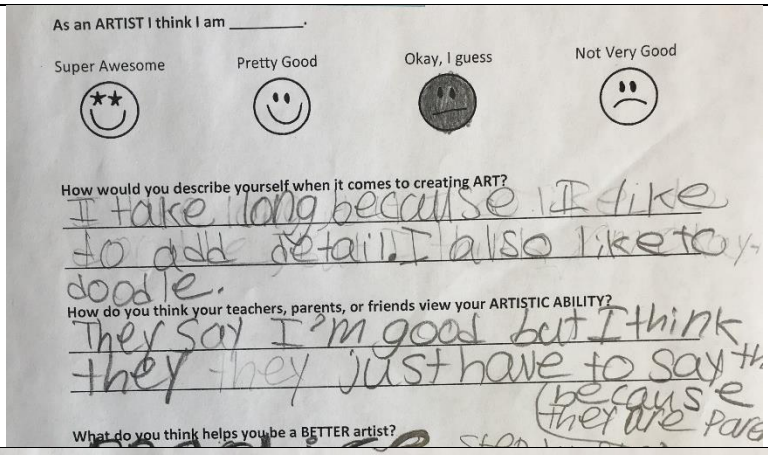
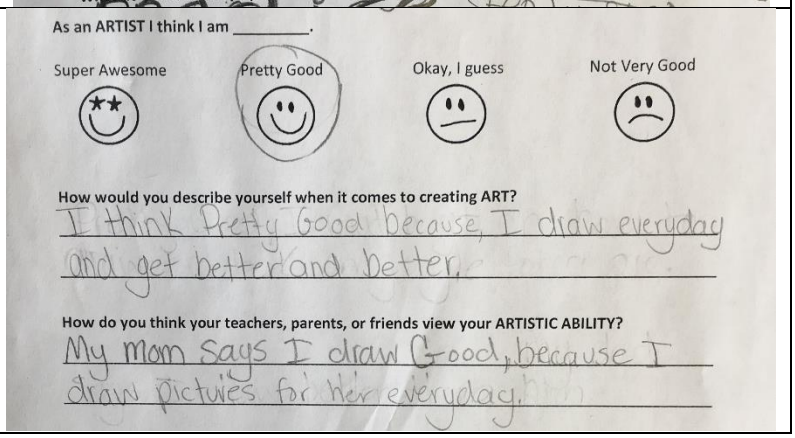
D.M. *-Okay, I guess* *-Takes a long time* *-Likes to add details* *-Doesn't believe people when they tell her she is good*	 As an ARTIST I think I am _____. Super Awesome / Pretty Good / Okay, I guess / Not Very Good How would you describe yourself when it comes to creating ART? I take long because I like to add detail. I also like to doodle. How do you think your teachers, parents, or friends view your ARTISTIC ABILITY? They say I'm good but I think they just have to say because they are pare What do you think helps you be a BETTER artist?
K.P. *-Pretty Good* *-Practices often* *-Notices improvements* *-Thinks parents think she is good*	 As an ARTIST I think I am _____. Super Awesome / Pretty Good / Okay, I guess / Not Very Good How would you describe yourself when it comes to creating ART? I think Pretty Good because, I draw everyday and get better and better. How do you think your teachers, parents, or friends view your ARTISTIC ABILITY? My mom says I draw Good, because I draw pictures for her everyday.

*Figure 12***.** Excerpts of Student Responses to Artistic Survey

Moderated Semi-Structured Group Discussion

Student responses to questions during the *Moderated Semi-Structured Group Discussion* given during the first week of the unit lesson on "Eye-dentity" were important in developing questions for the individual interviews so I could allow students to elaborate on answers they had been introduced to previously. This group discussion format was also important in introducing ideas about metacognition, planning, goal setting, teaching methodology preferences, and classroom dynamics.

Thought Processes. The first excerpt, (see *Figure 13:* Excerpt from Group Interview: Metacognition- Student Thought Processes) explores what students know and feel about how they approach their thinking, organize their thoughts, think about the ideas they come up with, and determine their understanding. This question was intended to be an initial inquiry into metacognition and reveal how comfortable or aware students are when discussing their thought processes and understanding. This question was difficult for students to discuss and was confusing for many participants initially and even as we moved on from this topic. Some students stated they weren't entirely sure how to talk about their thought processes or how they check for understanding, or even what we were talking about.

I:	So, what we're going to do is go over a few questions. And you can just talk. Think of this like a discussion, you don't have to take turns or raise your hand, and anyone can answer any question. Just be respectful of your classmates when they are sharing and try to be as honest as you can. First, I want to know how often do you all actually think about your thinking processes? How often do you think about how to organize your thoughts, reconsider things, or reflect on an idea so you know you understand it?
T.R.:	Umm, I always like think like about my thinking like every time after I think about something I think….
I:	So, you think about it after you have an idea? Like you reconsider what you came up with?
T.R.:	Yeah, yeah because… yeah, I am like, yeah wait did I….was that supposed to come up like… my mind, things just come up randomly. During art class I am like why did this come up? But this could be good. Like all these things come up like umm…
L.L.:	(Laughter) C.F.'s reaction…
I:	So, you think about things after you have an idea? You think about it after you think instead of making a plan or brainstorming before?
T.R.:	Yeah.

I:	Okay.
L.L.:	Me and C.F. are like sharing looks at this point.
I:	Okay, why?
L.L.:	Because we're very confused
C.F.:	I have no idea what you're talking about.
I:	Okay, that's okay. How often do you reflect on your thinking process to see if you're on the right track or if you understand something? Or don't you?
L.L.:	I don't really.
D.M.:	I do it after I do it.
I:	You do it after too?
D.M.:	So, like sometimes if I'm like trying to think like what do I do to like make this better, I would like think of a good idea and kind of just get everything for it and then I would like rethink about it, like is this good or not?
I:	So, you "re-think" things. Okay. Anybody else?
K.P.:	I do the same thing as D.M. and T.R.
I:	Okay.
K.P.:	And then I have to think about how to make it better because I just mess it up.
I:	So, what you are saying, just so I am clear, is that you come up with an idea kind of quickly but then you sort of mull it over afterwards and work it out?
All:	Yeah
D.M.:	It's like, I feel like, when I think about something and then I like actually put it on paper, it's better after, and not the quick thought. Like after I like fix what I was thinking of before.
I:	Okay, any other ways? There's no wrong answer. For me, when I am trying to come up with ideas or decide if I really understand something, I think about it for a long time before hand, sometimes I will make lists or a word web, and then I make a decision about what to do next. After I finish I like to look back and make sure I understand everything and that it makes sense and looks good. But you are all telling me you do the opposite, you come up with an idea quickly with little planning, try it out, and then think about what you did mostly after, so this interesting to me.
T.R.:	I sometimes do both too, but mostly I just do the after. But I think about it a lot, like I do it a lot. I like to know that I understand it umm like really well and that it's good.

C.F.: Yeah both.

I: You come up with something quickly, but you think about it a little before and after?

C.F.: Yeah

L.L.: Most of the time I'll think about it and then just do it.

I: K.P. what do you think?

K.P.: Ummm, I think…hmmm

I: Like, do you think about what you're doing and why you are making those decisions when you come up with an idea? Or do you ever think about what you're doing and wonder if you really understand the information?

K.P.: Yeah both. Sometimes I think about it long, and sometimes I think about it short, but usually to fix things after.

I: And when you go back to fix things, how do you know you understand something or that you've made enough improvements?

K.P.: Ummmm, I don't know, I just look at it and try to make sure it's right. Like I know I study before a test so then it helps me, but then if I get stuck on the test I try to think about what I practiced and then I write it down, not like on a separate piece of paper, but like on a blank piece of the paper and then I start to remember.

I: So, when you review or reflect on something that you did before.

K.P. Yeah.

I: Do you do that visually in your mind? Like, do you close your eyes? Or how do you remember those things?

K.P.: So, sometimes, like I study really hard then I write it down on paper, and then when I get to school, like if I have a social studies test, let's say, I would take maybe like a piece of blank paper or like a side of my test that's blank so that I can write down the notes if I get stuck on anything.

I: What about you V.G.?

V.G.: I still don't really know what you're talking about.

I: Okay. That's okay too for now. So, this lets me know "thinking" and "understanding" is definitely something I want to explore…

L.L.: Work on.

I:	Explore more, yeah. Helping you actually start to think about what you're doing and why you have those ideas instead of just feeling like you don't know why you're doing something or doing something that you are not sure you understand. And then helping you look at what you've done and find improvements on your own.

Figure 13. Excerpt from Group Interview: Metacognition- Student Thought Processes

Identifying Strengths and Weaknesses. The second part of metacognition that was explored through the group discussion was the students' abilities to identify strengths and weakness in themselves and their work (see *Figure 14:* Excerpt from Group Interview: Metacognition- Identifying Strengths and Weaknesses). Identifying strengths and weaknesses is important in helping students identify gaps in their understanding and reveals a lot about a student's self-esteem and confidence in an area. Students were asked to begin thinking about strengths and weaknesses during their initial Artistic Survey in the form of a Venn Diagram prior to this discussion (see Appendix E, *Figures E1a-E1f* for full artifacts)

I:	Alright, so is there anything you think you are really good or really bad at? And then how do you know that you are really good or really bad at those things?
K.P.:	Does it have to be like art related?
I:	Uh, no it doesn't have to be art related. This is similar to what we did on our Artistic Surveys when you filled in the circles in the Venn Diagram. So, is there anything you think you are really good at or really bad at?
L.L.:	I'm really bad at reading.
C.F.:	I'm really bad at writing.
K.P.:	I'm really bad at, um, math.
L.L.:	We're just gonna name all of our *bad* things.
I:	Yeah that's what I was picking up on.
L.L.:	It's like we have no confidence.

V.G.: Not to brag, but I think I am good at like logical thinking.

L.L.: I don't even know what that is.

D.M.: I don't think I am really bad at anything. I don't like think I'm like amazing at everything, but I just don't think I'm like at level 0 with everything.

C.F.: I think I am kind of good at art.

I: Okay.

K.P.: I know I am good at writing.

T.R.: I'm like kind of good at writing but sometimes like I have like, I have trouble elaborating.

I: So, you think writing is difficult for you because you have trouble elaborating?

T.R.: Yeah, so like, I like, try to elaborate but, yeah.

V.G.: I'm also good at math.

L.L.: I'm good at math.

C.F.: I'm okay at reading.

D.M. I mean, writing is like sometimes for me. It's like sometimes I'm like good at it, and sometimes I just like can't think. I'm really in the middle though. I don't know. Well, I mean kind of. I'm not like amazing at it, but I'm like okay sometimes.

I: So, what I'm hearing is that most of you think there are things that you are good at, and you also recognize there are things that might challenge you. And there's some things that you feel kind of in the middle about.

So, how do you know that you are good or bad at those things? I'm going to give you some options, but you can say anything.

So, when you're talking about like, how do you know that you're good at logical thinking or how do you know that you're good at math…is it because people tell you you're good at them? Because you enjoy doing it, you like doing it and you feel good about it? Is it because you used to not be good at it and now you see improvement in yourself. Or is it because when you compare yourself to other people you notice that you are better than them?

C.F.: For art I have all of those things.

I: For art you have all of those things?

C.F.: Yeah

I:	So, for art people tell you you're good at it and you like doing it and you've seen improvement, and you compare yourself to other people.
C.F.:	Yes.
I:	Okay. And that's the same thing for you T.R.? (Shaking his head affirmatively)
T.R.:	Yes. For art, yes.
I:	V.G. What do you think?
V.G.:	Um, well, I enjoy doing it, and I kind of compare myself to other people.
L.L.:	I compare myself to other people.
D.M.:	I feel bad comparing myself to other people.
L.L.:	Why? Because then you can criticize them!
D.M.:	It's either like I'm better and I don't want to say anything or like two, it's like I'm worse and I try to do something more and I just mess up my painting…or whatever we're doing.
I:	So, how would you say you know you're good at something?
D.M.:	Um…I don't know, I think like, some people tell me I'm good at something.
I:	Okay.
K.P.:	I know I compare with writing. I compare myself with other people because I usually write like two or three pages and other people usually write like a page and a half.
I:	Okay.
D.M.:	It's about quality not quantity.
I:	What do you think V.G.?
V.G.:	Umm…well I kind of, I like only compare myself to other people like a bit.
K.P.:	Yeah, I don't tell them, I just look to see how much they wrote.
V.G.:	Umm…like sometimes, there's some people that I like know are better than me, but I know that I can be better than them if I like work hard.
I:	Okay. So, you don't always compare yourself to other people because right now you know that they might be better but if you keep improving then you could get better than them.
V.G.:	Yeah.

Figure 14. Excerpt from Group Interview: Metacognition- Identifying Strengths and Weaknesses

Growth Mindset. Blackwell et al. (2007), Burnette et al. (2013), and Yeager and Dweck (2012) indicate that a growth mindset can instill a desire for students to take on challenges and build their perseverance to overcome challenges and failures instead of accepting that they are "not smart enough" to prevail (Yeager, et al., 2016; Dweck 2010). For students, accepting a growth mindset can motivate them to try new things, take risks, and approach challenges with an understanding that they may not be able to do reach their goal *yet*, but that with time and practice they will improve (Sternberg & Lubart, 1999). This discussion of growth mindset was approached from an impersonal standpoint in accordance with the Yeager, et al, 2016 study, which found that when suggestions on growth and improvement are meant for someone else it feels less personal and less critical. Students included in the Yeager, et al, 2016 study showed that they were more open to discuss growth mindset tendencies through indirect framing where participants were asked about someone else instead of themselves. The following excerpt from the group discussion explored the participants' growth or fixed mindset status and gave insight into how students in this study perceive the ability to learn and grown as well as how people can overcome challenges they may be confronted with (see *Figure 15*. Excerpt from Group Interview: Growth Mindset).

I:	Do you think some people are naturally smart and some people are less smart, from the time they are born? Or do you think people can change and people can become better at things that they are bad at?
K.P.:	People can change.
C.F.:	People can change.
L.L.:	People can change.
T.R.:	People can change.

V.G.: People can change.

D.M.: Both. I mean cause, I feel like some people are born smarter but other people who like aren't as smart, they're not just going to stay not smart.

I: So, you think some people are born smarter but also people can learn?

D.M.: Yeah.

T.R.: Yeah.

D.M.: I feel also you can lose knowledge kind of. Because if you don't do anything for like 3 years you'll forget…

L.L.: Just watch TV…sitting in your house playing video games…

V.G.: I think maybe it's easy for some people to change if they believe in themselves, kind of. And some people just don't want to learn and stuff and that's why they stay like, not smart.

I: What do you guys think?

C.F.: I think that people can change.

I: Okay.

K.P.: Yeah, people can change.

I: And that's what you said as well right L.L.?

L.L.: Yes.

I: T.R. what do you think.

T.R.: Um I think people can change, and like, I think people like, um yeah, I think people can learn but I don't think, not always people are naturally smart. Just say when they are 3 and 4 and then they learn how to read and do better, their mindsets are changing all the time…

I: Because they are growing?

T.R.: Yeah, so like it really depends.

D.M.: Actually, I take back naturally smart. You're naturally smart in some areas. Everyone is like better at something.

I: So, people have their strengths?

D.M.: Yeah.

K.P.: Like some people could be good at drawing and some people might not be good at drawing but they might be amazing at math. But, like someone who is not that good at drawing can still like become better.

L.L.: Morph into a smarter person.

I: So, overall though you would say that people who are bad at something probably will not *always* be bad at that thing, they can get better?

L.L.: Yeah, they can get smart if they want to.

I: So, this next question could be about you or someone else. What are some strategies you can use if you get stuck or run into a challenge? What could someone do to get better? And if you feel like you're stuck and don't know what to do, what can you do to get unstuck?

K.P.: It takes practice.

C.F.: Yeah practice.

L.L.: Practice.

C.F.: Watch YouTube videos on tips.

K.P.: Practice.

D.M.: I feel like tips are better than like steps because steps it's kind of like, it's like it's not really helping, it's kind of just like… in a drawing book I can draw like way better than like just regular, so I feel like it helps but not that much.

I: So, you think tips are better than steps? What do you mean by tips?

C.F.: Videos.

D.M.: Like saying you can kind of like do, like if, hmmm I'm trying to think. Like if you're trying to like paint something if they're like oh paint it with a smaller brush and in this direction or something.

I: So instead of just a set of directions, really going over the how?

D.M.: Kind of just like a little nudge instead of just like a path.

C.F.: Kind of like if you do this it will look better I guess.

I: Okay.

V.G.: Trying to learn more about what you're bad at.

I: Do you mean go to a library and research it?

V.G.: Well like maybe umm try to practice more and also like umm… look at what other people are doing too, well like other people who know what they're doing, but try not to compare yourself to them too much. But umm… maybe you could use some like techniques to help you.

I: And then, what do you think T.R.?

T.R.:	Well I think like when I practice I usually umm like sometimes use YouTube videos, but like D.M. said I do with tips too because like umm, I went to this art museum and then they gave us a sketch book and then like gave us tips about like how to add color if you want color or really small details they like told me like different tips to do it.
I:	So, it's like specific tips.
D.M.:	Also, I feel like kind of like creating more, not just like practicing one thing but just like , even if it's not good, making more stuff, well more like…more.
I:	Well, yeah, everything you make isn't always going to be the best thing you make but that doesn't mean that you didn't learn something from it, right? Just like every story you write.
D.M.:	Yeah.

Figure 15. Excerpt from Group Interview: Growth Mindset

Planning. Students' ability to plan incorporates integral components of executive function. Aside from coming up with an initial idea, students need to organize their thoughts and materials and access prior knowledge to determine how to approach a project and what materials they will need to begin. Understanding what motivates students to begin a work of art, or what helps students overcome the sometimes-daunting task of getting started, is important in understanding how to support young adolescent learners as they approach new challenges. The following excerpt (see *Figure 16:* Excerpt from Group Interview: Planning) explores participants' ideas of how they approach new projects and their opinions on the importance of planning.

I:	The next question is, how important do you think it is to plan when you start something new? Do you think of something and just jump right in, or do you think it's important to think about it and then, like you said, come up with a plan, and put it on paper?
L.L.:	Oh, I just jump right in.

C.F.: I sometimes do both. Like I switch.

L.L.: It matters what I am working on.

K.P.: Yeah.

D.M.: Yeah.

I: Okay, keep talking.

T.R. Yeah, I do both but like…

C.F.: If I'm drawing something I'll probably just like not plan it.

K.P.: I'll just write it down on a piece of paper, and then like I'll write notes down on a piece of paper, and then like I'll take notes and write it, like the actual thing.

I: So, if you guys had to rate it from like not at all important, to kind of important, to important, to like really important, what would you rate it?

L.L.: For like planning? I would say kind of important, not too important. It matters if someone is going to see it, it's important, but if no one's going to see then it's like I don't care. I'll just do whatever I want.

K.P.: Yeah kind of important.

C.F. Yeah.

V.G.: If it's really complicated then it's more important.

T.R.: I would say it's important.

I: If it's really complicated (taking notes).

D.M.: And sometimes if you're just drawing, it just like, looks good, even if you don't mean to. Like you don't always need a plan.

C.F.: When I'm drawing I don't really have a plan, I just like drawing it I don't plan it that much.

L.L.: Yeah just draw scribbly lines. Then make something out of lines.

D.M.: I like to just draw like lines and stuff and see how it turns out because it looks cool.

T.R.: I would say important because like when I do artwork like, once I make it I feel like, wow, this could be like…this is like really important to me, and like to others it can be like not as important, but to me I feel like it is really important because I took a lot of time on this so like…

I: So, you think it's important or really important depending on what you're doing?

T.R.:	Yeah.
C.F.	It depends, like kind of like V.G. said. If it's really complicated, you'll want to plan it out I guess.
I:	So, important or very important if it's complicated.
K.P.:	Yeah, same with me. But if it's not like that… if we're just writing something for fun, then like I won't plan it out I just jump right in.
D.M.:	It's kind of cool not knowing the ending, because like if you're trying to plan it and then you do something like to kind of mess it up that you weren't really thinking in your head, you kind of don't feel as good about it as if you were just to jump not it and not know the ending, and say like this could go worse. But when you have a plan it's like I wanted this not that.
I:	So, you're saying sometimes you like to leave it open-ended so that whatever you make doesn't have to reach a certain expectation? Like if it comes out differently than what you originally thought it's okay?
D.M.:	Yeah.
I:	Okay.
L.L.:	Cause like if I'm thinking of something and I mess it up I want to restart it until it's perfect.
D.M.:	Unless, it's like I already have it, and it's like half way done, then I would kind of plan it so I don't just like ruin the paper.

*Figure 16***.** Excerpt from Group Interview: Planning

Goal Setting. Goal setting is another important component of executive function that can aid in helping students become self-regulated learners. Goal setting requires students to self-monitor their progress and make determinations for what they decide are realistic and attainable achievements for a specific time frame, in the case of this study, a 35-minute class period. The following discussion (see *Figure 17:* Excerpt from Group Interview: Goal Setting) looks at how students view being able to set their own goals and exercise independence in their art making process.

I: When we're doing our daily goals like we've done before; would you want more help setting those goals or do you like setting them for yourself?

L.L.: I like setting them for myself because then I feel more independent and more like we get to do what our little heart's desire.

I: Okay.

T.R.: We have more independence for like our art…like in kindergarten through third grade we were more on task but like we had to do this and we could only use certain materials, but now like with our first project that we did this year we got to use whatever materials we wanted like paint, colored pencil, oil pastel, and we got to use all those and we got to make it our own. But like I like comparing it to third grade where we were always on task.

I: So, compared to that where you got free range to use everything, and what we're doing right now which is more structured where I show you and then you practice the materials—

L.L.: I like that because then we can use all the materials but it's also showing us like how and we can see if we liked this one, this one, or this one. Like it's giving us more options.

I: So, did you like having free range? Or do you like having more direction?

K.P.: A little bit both

C.F.: Yeah.

T.R.: Yeah.

D.M.: It has to be balanced.

C.F.: I like it how it's open but still… together.

D.M.: Yeah like organized chaos.

I: (Laughs) Organized chaos…that's how this room functions I think…

V.G.: I think kindergarteners listen because they are tiny and we're older, so we're like more mature…well not mature—

L.L.: No, we're like the opposite of mature.

V.G.: Well, yeah, we're the opposite of mature, but we like don't listen anymore because we think since we're so big we should be like more independent.

I: So, you think that because you're kind of playing with that idea of independence you like when I give you a little more structure so that the expectations are—

L.L.: But I feel like some people are going to like, use that basically by saying, "wait, you're letting us do whatever we want so I'm not going to do any work. I'm just going to talk to my friends."

K.P.: Or maybe give more time limits. And if they don't meet the time limit write their name down and they have to stay in for extra recess.

D.M.: Well also I kind of feel like, if you say "you can do this" then you can have like a time line, like with stopping points, but still throughout them they're still doing their own thing, but they should be at the points. But, like also you don't want to rush art, but that's the thing, you don't want to say stop like cause you want people to do it well, but also you don't just want them to spend months on the same thing.

V.G.: Yeah because sometimes the free range, it's like people think since they can use whatever they want, and they can do whatever they want they don't work hard enough on their projects.

C.F.: They just make things that are silly.

I: What do you think about the results of your products? Do you think your projects come out better when you have more choice or when I give you more directions?

C.F.: More directions.

L.L.: More directions.

K.P.: I feel like a little bit of both.

C.F. Yeah both.

D.M.: It depends because sometimes you're either like, "I don't really want to draw a pear, so it doesn't really matter," but then other times you like, you have to be interested in it, I don't know.

L.L.: It depends on what materials you're using, like I really didn't like using paint, so it really wasn't as detailed.

C.F.: I feel like if you let kids just do whatever they want without testing out the things first they just pick silly stuff and not take it seriously.

Figure 17. Excerpt from Group Interview: Goal Setting

Mid-Project and Post-Project Artistic Process and Progress Rating Scales

Mid-Project and *Post-Project Artistic Process and Progress Scales* (see Appendix C, *Figures C2.1 & 2.2)* were used to gain insight into how students feel they best learn and their opinions about their artistic process and products. Students were asked to rate themselves on an ordinal scale of 0-4, 0 being "Do not agree at all" and 4 being "This is always true." Anchors were read aloud and paraphrased or elaborated upon when needed to ensure students understood the meaning of the question and weight of each benchmark. The intention of this 2-part survey was to help students compare and contrast their own answers about how goal setting, collaboration, and a growth mindset contribute to their artwork during and after completion. Scales were colored by code creating a bar graph on each questionnaire to make the comparison clear and to help students see if there was any change in what they felt helped them in their design processes. Student participant responses from both scales were entered into a table to clearly illustrate mid vs. post responses (see Appendix E, *Figures E2a-E2f & Figures E3a-E3f* for full artifacts).

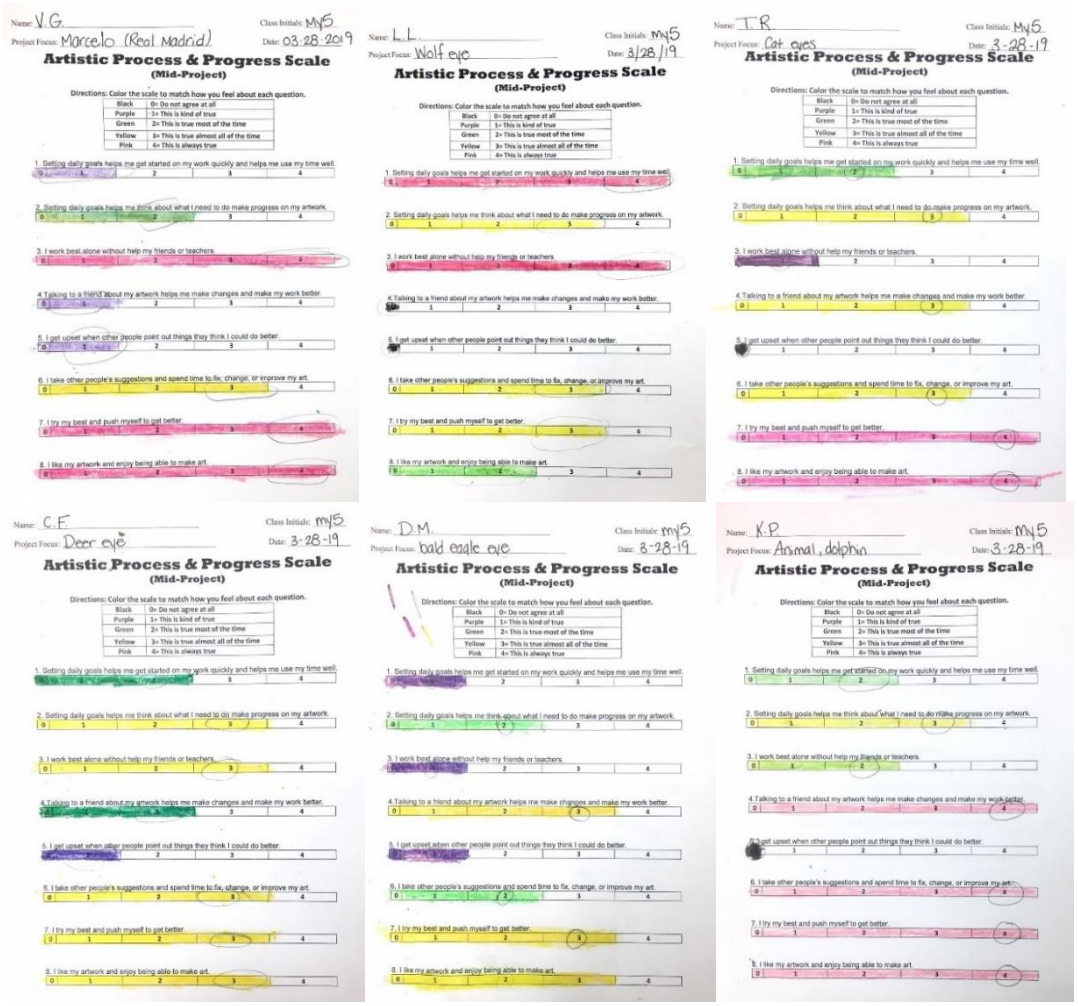


Figure C2.1. Mid-Project Artistic Process Rating Scale Responses

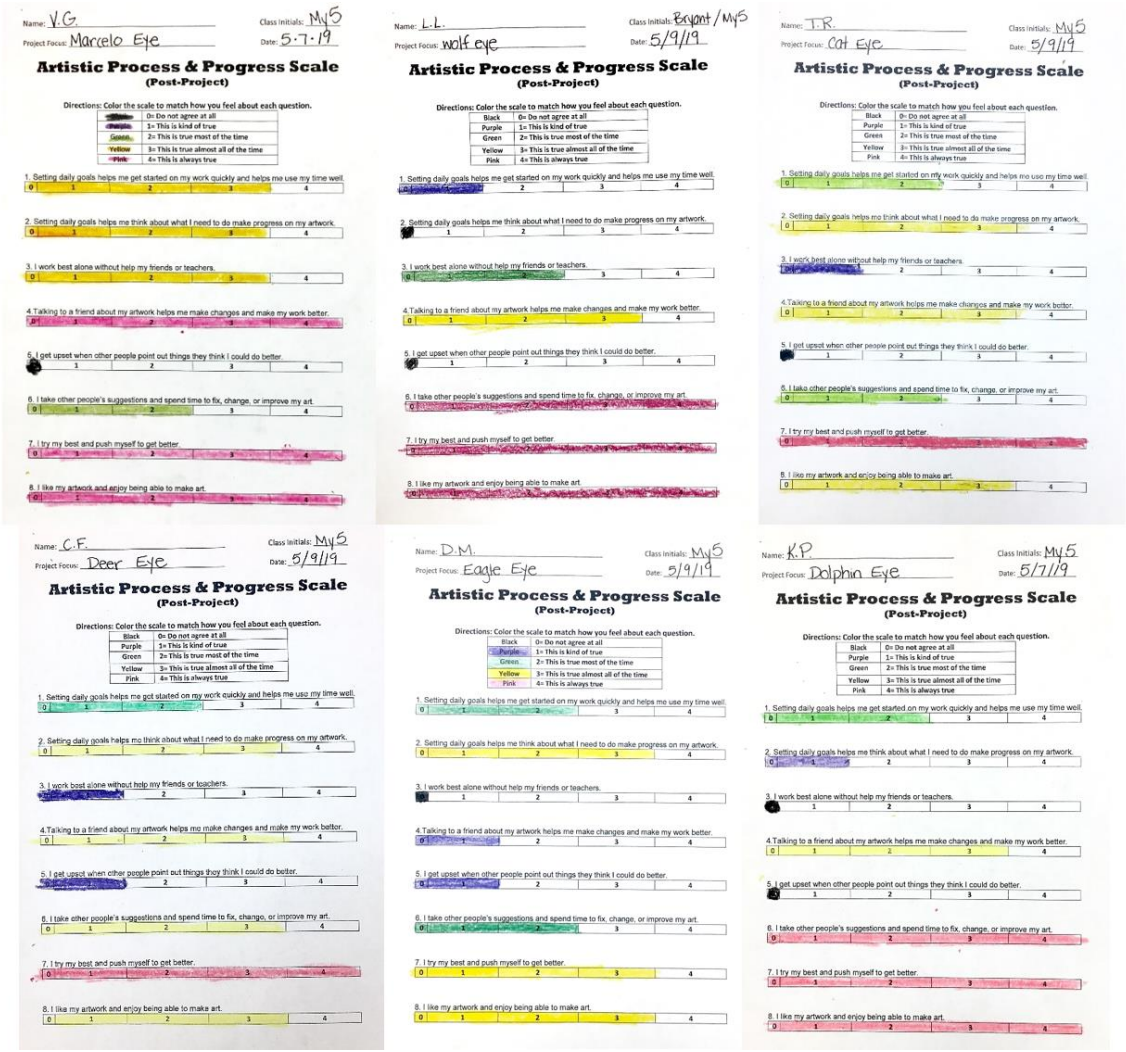


Figure C2.2. Post-Project Artistic Process Rating Scale Responses

Semi-Structured Individual Interviews

Semi-structured individual interviews (see Appendix B, *Figure B1*) were conducted to help students elaborate on themes discussed in the Moderated Group Discussion, *Process and Progress Rating Scales*, *Artistic Survey*, and goal setting and project planning activities. Individual interviews allowed students to expand on the ideas of goal setting, project planning (including effort and motivation), teacher and student

roles, and self-reflective practices without being interrupted or influenced by the answers of their peers. These interviews were administered after the *Mid-Project Process and Progress Rating Scale* but before the completion of their art project or summative activities. Each interview lasted between 9-11 minutes and was delivered in a semi structured format in which the questions and interviewer responses were read identically to each participant, but where restating, prompting, and clarification were permitted to help students fully understand the question (see Appendix F, *Figures: F2-F7* for full artifacts). Individual interviews focused on student planning, goal setting, collaboration, motivation, artistic disposition, growth mindset, ownership, preferred instructional methodology, student challenges, and student strategies. Student responses by theme can be found in the Data Analysis section of this chapter (see *Figure 29*).

Artist Statements

Artist Statements (see *Figure 18*) were created as a form of summative assessment which required students to organize information from throughout their project process into one coherent document. Completing an artist statement encouraged students to reflect on their planning and construction but also to revisit their intention and elaborate on the reasons they chose their subject matter and what they wanted their image to communicate to the viewer (see *Figures: G7, H7, I7, J7, K7, &L7* for full artifacts). *Artist Statements* were used to assess how well students were able to recall how they made their work, judge students' metacognitive ability to accurately assess their strengths and weaknesses through stating challenges and make meaningful connections with their work.

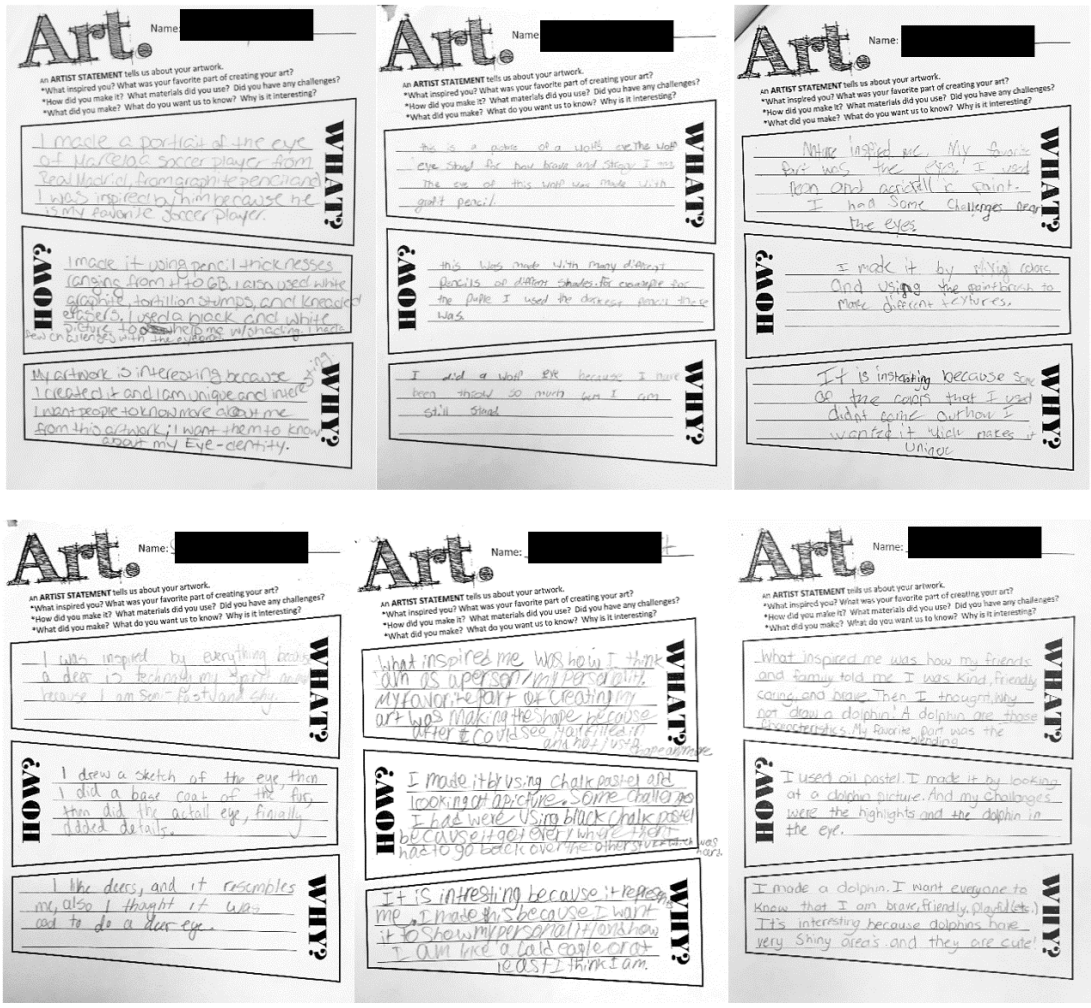


Figure 18. Participant Artist Statements

3-2-1 Summative Assessments

As part of the adjustment to the implementation of this study, a formal summative assessment was added in addition to the summative *Artist Statement* activity. The purpose of the addition of the *3-2-1 Summative Assessment* (see Appendix C, *Figure C12*) was to gain further insight into the students' view of their process during their project design and completion using an open-ended response format. Full student responses to the *3-2-1 Summative Assessments* are included in Appendices (see *Figures*

G8, *H8*, *I8*, *J8*, *Figure K8, & Figure L8).* Where the Process and Progress Rating Scales asked students specific questions in a measured rating scale about aspects of their work habits, this open-ended format allowed for me to see what areas of the project stood out to students.

*Figure 19***.** Participant 3-2-1 Summative Assessments

Student Artifacts

Student artifacts include completed unit lesson worksheets such as *Project Planning* sheets (see Appendix C, *Figure C3*), *Daily Project Goals* (see Appendix C, *Figure C4*), *Materials Pros and Cons Charts* (see Appendix C, *Figure C7*), *Personal Identity Adjective Collection* worksheets (see Appendix C, *Figure C8*), My Eye-dentity Brainstorming worksheet (see Appendix C, *Figure C9*), *Art Project Rubrics* and *Alternative Rubrics* for students who benefit from modified instruction (see Appendix C, *Figure C15* & C 16), examples of student work from Part 1 of the unit, "Exploring Identity: A Materials Exploration and Illustration of 'Self'- Still Life Series" Lesson, and Part 2 of the unit, "Exploring Identity: A Materials Exploration and Illustration of 'Self'- Eye-dentity" Lesson (see Appendix C, *Figures C17 & C18*).

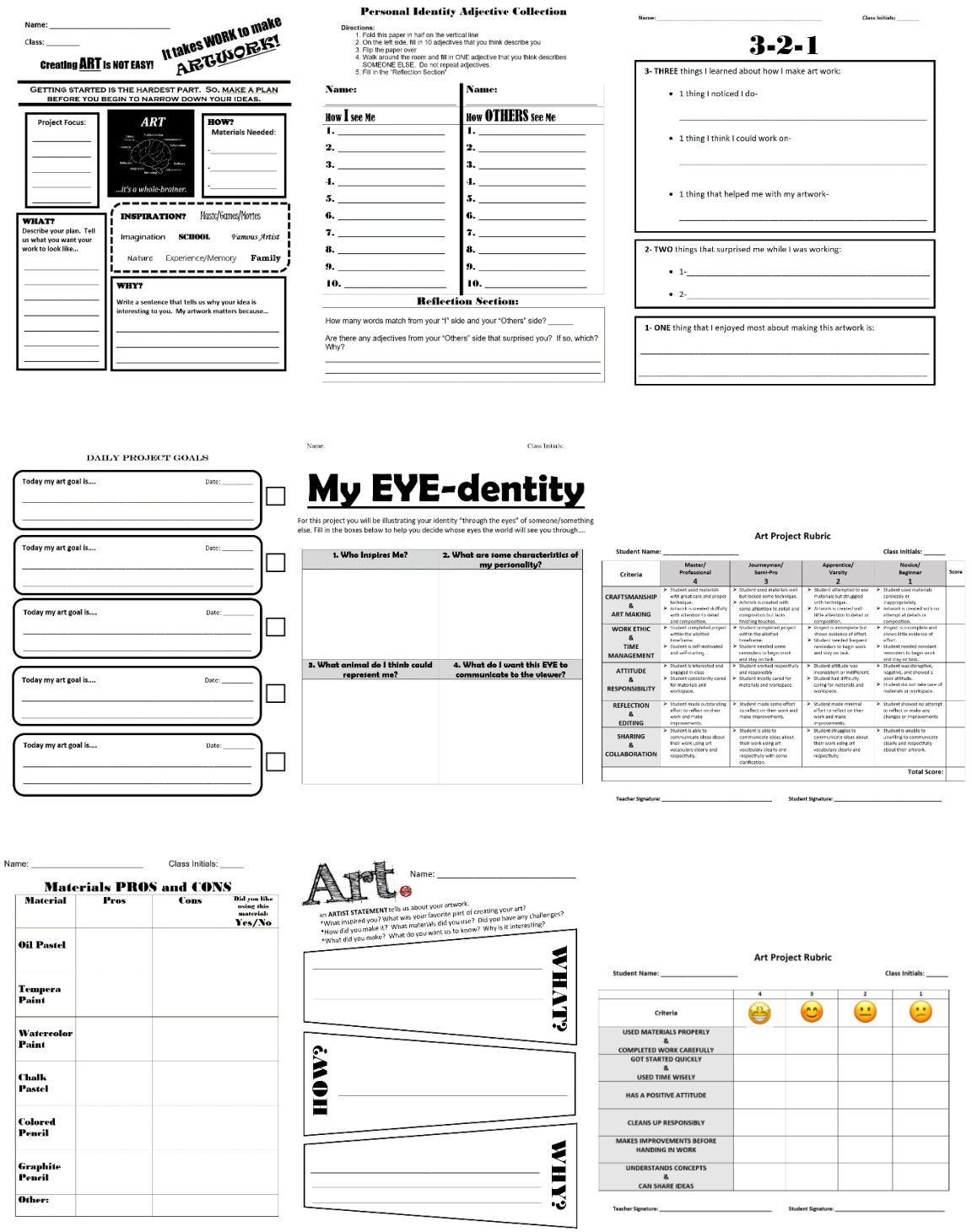


Figure 20. Student Artifact Worksheets and Assessment Tools

According to Diamond (2013), core EFs include inhibition, working memory, and cognitive flexibility. EFs make it possible for people to mentally play with ideas, think before acting, manage unforeseen challenges, resist impulses and stay focused (p. 135).

Executive Function Processes (Diamond, 2013)		
Inhibition	**Working Memory**	**Cognitive Flexibility**
Self-Control: -Resisting temptations -Limiting impulsive reactions **Inference Control:** -Selective attention **Cognitive Inhibition** -Blocking or ignoring distracting stimuli	**Short-Term Active Memory:** -Reasoning -Decision making -Mentally reorganizing -Visually reorganizing -Connecting information	**Creative Thinking:** -Thinking "outside the box" -Seeing things from different perspectives spatially and interpersonally **Transitioning:** -Shifting easily between thoughts or activities -Adapting to changed circumstances

Figure 21. Core Executive Function Processes

Student artifacts in the form of worksheets and project planning sheets were administered as an introduction to constructive strategies for engaging these EF skills when approaching problems such as: making lists, chunking or grouping information, note taking, brainstorming, goal setting, and reflecting. These activities provide organizational tools for students to gather and streamline ideas, make decisions, discover inspiration, and create visual reference sheets to revisit later in their processes. The expectation of providing this framework is that students would continue to practice and use some or all of the strategies which engage EFs and apply them to future challenges as they adopt self-regulatory behaviors. Student artifacts are organized by participant in Appendices G-L and can be referenced according to the following tables.

Participant	Appendix
V.G.	G
L.L.	H
T.R.	I
C.F.	J
D.M.	K
K.P.	L

Figure 22. Appendix Guide for Student Artifacts organized by Participant

Figure Number	Artifact
1 (a,b,c, etc.)	Materials Exploration Completed Projects in Various Materials
2	Materials Pros and Cons Chart
3	Eye-dentity Project Plan
4	Eye-dentity Project Daily Goals
5	Personal Identity Adjective Collection Worksheet
6	My Eye-dentity Brainstorming Worksheet
7	Eye-dentity Project Artist Statement
8	3-2-1 Summative Assessment
9a	Project Process Beginning Stage
9b	Eye-dentity Project Process Middle Stage
9c	Eye-dentity Project Process Completed
10	Project Rubric

Figure 23. Artifact Guide

	Completed Eye-dentity Projects by Participant
V.G.	**"Marcelo Eye"** **Graphite Pencil on Paper** **4"x3"**

L.L.	 **"Wolf"** **Graphite on Paper** **9"x7.5"**
T.R.	 **"Cat"** **Tempera Paint on Paper** **12"x13"**

C.F.	 **"Spirit Animal"** **Colored Pencil on Paper** **6"x5"**
D.M.	 **"Eagle Eye"** **Chalk Pastel on Paper** **12"x18"**

K.P.	**"Dolphin Eye"** **Oil Pastel on Paper** **6"x12"**

Figure 24. Completed Student Eye-dentity Projects

Data Analysis

Coding Strategies

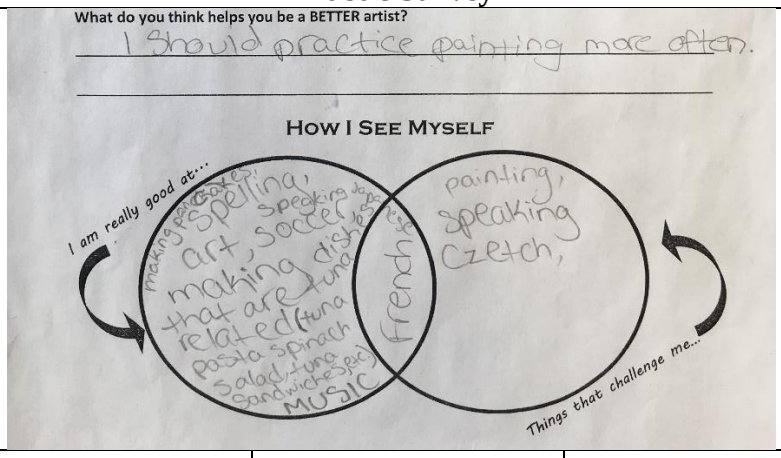
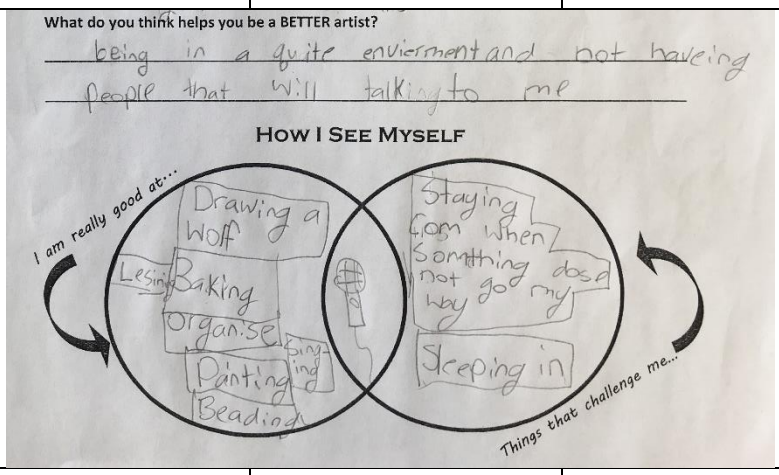
In order to organize data and find themes in student responses inductive and thematic coding with color-coding strategies was used. Though data was collected through a variety of methods, topics centered around executive function and self-regulated learning were examined through intentional questioning (these themes correlate closely with sections of the Literature Review found in Chapter 2). Data was coded by theme and organized into comparative graphs and matrices based on frequency of student responses. Verbal interview data and summative assessment data was color coded by theme and participant responses were organized under thematic headings. Common themes which are consistent throughout the study include: goal setting, planning,

collaboration, motivation, metacognition, artistic disposition, growth mindset, and teacher/student roles in classroom management and instructional methodology.

Coded Artistic Survey

The data collected from the initial *Artistic Survey* presented in the previous section is organized into a graph to indicate a baseline of student and teacher disposition. Data was coded based on student responses to questions regarding how teachers viewed student artistic ability through observation, how students viewed their own ability through indicated emoticon, and how others viewed their ability through open response. Participant responses on this survey helped me identify discrepancies in "artistic ability" of the student as observed by the teacher through ongoing observation and assessment, student indicated disposition, and student perception of how others view their ability. "Artistic ability" was defined as a student's ability to come up with an idea, use art materials and techniques to execute their idea, and tendency to revise artwork to make improvements.

The *Artistic Survey* also asked students to begin identifying strengths and weaknesses and some possible strategies for improving their art that they already use. Students were instructed they could list any strengths or weaknesses, not just those related to art. I thought this was important so that students who did not have art as a strength would still have things to list in their "strengths" sections. Student responses are organized in the following chart.

Participant	Artistic Survey		
V.G.			
	Strengths Making pancakes Spelling Speaking Japanese Art Soccer Cooking tuna related food Music	**Weaknesses** Painting Speaking Czech	**Challenge:** Painting **Strategy:** Practice
L.L.			
	Strengths Drawing a wolf Baking Organization Painting Beading Singing	**Weaknesses** Staying Calm Sleeping in	**Challenge:** Focus **Strategy:** Quiet

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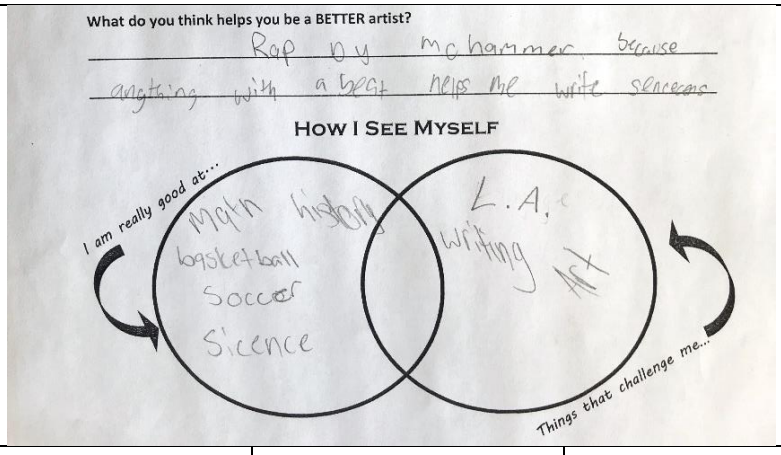
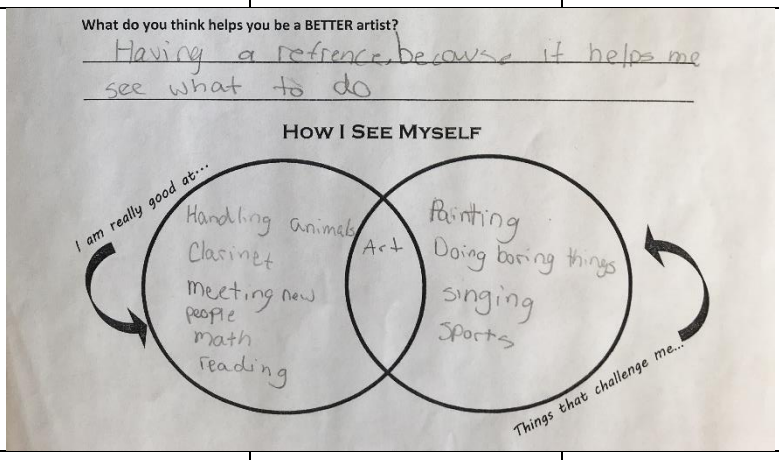
<tr><td>T.R.</td><td colspan="3"> 
</td></tr>
<tr><td></td><td>Strengths
Math Soccer
History Science
Basketball</td><td>Weaknesses
L.A.
Writing
Art</td><td>Challenge:
Concentrations
Strategy: Music</td></tr>
<tr><td>C. F.</td><td colspan="3"> 
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Handling animals
Clarinet
Meeting new people
Math
Reading</td><td>Weaknesses
Painting
Doing boring things
Singing
Sports</td><td>Challenge: Creating Work
Strategy: Reference Photo</td></tr>
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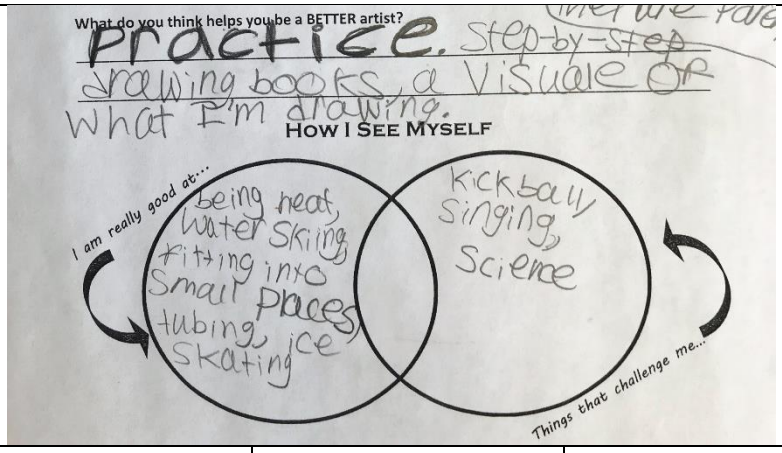
<tr><td>D.M.</td><td colspan="3"> 
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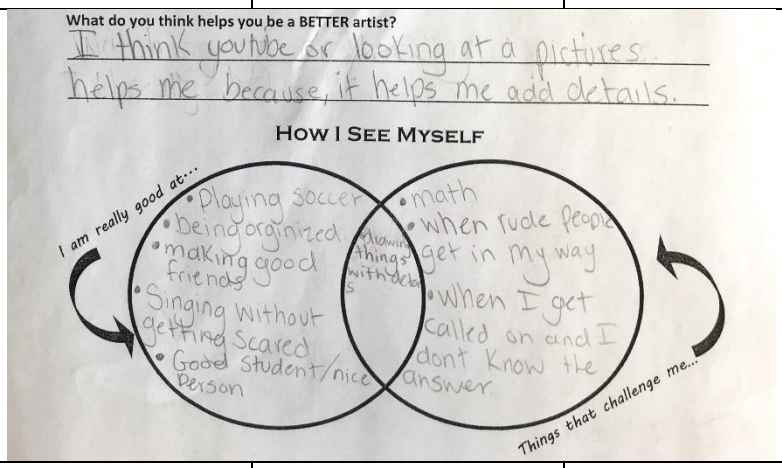
Neatness
Water skiing
Fitting into small spaces
Tubing
Ice Skating</td><td>Weaknesses
Kickball
Singing
Science</td><td>Challenge: Creating Work
Strategy: Practice Step-by-step drawing books
Reference pictures</td></tr>
<tr><td>K.P.</td><td colspan="3"> 
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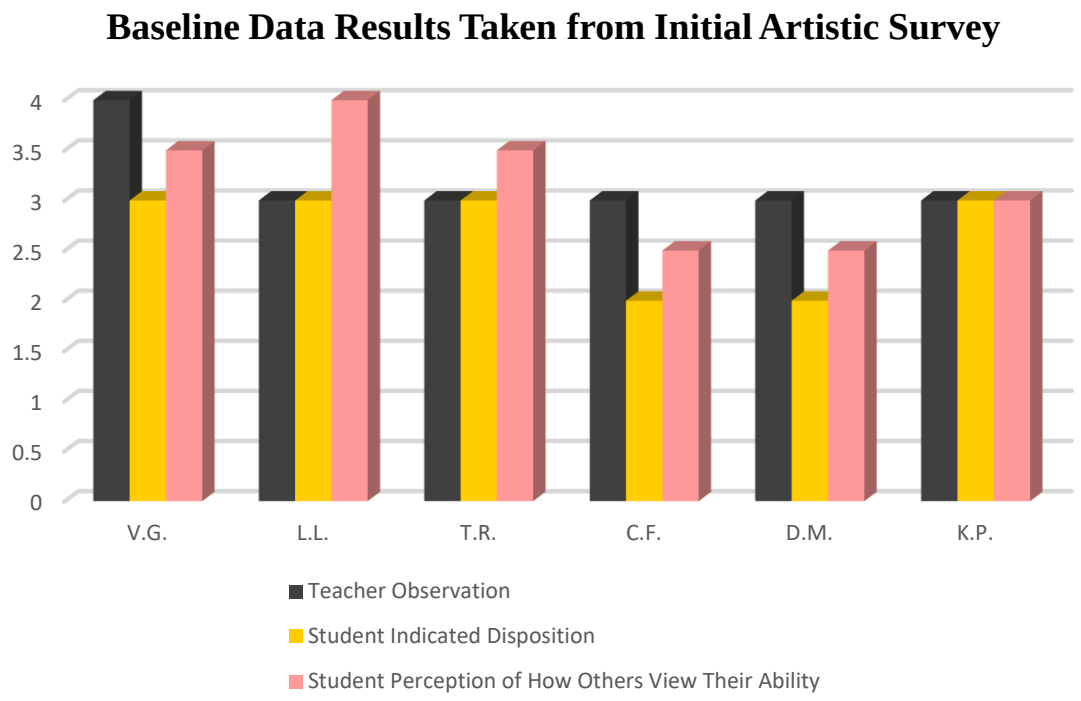
<tr><td></td><td>Soccer
Organization
Making friends
Singing
Being friendly
Being a good student</td><td>Math
Dealing with rude people
Not knowing the answer</td><td>Challenge: Representational Drawing
Strategy: YouTube
Reference pictures</td></tr>
</table>

Figure 25. Excerpts from Artistic Survey-Strengths, Weaknesses, and Strategies

The comparison of student disposition versus teacher observation was coded by assigning a numerical value to each response and representing these values in a bar graph.



4- Very High Opinion/ Very Confident
3- High Opinion/ Confident
2- Recognizes Areas for Improvement/ Lacking Confidence
1- Needs Considerable Assistance and Encouragement/ Diminished Confidence
0- No Independent Work Ethic/ Minimal Confidence

This graph shows a comparison in the "artistic ability" of the student as observed by the teacher through ongoing observation and assessment, student indicated disposition, and student perception of how others view their ability. "Artistic ability" was defined as a student's ability to come up with an idea, use art materials and techniques to execute their idea, and tendency to revise artwork to make improvements.

Figure E1b. Baseline Data Results Taken from Initial Artistic Survey (see Appendix E)

Coded Transcribed Verbal Interview: Moderated Group Discussion

Verbal moderated group discussion audio was transcribed into a word document and then color-coded to highlight specific themes that were addressed throughout the discussion (see *Figure 27*). Themes include: metacognition/thinking processes,

metacognition/identifying strengths and weaknesses, growth mindset, planning, goal setting, and methodology. These themes were targeted using intentional questioning through moderated interview format and expanded upon further in the individual interview process. Data from this color-coded transcript was further extrapolated and was entered into a thematic matrix to indicated participants' specific responses within coded themes (see *Figure 26*).

	Metacognition-Thought Processes					
Participants	Before	After	Often	Seldom	Never	Unsure
V.G.						X
L.L.	X				X	X
T.R.		X	X			
C.F.		X				X
D.M.		X	X			
K.P.		X	X			

	Planning					
Participants	Impulsive	Pre-Planning	Very Important	Important	Kind of Important	Not Important
V.G.	X	X		X	X	
L.L.	X				X	X
T.R.	X	X	X	X		
C.F.	X	X		X	X	
D.M.	X	X			X	
K.P.	X	X		X	X	

	Growth Mindset				
Participants	Fixed	Growth	People Can Learn	People are Born a Certain Way	Optional
V.G.		X	X		X
L.L.		X	X		
T.R.		X	X	X	
C.F.		X	X		
D.M.		X	X	X	
K.P.		X	X		

	Classroom Management		
Participants	Seating	Time Limits	Punishment
V.G.	X		
L.L.	X		X
T.R.	X		
C.F.			
D.M.	X	X	X
K.P.	X	X	

	Metacognition-Identifying Strengths			
Participants	Enjoy	Other People	See Improvement	Comparison
V.G.	X			X
L.L.				X
T.R.	X	X	X	X
C.F.	X	X	X	X
D.M.		X		
K.P.				X

	How Can You Improve?				
Participants	Practice	Watch Videos	Collaborate	Reflect	Specific Tips
V.G.	X		X	X	X
L.L.	X	X	X		
T.R.	X	X	X		X
C.F.		X	X		X
D.M.		X	X		X
K.P.	X			X	X

	Instruction		
Participants	Limited Choice	Moderate Choice	Full Choice
V.G.		X	
L.L.		X	
T.R.		X	
C.F.		X	
D.M.		X	
K.P.		X	

	Motivation		
Participants	Interest	Material Choice	Independence
V.G.	X		X
L.L.		X	X
T.R.		X	X
C.F.			
D.M.	X		
K.P.			

Planning	Growth Mindset
Goal Setting	Ownership
Collaboration	Instructional Methodology
Motivation	Student Challenges
Artistic Disposition	Student Strategies

*Figure 26***.** Data Matrix: Verbal Semi-Structured Moderated Group Discussion

Figure 27. Color-Coded Transcribed Verbal Semi-Structured Moderated Group Discussion

Coded Rating Scales

Rating scales were coded by colors which correspond to indicators on the ordinal scale. A color-coding key was included in the directions of the rating scales so that students could color code their own responses. Responses from rating scales were compiled and organized into a single visual chart (see *Figure 29*) to compare participants' mid- and post- project results as well as differing responses between student participants.

Directions: Color the scale to match how you feel about each question.

Black	**0= Do not agree at all**
Purple	**1= This is kind of true**
Green	**2= This is true most of the time**
Yellow	**3= This is true almost all of the time**
Pink	**4= This is always true**

Figure 28. Mid- and Post- Project Process and Progress Rating Scale Color-Coding Indicators

Coded Transcribed Verbal Interview: Individual Interviews

Semi-structured individual interview audio recording was transcribed into word documents that corresponded to each participant and then color-coded to highlight specific themes that were discussed throughout the interview. Intentional questioning was used to discuss goal setting, project planning, motivation and inspiration, teacher and student roles, and self-reflective practices. Coded data was then reorganized into a master chart of participant response by theme (see *Figure 30 and* Appendix F: *Figures F2-F9).*

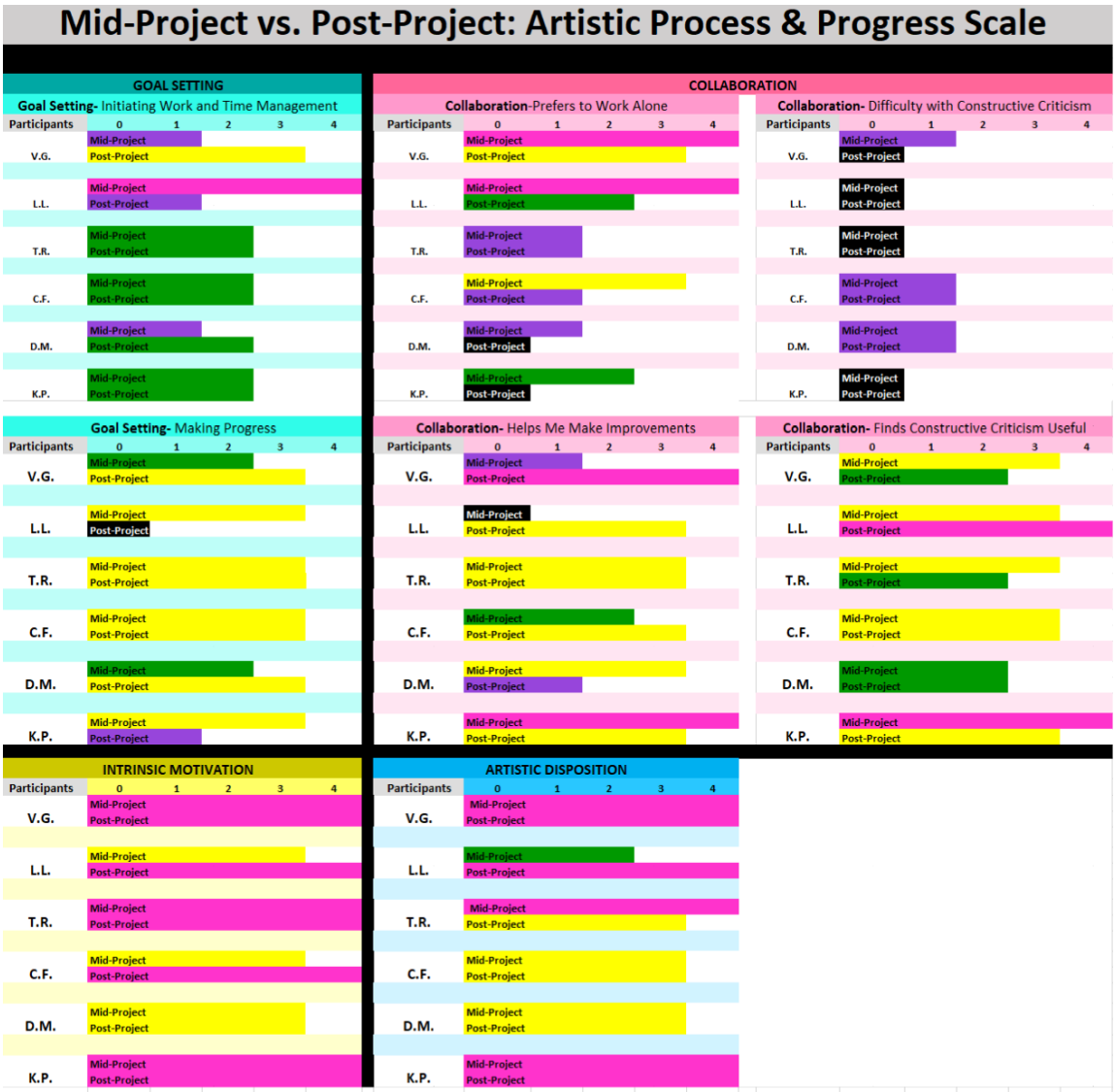


Figure 29. Mid-Project vs Post-Project Artistic Process Rating Scale Responses

Individual Interview Thematic Chart

Theme	Participant Response
Planning	**(V.G.):** It depends because it's easy if it's like….well, sometimes it comes easy but sometimes it doesn't. Sometimes I feel inspired but sometimes I have to think about it more. - **(L.L.):** It's usually easy to come up with ideas, and what I like to do is get a piece of paper and like list all the things in my head so I don't forget them and then pick my favorite idea. - **(T.R.):** Oh, so, sometimes I just, you can look up just artwork stuff and I can see something and then say oooh maybe I want to do something similar to that and so I would just start, like sketch out real fast, and then try sketching it out with different materials and then that would give me an idea of something I could do similar to it. Like say if it was like Pokémon… and maybe I could take that idea and the idea of a cat and try to combine it and sketch out the face of it together. Like find images on the internet or YouTube. - **(C.F.):** Like some days it's easy and some days it's really hard. If I am in a room that has a lot of stuff that I can draw I can easily come up with an idea, but if it's a plain room and really boring it is probably harder to come up with an idea. **(D.M.):** Maybe, probably just like drawing, planning out what I'm gonna do because sometimes if I don't know what I'm doing, and I just have a blank piece of paper I kind of do whatever and I don't have a plan. So, it would be like hard, I don't know. It's easier to come up with something if you already have something that you are good at or that you already enjoy from past art, but then, if you want to start something new it's just like, I don't know where to begin. Like step 1 is the hardest part, then I can kind of go from there…
Goal Setting	**(V.G.):** I like my own goals because then I feel like I am not under pressure. I don't like working under timers. - **(L.L.):** Umm, kind of in the middle because some people do work at their own paces, but then sometimes it can boost someone and make them work a little harder to meet the teacher's expectations and maybe there will be less talking. - **(T.R.):** I think like when I choose my goals I can decide it sets like a higher standard for me. So like, I should like…well my artwork right now its s huge thing so I try to do one section at a time and, like one of my goals would be like the left eye, that was one of my goals for the week and it helps me to set goals for just that one area and then move on to the next area next week. **(T.R.):** Umm, I think probably setting the goals helps me do that the best because it tells me like here's what I need to do and helps me think about what I need to do and makes me feel like I can have no distractions. - **(C.F.):** Probably like when I decide my goal because when someone else tells me what I have to do I kind of feel rushed and like I want to get it done in a short amount of time, but I can't do it well. -
	(D.M.): Well, kind of like both, because if I do just a completely random goal I feel like I won't get that far kind of, but if you're like, "you should have like the sketch done," or something, I can be like, "I want to have the sketch done and then maybe something else," I can like base it off of that kind of but what I am working on too. - **(K.P.):** Umm, when you tell us what has to be done. I like to know what has to be completed because it makes me have to work faster your artwork might not get better just by concentrating more, sometimes you have to just get it done that day.
Collaboration	**(L.L.):** I don't really mind. I check what they say but some things I ignore because I either already have that or I don't like their suggestion. **(C.F.):** Umm, well, I would probably follow their suggestions because I like to make my stuff good. **(D.M.):** Well sometimes I am a little like, I don't want to say like mad, because I am never like angry at them, but sometimes I am a little upset because like if I'm proud of something and then someone says, "oh you could have done that, or added that," I am a little upset but then most times I kind of know I could have improved on that but then when someone says it I'm like "yeah, I know." But, like if you say it I know it's to help me, and I guess it's the same with someone next to me, but most times no one next to me is working on same thing I am. When you say it, I know it's gonna to make it better But then, when someone else says it I can either like tell because I am not doing the best on something so I am like, "yeah I kinda could do that," but then other times if I'm already working on one thing and I just want to get it finished and be done and someone give me suggestions it is kind of like too much and could ruin it. I trust you more to help me, I trust what they are saying but sometimes I feel like it can be just too much. It depends. With you it always makes it better.
Motivation	**(V.G.):** Ummmm, usually like my life. Like life experiences. **(V.G.):** No. Sometimes I just do stuff because it's what we're doing. But if something really really inspires me or if it is for an important person or something it makes me want to work harder a bit. I like to be able to choose things that inspire me or have a reason to make stuff. Like with the orange I didn't really care about the orange but I wanted to make it look real, so I guess that was my inspiration for that. - **(L.L.):** My mind is just my inspiration. - **(C.F.):** Umm, probably like looking around the room and trying to see stuff that I could try to recreate. - **(C.F.):** Yeah, because I like kind of being better than people I guess. And, I don't know… I like just working hard and then seeing the outcome. **(D.M.):** I mean, not all the time, because sometimes it's just like I don't really want to do the project. Like when we were just like sketching the pears I was just kind of like doing it quick so I could get to like doing the materials, so I don't always try my hardest because sometimes I don't really want to like do that thing. But when I am interested in a topic, I will try harder and like put more effort into it.
	(D.M.): Kind of like 3-dimensional stuff. I feel like more like fantasy drawing. When you're trying to do something that is real it can get a little bit boring because you're trying to make it look like something but with fantasy there is like there is nothing wrong with what you do.
Artistic Disposition	**(V.G.):** Yes. (Proud) **(V.G.):** Ummm, not really, well, I think I am getting a bit better at painting. **(L.L.):** This all looks pretty much the same. I think I am still pretty good at art but my mom and teachers definitely always compliment me. And like, yeah, I still like it to be quiet for me to focus so *that* hasn't changed. **(T.R.):** Yes. I am proud of it because I feel like I did this, so I feel like it may not be the best but I am proud of it because I can work off of it and I can make better versions. So, my first one may not be good to my standards but I can re-fix it or add another shade or something. - **(C.F.):** Yeah. Because I know I worked hard on it and I spent a lot of time working on it. And, even if it doesn't look that good I still know that I worked hard and it kind of feels good. **(D.M.):** I'm just trying to think. Most times I am kind of like, that kind of looks bad I guess. That's why I like doing projects with multiple parts. Because like with the fruit, we did the oil pastel and the paint and the chalk pastel and I was like proud of the chalk pastel but the others I like wasn't. Cause when we did the portraits and then I looked at other people's portraits I was kind of like, mmm, but like if I had like two I could have more choices. **(D.M.):** I mean, I think I am like good as an artist, but I don't think I'm like amazing. Like I guess I would be half way between good and pretty good instead of just okay. Some things I do I think are pretty good but when I make art I feel like I do more kind of like my own style than trying to make it look realistic or more like kind of I don't know. I also like clay and stuff and pop ups. - **(K.P.):** Yeah. Because I want it to turn out really good and like show my parents that I tried my best. **(K.P.):** Yeah. (Proud) **(K.P.):** Umm a little bit. I would change my wording. I still think I am pretty good but it's because I work on art everyday still but now I work more on my techniques more. Like instead of just making stuff I am trying to make specific things.
Growth Mindset	**(V.G.):** Uh, it makes me feel good because umm… It's noticeable and I like it when people tell me what I need to work on because I always want my artwork to look better. - **(L.L.):** Yeah. Thinking I can do better and work harder than what I have done already. - **(T.R.):** Umm, I think the majority of the time I do except maybe when we had our first project this year about our self-portraits, I don't think I tried my hardest on that one, I think it could have come out a little bit better but I felt a little rushed because I missed art because I was sick and I didn't feel like I did my best work. But I usually want to do my best work, like usually after I make a first copy and I look at it and I see what I need to better on it and if I don't like something and I can do better I just
	re-do it all, but I keep the first one with me to remind me what I can do better and what I can keep the same. I like to compare it. **(T.R.):** Ummm, a little bit because I feel like I have gotten much stronger with my art. I feel like I've gotten better because at home I even have art stuff surrounding my desk and I try things at home, like the eyes some days, faces, necks, ears, hair, and I try them at home. I look at books and the computer and I do drawing challenges with my friend and then have someone else judge it. **(C.F.):** Oh, um well, since I answered that I only thought I was okay at art in the beginning I guess it's changed. I feel like I'm now pretty good because I've been doing art for the whole year and I feel like I've improved a lot. And, I guess also I wouldn't answer that art makes me feel stressed or rushed anymore. I guess. But also, like I said here, I still like having a reference to look at, that hasn't changed, and I guess I still think other people think I'm better than I do… they sometimes give me compliments when I don't even think it is that good. **(K.P.):** Ummm, I would feel fine, I would just be like, "oh, I have to work on this area real quick and then I can finish it."
Ownership	**(V.G.):** For me because I am the one who sort of created it, so I know what it means, and I feel like I sort of understand it more than other people. **(L.L.):** Me. Because it's my artwork and I should be proud of what I did. I like to ask your opinion but more cause like I want to know what to change to help myself, not really just so you say you like it or I did a good job. **(T.R.):** I think it's more important for me to like my artwork because I created it and other people may not like it but I feel like I like it because I created it, so you should be proud of it because you made something. Like no one else made it for you, you actually created it on your own. So, like you should be proud of what you create. **(C.F.):** Umm probably for you because I don't really care if my art is good because art is just fun for me. I don't know why I care what you think either though because I'm the one who made it. **(D.M.):** Kind of like for me to like my artwork because I made it so I kind of like don't just want to make it, hand it in, leave, make it, hand it in. I kind of just want to feel proud of it after. Like even in class, when you finish something, even if you don't like it it's like, well I finally finished something and you're like proud of it no matter what because you finished. **(K.P.):** For me to like my artwork, because like if I concentrate on my own work and I think it's good I'll keep it good and try harder.
Instructional Methodology	**(V.G.):** Uhhhhh, I kind of like doing it on my own because when I do it on my own I can sort of think up my own ways cause sometimes I don't like the way they teach me. **(V.G.):** Ummmm, yeah it helps me sort of construct it in a way, like the basic structure, so that I know what to do. I like to come up with my own ideas but step by step helps me when I am actually making it step by step instructions can be helpful. - **(L.L.):** Step by step because some people will fool around, and they won't actually do the work and it gets distracting for other people. But, I guess for me, personally,
	I like step by step because then I know if I am doing it correctly or not. I don't want to do *that* wrong and then have to go back and do *this* again or restart the whole project. **(L.L.):** I like freedom more too because other people can't really compare each other, like "I have this and you don't" because they could be doing completely different subjects and there's no real way to interact and compare because it's different. You can also kind of like let your mind does whatever it wants and if your stressed you can let your mind go and do your own thing and let your stress out. I guess I'm kind of in the middle. - **(T.R.):** I more like to start off on a proof draft and like do my own because sometimes when I go step by step I feel like I am really ahead of everybody or I'm really behind everybody so I work at different paces when I work with different materials, so when I do it on my own I can stay on track with everybody because I can still work and finish my artwork probably by the time everybody else is. I don't like to feel rushed. **(T.R.):** I think step by step is good because sometimes, well, compared to like when I was in the younger grades I could actually like know what I was doing but I think when I didn't know something I could understand the steps. But when you don't have the step when you're in kindergarten or something, like, it's probably going to be harder for you because sometimes you might not know what you're doing. - **(C.F.):** I like them both, but I feel like I like it better when we can like do it on our own because if you make a mistake you can always fix it instead of having to do one certain thing. Like if you make a mistake it could be harder to fix it if there was a right way. **(C.F.):** For step by step if someone else is doing the same thing you don't feel like they are really that much better than you. **(D.M.):** Well, I kind of like, it depends because when you tell us what to do it's helpful and we can just kind of like do it easily and like kind of maybe….well, I don't know. I feel like my reasoning is kind of backwards because I feel like we can have more fun when it's step by step because we just like do the art and we know what we're doing, but then also, if we don't do step by step, if you like the things that we're doing it would be easier, but then some people that don't like know what they're doing its kind of harder. You always help us with the materials so that's not a problem but sometimes I think it's harder to actually create it, like the idea of it. **(K.P.):** A little bit of both, like sometimes I could do it on my own or like a little bit step by step because like it helps me get better and helps me concentrate on one thing and what I am doing. I get my work done quickly and after I get done I can move on to something else or keep going back and fixing things but I know what to do and I know when I'm done.
Student Challenges	**(V.G.):** Sometimes I have trouble thinking up an idea so when I start doing the ideas I do though, it just sometimes comes out bad and I think I need to do something different. It just doesn't come out the way I want it to… so I sort of just start over. Sometimes it could be a similar idea but different. - **(L.L.):** If people got a little more quiet. I kind of like silence.
	(L.L.): Somewhat, like I feel like I can work harder but sometimes I feel like I don't have a lot of time. Because sometimes we have extended art time but I don't always get to go because I'm in Mrs. Bryant's class, not Mrs. Meyer's class like everyone else. - **(T.R.):** Sometimes it's easy but sometimes it's hard, like when I'm stressed out I can't come up with ideas. But after I relax and stuff that's probably how I get more ideas. Maybe also like the noise level. Sometimes like with our class, when I am like trying to come up with an idea, like from over there especially, I hear like a lot of noise compared to more over there which is less noise and then at my table where I sit with the painters we barely talk so it's like different noise levels coming at me from different directions and I can't concentrate. - **(C.F.):** Probably figuring out how to start or making up an idea I guess. **(D.M.):** I feel like it's kind of hard for me to come up with ideas. But I kind of feel like if we're using a picture, I try to base it off of that, but as we go I kind of change it to make it better or more what I was thinking. Coming up with ideas randomly is like, I don't know, I'm not good at thinking of ideas. - **(K.P.):** Moving my mind off of what we are working on and onto something else. **(K.P.):** If we had like more time in art.
Student Strategies	**(V.G.):** Ummm, sometimes I just change specific details and sometimes I'll change it entirely. **(V.G.):** I don't know. Like maybe if I knew how much time I had left or maybe how long the whole class was so I can decide for 5 mins. I should do this and then for another 5 mins. I should do this. **(V.G.):** Ummm, I just know when I am done when it looks like just like an artwork. Well, sometimes I feel like all I need to do is go back because I one time created a piece of artwork in 3rd grade and then I looked at it in 4th grade and I realized that I should go back and add more things. You just have to wait and look at it again later. - **(L.L.):** If I don't have silence, I guess ear buds or music so if people try to talk to you, you can't really hear them and you can mind your own business in your own little world. And music can also help inspire you for certain ideas. **(L.L.):** I like to look at pictures and then kind of do it, so taking the picture that I am basing my artwork off of and saying, "this is different than mine, I need to fix this." I also don't know when I am really done. - **(T.R.):** Uh, something that helps me come up with an idea is first like try out different materials to see the colors and different textures of it because sometimes different materials have different textures. Like at my house I use felt, and I tried to make a stuffed animal before and it didn't come out good (laughs) but um I've tried many things with different materials so, when like I start off with a new material and then I try to draw just like a random picture, I would draw a line and feel the texture of it. Like see if it would come off on my fingers. And, just to see how permanent it would be. Like experiment first. **(T.R.):** So, what I do it like fidget a lot with this thing I bring in my book bag and it calms me down and helps me focus more than with without it because it takes like my mind off that and helps me focus on what I am actually doing.

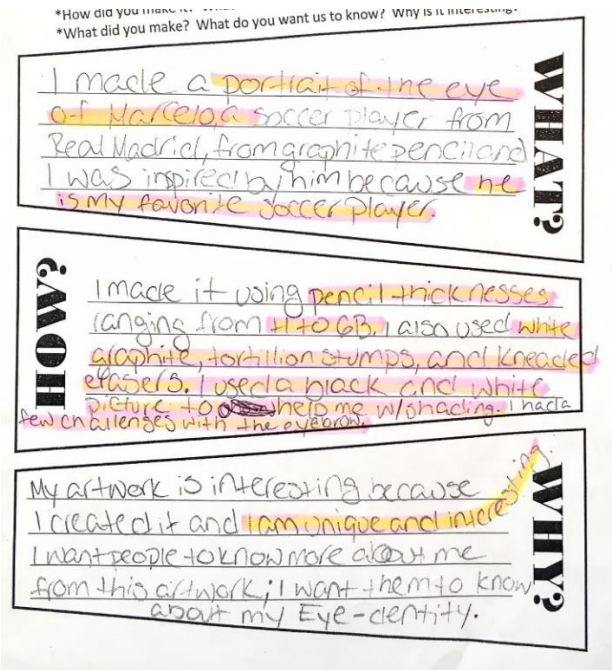
Planning	Growth Mindset
Goal Setting	Ownership
Collaboration	Instructional Methodology
Motivation	Student Challenges
Artistic Disposition	Student Strategies

	(T.R.): Something that helps me know when I am finished is at least like when I have everything that's like on the picture that I am referencing from, when I have everything that's on there, it may not be the exact same thing, but at least I try to make it very close to it. - **(C.F.):** Maybe like thinking of stuff that you and like trying to change it and make it more creative and drawing it. **(C.F.):** Umm, probably like if I could control people I would probably make them a bit quieter because sometimes it gets loud. But since I can't control people… I don't know. Probably if someone near me likes to talk a lot and keeps interrupting me while I'm working, maybe I could put up a blocker or folder to help me concentrate. **(C.F.):** Like I probably like look at what I am trying to draw and see if it kind of matches it and looks similar. And also, if there's spot that aren't really colored in and I think I could add more to them I'd probably go back and try to add some more. - **(D.M.):** Ummm, I feel like when it's open, and we're just doing whatever, we're still able to do the same thing. Like you make it so everyone can do something different and we're using different materials but it's still like the same thing. But, if it were just like, do whatever, like more open, I mean I would kind of like it. I like step by step but I also like just doing whatever. For some things step by step is better but for some things it's just easier to do it on your own. If it's step by step I don't have to struggle with it, because you tell us how to do those things, so it's kind of easier. **(D.M.):** I guess kind of by material. Like if I pick a material that is good with blending I might try to pick something to make that has a lot of colors. Like pick my materials and then come up with an idea. Unless I already have an idea, then I would pick a material that would look good. **(D.M.):** If it's just like anything, I kind of just look around the room, like the rainbows over there look kind of cool so maybe I'd do something with a bunch of color. It's like if I see something that day that I thought looked cool I'll maybe just do that. - **(K.P.):** Ummm, blending with oil pastels, cause when I start blending and using a technique I come up other ideas I could blend with. - **(K.P.):** Like I take a picture and I put them side by side like what you do, and then I look in certain areas and if I'm like missing something I'll be like "okay I have to add this here real quick."

Figure 30. Thematic Coding of Participant Responses to Individual Interviews
(See Appendix F: *Figure F9* for full scale images)

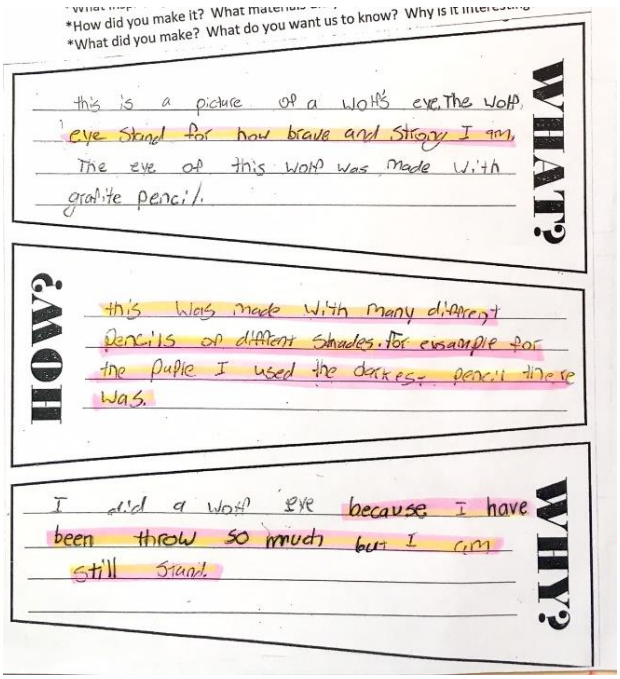
Coded Artist Statements

Artist Statements were used as a formal summative assessment to evaluate how well students were able to reflect on their art making process and organize and communicate information about their finished projects. Artist Statements were coded using latent coding on a numerical scale in the categories of reflective practices, clarity of information, and explanation of intent (see *Figures: 31-37).* Higher scores correspond to higher use of EF skills and more self-regulated behaviors. Lower scores indicate limited or lack of accessing EF skills and less self-regulated behaviors.



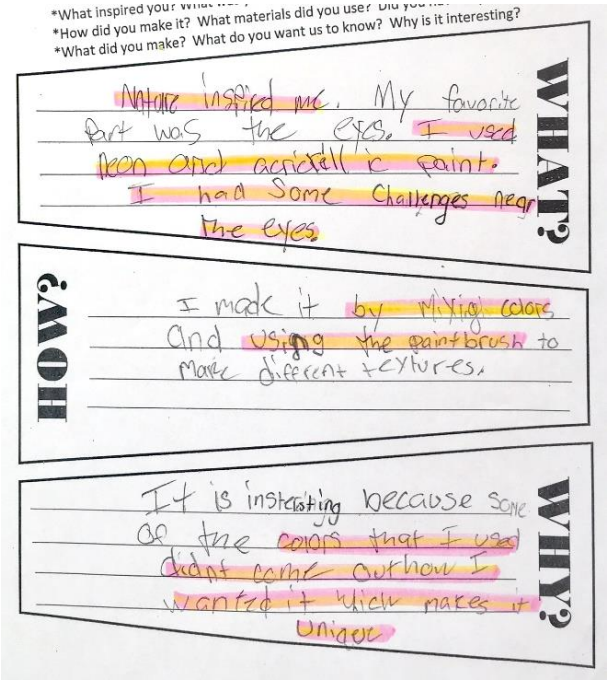
Artist Statement Coding for: V.G.		
Reflective Practices: Identifying Strengths and Weaknesses	*Student is able to reflect on their art making and clearly explain their process.*	**3**
Clarity of Information	*Student's approach to content is clearly stated and connects directly to their project subject.*	**3**
Explanation of Intent	*Student's explanation of intent is innovative, and unique.* *Student is able to communicate what the student wants the audience to know or understand about themselves or their artwork.*	**3**

Figure 31. V.G. Coded Artist Statement and Coding Rubric



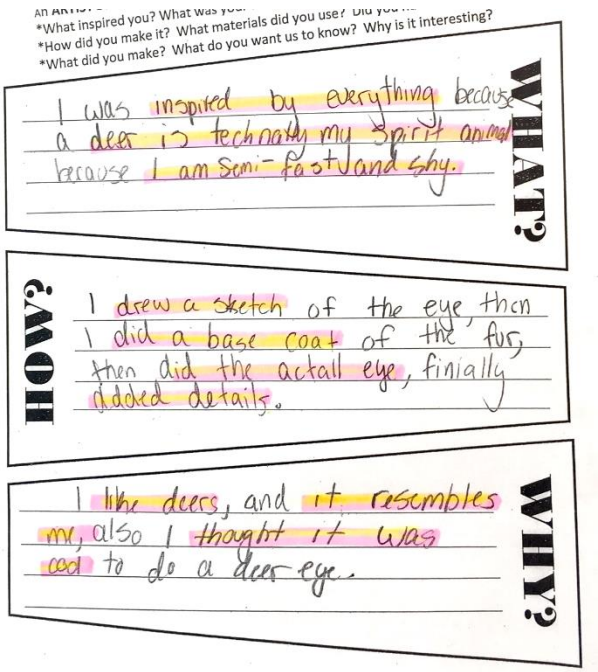
Artist Statement Coding for: L.L.		
Reflective Practices: Identifying Strengths and Weaknesses	*Student is able to reflect on their art making and clearly explain their process.*	**3**
Clarity of Information	*Student's approach to content is clearly stated and connects directly to their project subject.*	**3**
Explanation of Intent	*Student's explanation of intent is innovative, and unique.* *Student is able to communicate what the student wants the audience to know or understand about themselves or their artwork.*	**3**

Figure 32. L.L. Coded Artist Statement and Coding Rubric



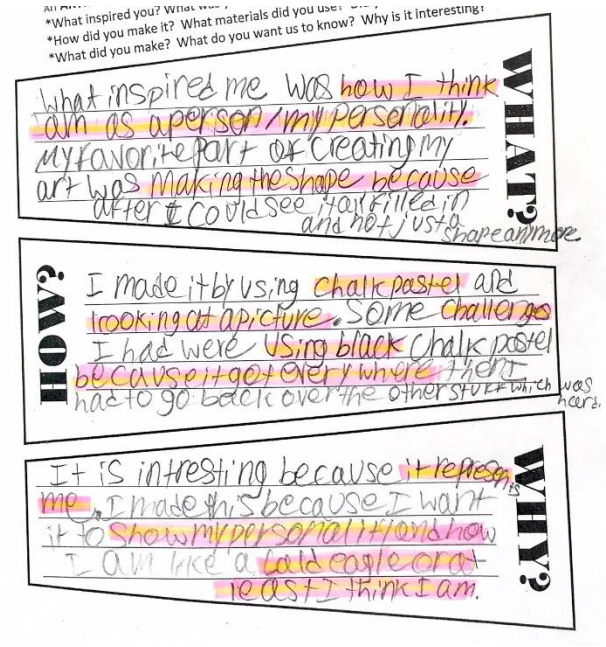
Artist Statement Coding for: T.R.		
Reflective Practices: Identifying Strengths and Weaknesses	*Student is able to reflect on their art making and clearly explain their process.*	**3**
Clarity of Information	*Student's approach to content is clearly stated and connects directly to their project subject.*	**2**
Explanation of Intent	*Student's explanation of intent is innovative, and unique.* *Student is able to communicate what the student wants the audience to know or understand about themselves or their artwork.*	**2**

Figure 33. T.R. Coded Artist Statement and Coding Rubric



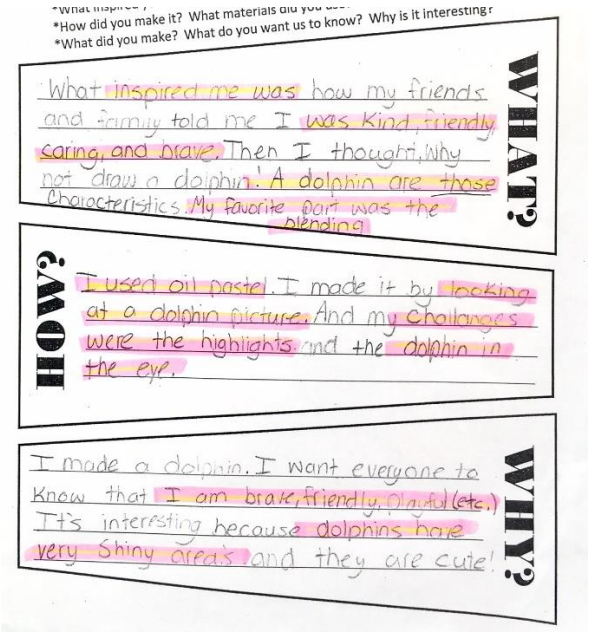
Artist Statement Coding for: C.F.		
Reflective Practices: Identifying Strengths and Weaknesses	*Student is able to reflect on their art making and clearly explain their process.*	**3**
Clarity of Information	*Student's approach to content is clearly stated and connects directly to their project subject.*	**3**
Explanation of Intent	*Student's explanation of intent is innovative, and unique.* *Student is able to communicate what the student wants the audience to know or understand about themselves or their artwork.*	**3**

Figure 34. C.F. Coded Artist Statement and Coding Rubric



Artist Statement Coding for: D.M.		
Reflective Practices: Identifying Strengths and Weaknesses	*Student is able to reflect on their art making and clearly explain their process.*	**3**
Clarity of Information	*Student's approach to content is clearly stated and connects directly to their project subject.*	**2**
Explanation of Intent	*Student's explanation of intent is innovative, and unique.* *Student is able to communicate what the student wants the audience to know or understand about themselves or their artwork.*	**3**

Figure 35. D.M. Coded Artist Statement and Coding Rubric

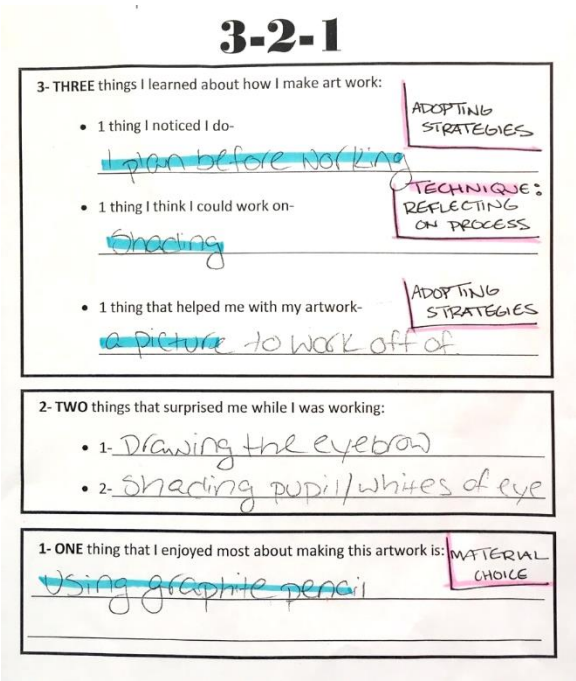


Artist Statement Coding for: K.P.		
Reflective Practices: Identifying Strengths and Weaknesses	*Student is able to reflect on their art making and clearly explain their process.*	**3**
Clarity of Information	*Student's approach to content is clearly stated and connects directly to their project subject.*	**3**
Explanation of Intent	*Student's explanation of intent is innovative, and unique.* *Student is able to communicate what the student wants the audience to know or understand about themselves or their artwork.*	**3**

Figure 36. K.P. Coded Artist Statement and Coding Rubric

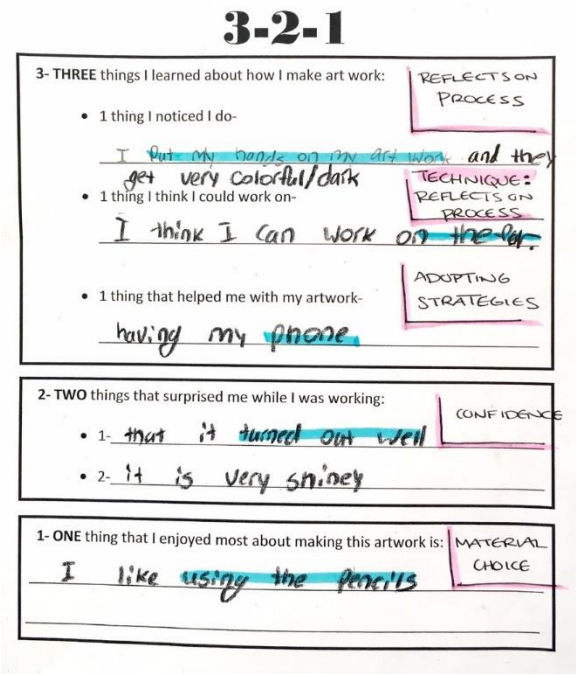
Coded Summative 3-2-1 Assessment

The *3-2-1 Summative Assessment* (see *Figures: 37-42*) was used as a formal assessment to evaluate participant opinions of their process during their project design and completion using an open-ended response format. 3-2-1 Assessments were coded with latent coding on a numerical scale assessing students' use of metacognition (recognizing what they did well and where they still have gaps in learning or understanding), ability to use reflective practices, and ability to clearly organize and communicate ideas, which are all essential EF processes.



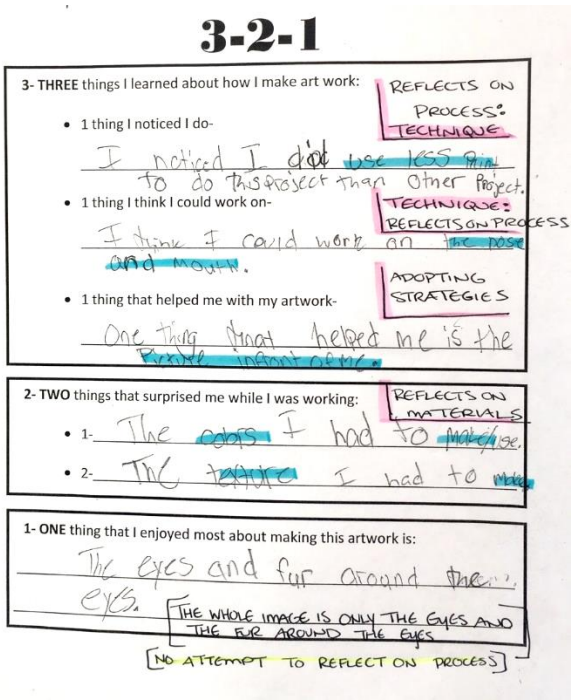
3-2-1 Coding for: V.G.		
Metacognition	Student recognizes what they did well and where they still have gaps in learning or understanding.	**3**
Ability to Use Reflective Practices	Student makes an attempt to reflect on their art making.	**3**
Ability to Clearly Organize and Communicate Ideas	Student's approach to content is clearly stated and connects directly to their project subject.	**3**
Student V.G. mentioned two strategies they adopted which helped them including planning and using a reference picture. V.G. also reflected on their choice and use of materials.		

Figure 37. V.G. Coded 3-2-1 Assessments and Coding Rubric



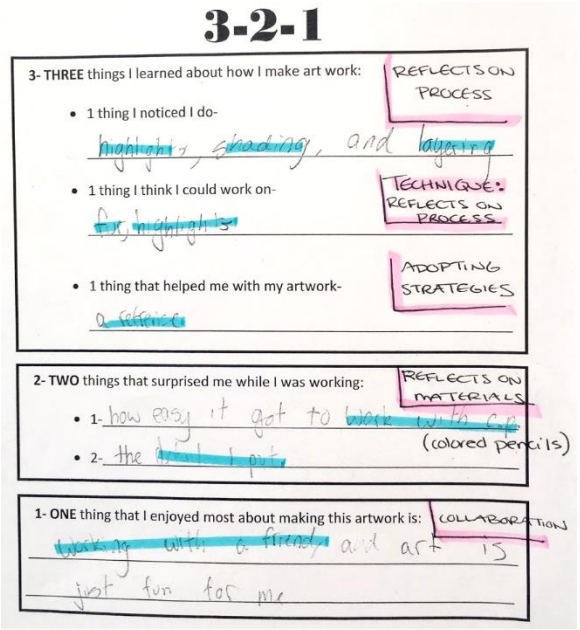
3-2-1 Coding for: L.L.		
Metacognition	Student recognizes what they did well and where they still have gaps in learning or understanding.	**3**
Ability to Use Reflective Practices	Student makes an attempt to reflect on their art making.	**3**
Ability to Clearly Organize and Communicate Ideas	Student's approach to content is clearly stated and connects directly to their project subject.	**3**
Student L.L. took the time to reflect on their process in regard to technique and materials choice as well as strategies they adopted to help them including being able to use a phone (for editing and music). L.L. stated that they were surprised how well their final product turned out which indicates that their confidence level approaching the project increased as they worked through their process and challenges and created a finished product.		

Figure 38. L.L. Coded 3-2-1 Assessments and Coding Rubric



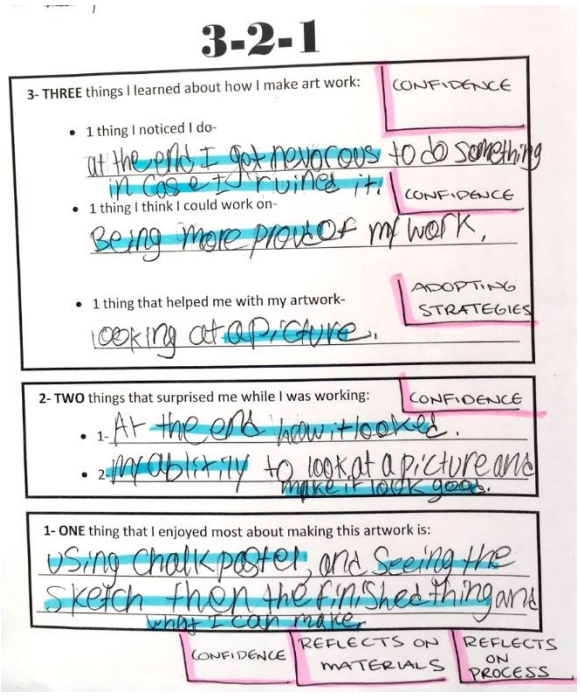
3-2-1 Coding for: T.R.		
Metacognition	Student recognizes what they did well and where they still have gaps in learning or understanding.	**3**
Ability to Use Reflective Practices	Student makes an attempt to reflect on their art making.	**3**
Ability to Clearly Organize and Communicate Ideas	Student's approach to content is clearly stated and connects directly to their project subject.	**2**
Student T.R. took the time to reflect on their process in regard to technique and materials choice as well as strategies they adopted to help them including having a reference image. T.R. acknowledged a challenge they had with regard to the image and composition but not the materials or technique.		

Figure 39. T.R. Coded 3-2-1 Assessments and Coding Rubric



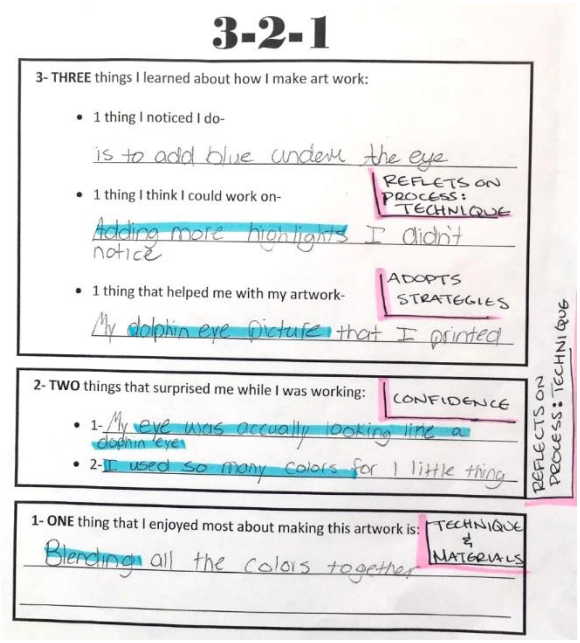
3-2-1 Coding for: C.F.		
Metacognition	Student recognizes what they did well and where they still have gaps in learning or understanding.	**3**
Ability to Use Reflective Practices	Student makes an attempt to reflect on their art making.	**3**
Ability to Clearly Organize and Communicate Ideas	Student's approach to content is clearly stated and connects directly to their project subject.	**3**
Student C.F. reflected mainly on the materials they chose and the techniques they used. C.F. also mentioned that they enjoyed not only making art but also collaboration during the process.		

*Figure 40***.** C.F. Coded 3-2-1 Assessments and Coding Rubric



3-2-1 Coding for: D.M.		
Metacognition	Student recognizes what they did well and where they still have gaps in learning or understanding.	**3**
Ability to Use Reflective Practices	Student is able to reflect on their art making.	**3**
Ability to Clearly Organize and Communicate Ideas	Student's approach to content is clearly stated and connects directly to their project subject.	**3**
Student D.M. made remarks repeatedly that indicate a low confidence level in their ability and their opinion of their artwork, BUT also indicated that they were impressed with their ability in the end to create a finished product that looked better than they anticipated even though they felt challenged. Student also indicated that materials choice and use of materials was something they enjoyed as well as being able to look back at the process from the beginning and seeing how it looked in the end.		

Figure 41. D.M. Coded 3-2-1 Assessments and Coding Rubric



3-2-1 Coding for: K.P.		
Metacognition	Student recognizes what they did well and where they still have gaps in learning or understanding.	**3**
Ability to Use Reflective Practices	Student is able to reflect on their art making.	**3**
Ability to Clearly Organize and Communicate Ideas	Student's approach to content is clearly stated and connects directly to their project subject.	**3**
Student K.P. took the time to reflect on their process in regard to technique and materials choice as well as strategies they adopted to help them including having a reference image. K.P. acknowledged a challenge they had and also said that they were surprised that they were able to achieve their intended vision and create an artwork that looked like the image which indicates that their confidence level approaching the project increased as they worked through their process and challenges and created a finished product.		

Figure 42. K.P. Coded 3-2-1 Assessments and Coding Rubric

Connecting Data

Data for this study was collected using questionnaires, surveys, discussion forums, observations, student work sample, and written response and reflection assessments. Questionnaires, interviews, and assessments were all designed to investigate the major sections of the Literature Review and help me to understand how students thought they learned best (seating arrangement, amount of direct instruction, amount of independence, instructional aides) and how to encourage the intentional and effortful use of EFs to help students work towards becoming self-regulated learners. Designing the methodology to reflect the areas of investigation that relate to EF and SRL allowed the data types to be interrelated with overlapping themes while revealing trends and student opinions about these themes in different ways at the beginning, middle, and conclusion of their project design.

Summary of Findings

Throughout the course of intentionally scaffolding goal setting, planning, and reflective practices during weekly art lessons I anticipated the need to allow for more time in the unit plan as students adopted these skill sets and incorporated them into their daily practices. Placing the ideation and planning steps of the design process at the forefront of lesson objectives for each 35-minute class effectively reduced the amount of time students had to work on their projects. I found that the timeline of this unit and this study continued to expand as students took longer than projected to create physical work. Without the explicit directions and steps to achieve a desired result that students had

become accustomed to, many of the students I observed had a difficult time deciding on a subject for their work and getting started on their still life drawings and painting during the materials exploration. These sentiments continued and were expressed by student participants during individual interviews regardless of the introduction of structured planning activities designed to walk them through their ideation using guided questioning that touched on inspiration, interests, personal connections, and personal identity.

One possible obstacle that may have contributed to students' lack of focus and effective use of class time is the time of day 5th grade students attended art class. For the 2018-2019 school year, 5th-grade students participated in art classes during the last period block *after* visiting lockers and packing up for dismissal from 2:50-3:25pm. Shifting flexibly is a core EF skill that aides in helping students' transition between unrelated tasks. For students with low EFs, this unavoidable transition may act as a detriment to ability to begin effortfully using working memory or focusing on cognitive inhibition. However, initial analysis of data has revealed that though students may not be able to fully self-regulate their learning during the course of this study, participants have indicated that goal-setting helps them focus on what they need to do each class period and helps them get started quickly.

Data also shows that students are enjoying the autonomy and independence of creating their own daily goals and having more choice over the subject and materials of their projects. The data collected also indicates that student feel setting daily goals helps them get started quickly most of the time, but moreover, daily goals help them think about what they need to do for a particular class period. However, even though students

expressed increased ownership and motivation through heightened choice and the independence of individualized goal setting that matched the pace of their work, participants all shared that they still felt step by step directions were useful and that they feel more supported and confident as they progress through their design processes in a balanced, moderate-choice instructional setting.

CHAPTER V: FINDINGS AND IMPLICATIONS FOR THE FIELD

Introduction to Findings

Several themes became evident in student responses during the verbal group and individual interviews, self-report questionnaires, and student reflective activities. Among these themes were metacognition, planning, goal setting, growth mindset, classroom management as it relates to focus, identifying strengths and weaknesses, student challenges, strategies to improve, instructional methodology, collaboration, artistic disposition, ownership, and motivation. These categories reflect major components of executive function and self-regulation. Each data collection method was designed to explore how EF and SRL can be supported in an elementary art class during a series of 35-minute class periods.

Presentation of Findings

Results in Context of the Research Question

How Does Practicing Executive Function Help Improve Self-Regulation?

Strategies to aid students in planning and designing projects, setting and realizing goals, and reflecting on work habits and project results were designed to help students practice using executive function skills to heighten self-regulatory behaviors. Once a student is able to hold information in their mind, focus on a task, and alternate between activities, high-level executive function skills like reasoning, problem solving, and planning will be able to start developing throughout adolescence (Nigg, 2017, p. 368). Without the advancement of these skills, expecting students to self-regulate their learning is unrealistic.

This study investigated how to apply existing research of EF and SRL to determine if increasing the focus on building EF skills during lesson design, introduction, and creation in the 5th grade art curriculum could have a positive effect on student learning practices. This process was investigated from two main perspectives; how can planning, goal setting, and a student-centered/project-based learning approaches help students to take ownership over the creative processes that require EF skills and how does metacognitive awareness and self-reflection help to develop students' intrinsic motivation and growth mindset to promote self-regulatory behaviors?

How Does Planning, Goal Setting, and Project-Based Learning Affect Ownership?

Planning. Independent planning used in self-regulated learning requires students to utilize several executive function skills including organizing, prioritizing information, shifting flexibly during transitions, accessing working memory, and self-monitoring their progress. *Project Plan* sheets were used to support students in organizing and recording their ideas and intentions to refer to as they worked through their project creation and reflected on their process. Project plans include information from discussions and lesson activities such as the *Personal Identity Adjective Collection*, *My Eye-dentity Brainstorming Sheet*, and *Materials Pros and Cons Chart* and helped students practice organizational strategies to gather important information in one document.

Conclusions drawn from verbal interview data showed that student participants consistently responded that "getting started" and "coming up with a plan" can be the most challenging part of creating artwork. Students indicated that not only can it be difficult to

come up with an idea, but that even after they have an idea they don't always know how to get started or start something and then abandon it for something else if it does not turn out how they wanted on their first attempt. Verbal interview data also suggests that students felt that they cared more about their artwork when they had a say in their project plan including what they were going to create and how they were going to execute their ideas. Students mentioned using strategies such as creating lists, sketching, finding inspiration around the room, using a reference photo, and watching "tips" on YouTube.

Since concerns about planning and ideation reoccurred in interviews with some frequency when discussing challenges and "difficulty focusing" also appeared regularly, it is not surprising that students were torn between whether they liked having the opportunity to plan on their own with the freedom to choose or whether they preferred guided step-by-step instructions for the initial stages of production. Students' lack of practice in independent planning, project ideation, and prioritization of information left them feeling vulnerable, hesitant, and without a strong sense of direction in the beginning of their creative design process.

This indication that "focus" was a major issue for students during class time presented itself in group discussions, individual interviews, class *Growth Mindset Problems and Solutions* activity, and in the *3-2-1 Summative Assessment*. In order for students to be successful at planning, they need to actively and deliberately exercise effortful control and use cognitive processes while controlling their emotional and behavioral impulses. However, due to lack of practice, time of day, class sizes of 28 students, and many students citing focus as a challenge for them in art class in general, I

was also not surprised that students had difficulty when attempting to create a cohesive, well thought out plan. Even though they completed brainstorming activities, idea collection worksheets, and materials pros and cons charts prior to filling in their project planning page, some students still struggled to make connections and draw information from these resources. In order for students to improve in formulating project plans (which consider subject, size, and materials as well as inspiration and intention), a routine for utilization of strategies for ideation and informational organization needs to occur as well as additional encouragement to practice effortful control.

Goal Setting. Students' ability to formulate a plan directly affects their capacity to create practical and attainable goals. Jones and Davenport (1996) contend that in SRL students must be able to set challenging goals that are realistic and able to be reached in both short and long-term settings, self-assess and self-reflect on their process and progress, and get feedback from others. Goal setting sheets were used to help students begin to set daily goals (mini short-term plans) and monitor their own progress throughout their work as well as track progress from week to week. Students were able to use this quick activity to trigger metacognition and prompt themselves to think about what they needed to do to re-engage with their project after a week break, refocus their attention, narrow their intention for the class, and see if they are using their time wisely.

However, like artistic techniques and planning, goal setting is a skill that students need to practice to become capable in setting appropriate intentions for each class. During discussions students expressed difficulty deciding what needed to be done in the

beginning of their goal setting attempts. Students shared that they felt there was so much to do they didn't know where to begin. Other students had a difficult time gauging how much they would actually be able to accomplish in a given period of time (often over estimating their potential progress). Students were also tentative to set goals at all or wanted me to help them set their goals for fear of failure or lack in confidence in their ability to make a decision or attain a set goal. Finally, a few students resorted to setting a goal that was too easy which could be interpreted as an attempt to avoid failure or be comical (such as "make a line on the paper" or "pick up my pencil").

"Self-protection tendencies," which were discussed previously in the literature review, identify ways in which students may try to protect their fragile self-esteem by sabotaging their work so they have an excuse for failure that stretches beyond the effort they put into their work. This can present in what Jones and Burglas (1978) coin "self-handicapping" such as procrastination, feigned illness, or work avoidance, or in which students prepare themselves for the worst possible outcome thereby lowering their expectation of their ability so to avoid disappointment or embarrassment (Garcia & Pintrich, 1994; Kleitman & Jiang, 2014). Students who approach learning with the preconceived notion that they are incapable of understanding or accomplishing a task will be less motivated to invest effort, work independently, or benefit from reflecting on their process (Kleitman & Jiang, 2014). For example, if a goal is too broad, students may have it listed for several weeks in a row never accomplishing their goal with the excuse that they "just can't do it" or have a difficult time using their goal to steer their work (such as listing "finishing project" instead of the task needed *to finish* the project). On the other

hand, a goal that is too simple may not challenge students to push themselves to make progress during their short time period. There are many discrete challenges to goal setting which students encountered as they learned more about themselves as students, artists, and individuals. Quick meetings to check and discuss goals occurred at the beginning of each class to reinforce the importance of goal setting and the individual class intention or refine the goal so that it could better guide student work and model more appropriate daily goals.

Even though goal setting was unfamiliar, and I would even say slightly uncomfortable for students initially, student participants shared that they liked setting their own goals because it made them feel more independent and more in control of their artwork and their learning. Participants also shared that they felt that setting their own goals decreased the anxiety and pressure they felt when comparing their personal progress to that of their neighbors' because each project was intended to be different. Additionally, students revealed that I was not the only one who felt constrained by the short time periods to complete work, but, that since goals were personal and could carry over week to week, students felt less anxiety about keeping up or not "missing steps." As they worked.

The *Mid-Project Process and Progress Scale* (see *Figure 29*) revealed that most of the participants in my study, during the first half of the project, felt that setting goals helped them get to work quickly or helped them stay focused on the task "most of the time". Students also indicated that self-assigning daily goals helped them to identify what progress they needed to make in their work during a class period to a higher degree.

Though these answers varied slightly in the post assessment, overall they remained consistent across participants.

However, students also mentioned some drawbacks to being in charge of setting their own goals. Students revealed in individual interviews that sometimes they did not really know what a realistic expectation for the class period would be even after they had been setting goals and making progress on their projects for several weeks. So, even though participants liked setting their own goals, they also liked having some support and guidance when we discussed their goals during daily check-ins to bolster their confidence that they were on the right track. In addition to this, students were torn as to whether they thought their projects came out better when the goal and expectation was set for them or when they got to create it themselves. Students during the group interview discussed how allowing 5th graders to set their own goals may leave room for some students to think they don't have to do anything because they can do whatever they want and that they wouldn't be motivated to push themselves without explicit teacher directions or behavioral consequences. These concerns about students' abilities to set high standards for themselves as they work in a project-based environment echoed the apprehensions Burton (2018) mentioned when discussing the reasons many modernist theorists oppose student-centered learning as discussed in the literature review.

Creative Ownership. Instead of assigning an image or doing a guided drawing lesson on self-portraiture, or even just creating cropped composition eyes as a group, I chose to adopt a project-based learning approach with moderate choice where students

were asked to explore the concept of personal identity through the lens of someone (or something) else's eye(s) that they found inspiration from or representative of themselves. Students were challenged to draw connections between characteristics of their own identity and the characteristics or traits of whatever subject matter they chose as well as asked to consider the perspective of the eyes and what they wanted to communicate to the viewer. Students were encouraged to consult their notes on their *Materials Pros and Cons Chart* but were free to explore in the medium of their choice and also had choice over size and composition of their artwork.

The goal of allowing students to choose their eye subject matter was to help make the pursuit of the design process more personal and help increase intrinsic motivation to heighten their effort and personal pride in their work. However, by exploring representational drawing and identity (self-portraiture) without requiring students to use themselves as the subject matter, I aimed to alleviate some of the tendency students have shown to be self-critical and become easily frustrated when their work does not match their desired outcome (look exactly like them).

Fostering a personal connection with their work is the first step in encouraging students to persevere through their process and approach challenges with grit and an open mind. "Praising students for the process they have engaged in—the effort they applied, the strategies they used, the choices they made, the persistence they displayed, and so on—yields more long-term benefits than telling them they are 'smart' when they succeed" (Dweck, 2010, p.16). My research directly speaks to the findings of Dweck's investigations on process-based education. Data collected from individual interviews and

the *3-2-1 Summative Assessment* supports Dweck's student-centered growth mindset theory and the idea that students will have increased ownership of their product when they feel invested in their process. Of the participants asked, five out of six students immediately answered that it was more important for them to like their artwork than for me (the art teacher) to like their artwork. Students indicated that this is because they made it— so they know how much effort they put into it— and feel a sense of accomplishment when it is completed, regardless of the product, they will feel proud. Students also stated that it is more important for them to like their artwork because if they work hard and are proud of it, even if they ask for my opinion, their pride will motivate them to continue to do better and try harder in the future. One student answered differently to this question stating that he thought it was more important for me (the teacher) to like his work because for him art was just fun, so, if a project is graded the teacher would need to like it. However, this student shared that he also doesn't know why he cares what I think about his work after considering the question.

The *3-2-1 Summative Assessment* and *Artist Statement* activities also helped to support the theory that student-centered instruction with heightened choice increases student motivation. Students responded that their favorite part of creation was often the material they used or the subject matter they chose and often used their choice of subject as the reason why their artwork was important to them and the viewer.

Exploring How Metacognitive Awareness and Self-Reflection Help to Develop Intrinsic Motivation and Growth Mindset

Metacognition. Metacognition is a student's self-awareness of their own understanding as well as gaps in comprehension. Students' ability to determine how to access strategies that would best help them reach their goal(s) or solve a problem in occurrence with their specific learning profile is essential in developing metacognitive practices (Meltzer, 2018). Asking students to begin thinking about how they approach their learning and how they think they view their learning is an important introduction to reflective practices. This includes identifying strengths and weaknesses as well as acknowledging how students think they learn best. For the purpose of this study, planning skills, questions about thinking, strategies students use when coming up with an idea, planning practices for deciding what to do next, and assessing their own understanding all revealed clues about how students use metacognitive behaviors in their design processes.

The semi-structured moderated group discussion format revealed that at times students had strong opinions regarding their learning and artistic practices about coming up with ideas and thinking about how they think. However, recurring incidents of hesitancy (like, umm, and pauses), contradictory responses, and changes in responses showed that participants were actively working through their ideas about several topics as we discussed them and did not always have a fully formulated understanding or opinion about what was being asked. Student responses were often difficult to understand so interviewer restating was used to summarize and clarify responses before moving on to subsequent questions and topics.

It became evident after discussing "thinking" with students, that they don't often consider their metacognitive practices and lack adequate strategies to remediate gaps. This is to say that students in verbal interviews were able to discuss what they thought their strengths and weaknesses were but lacked the "tool box" to discern how to address the areas they indicated needing improvement on or meeting unexpected challenges. For this reason, asking students to self-assess their process and products is an important practice in building self-regulated learners who can help themselves further their exploration and investigation and make independent growth milestones.

Motivation. Student responses to verbal data collection indicated that including students in the planning process of their art projects increased student motivation as discussed previously. This is because students were able to create plans about something that interested them from the start as well as work on a project that was not imposed on them or where the teacher had to try to incite excitement. By creating a project where students were asked to investigate their own identity, students were able to draw on the familiar subject, themselves. Dweck's growth mindset mentality also overlaps with motivation in that "students can show greater motivation to learn when they are led to construe their learning situation as one in which they have potential to develop their abilities, in which they feel psychologically safe and connected to others, and in which putting forth effort has meaning and value" (Yeager et al., 2016, p. 2). Students overall expressed that they enjoyed being able to work on the subject matter of their choice and that they felt invested in their work and cared because it meant something to them.

Results in Context of the Literature Review

Scaffolding Success

The careful design of this project-based unit intentionally began by limiting the scope of the subject matter and size of the still-life projects in a more supportive and structured environment as students practiced techniques and skills through a variety of materials that were demonstrated for them in mini-lessons and reviewed each week through modeling. Teachers in a PBL classroom often model the process and approach to inquiry and provide students with techniques that they can use in the future and provide feedback throughout the student work process (Krajcik & Blumenfeld, 2005, p. 324).

The objective of this instructional methodology was to allow for more independence and a greater feeling of self-confidence when students moved toward working more autonomously in the Eye-dentity portion of the lesson by building their skills in the materials they were using and modeling the process of setting a daily goal and creating a plan through oral narration of artistic processes. Dewey (1938) discussed the role of students' ability to transfer information or attitudes from one situation to another and the effect this has on the students' understanding or acceptance of a new concept across domains. Students are not learning in isolation, which is why it is important for educators to help students add to the knowledge they have already obtained to gain deeper meaning of the topic they are investigating.

Showing students how to use materials they are unfamiliar with created new avenues for exploration in student work. Whereas earlier in the year, 90% of my students

wanted to paint every time they were given a choice of materials, the variety and change in student choice for their final Eye-dentity project was evident. Many students used materials for their final project that they had avoided for the first two trimesters, and all mentioned their materials choice on their *3-2-1 Summative Assessment* surveys, whether it was the way they enjoyed working with the materials, the way it helped them created their finished project, or the way they surprised themselves or learned something about themselves through using a materials and focusing on exploring the techniques more deeply.

Ideation: The Most Daunting Stage of Design

Sternberg & Lubart (1999) suggest that art and design training are known to develop at least five attributes or dispositions. These are discussed and presented previously in Chapter 2 of this paper. Among them are tolerance of ambiguity, perseverance, willingness to grow, openness to experience, and willingness to take risks. "Each of these mindsets are related to self-assuredness, independent thinking, courage of mind and spirit, and the ability to resist peer pressure, which are vital in the development of student agency and responsibility. In turn, student agency affects one's ability to manage ambiguity, failure, and adversity—key dispositions necessary for success in life and work" (as cited in Ingalls Vanada, 2016, p. 7).

As discussed in the previous section with regard to planning and ideation, students are still struggling with the ambiguity and initial planning and ideation but have adopted a willingness to grow and have delighted me in their unanimous agreement that

people can grow and learn. I have also noticed that some of the frustrational levels have gone down among my students as they worked through their projects even as they approached challenges which they were unsure how to conquer or stages where they were not confident in what to do next. Perseverance has increased as students overall were not asking to start again and were eager to help each other master textures and values as they attempted fur, feathers, skin, etc. Willingness to take risks is still underdeveloped as students are still showing signs of hesitancy across all stages of their design process, but overall, students applied effort even when approaching a new skill or task and were impressed (and even sometimes surprised) by how well their final projects turned out.

Adopting a Growth Mindset and Strategies for Improvement

Growth Mindset. A goal of growth mindset interventions is to change the way students view their ability to learn new information and believe that their intelligence is not limited or fixed, but rather can be expanded with effort and practice as they build off of prior knowledge (Yeager & Dweck, 2012). Student responses on the *Mid- & Post-Project Process and Progress Rating Scales* indicated that these participants are open to, and looking for, constructive criticism from peers and teachers to help them improve as they work on their projects and that this criticism is viewed as helpful, not hurtful. All students in the study responded within the 0-1 range when asked if they get upset when people give them constructive criticism and between 2-4 when asked if they use people's suggestions to improve their work. Responses on the *Artistic Surveys* also helped to

gauge students' metacognitive awareness and ability to identify their own strengths and weaknesses.

Critique as Helpful, Not Hurtful

Gnezda (2011) warns that teachers need to be mindful of the way in which they approach and teach critical response to students' creative work. Rather than dissecting student work to identify faults, "we can design evaluation procedures that are growth experiences and that help students recognize their strengths and reflect on their creative processes" (p. 51). Students in the study who initially scored peer collaboration low in the beginning/middle of the project revealed that by the end they felt that talking to their peers was important in their ability to make improvements on their work; whereas students who initially scored collaboration high either stayed the same or only decreased their opinion by one point. Having and nurturing a growth mindset mentality is essential in ensuring that all students are able to share and receive suggestions about their own work and the work of others and treat criticism as a positive learning experience instead of a hurtful condemnation of effort or skill. Critique for this project was encouraged through collaboration in deliberate seating as well as requirement that students participate in a *Think, Pair, Share* activity before finalizing their artwork or completing their Artist Statement or 3-2-1.

Similar to White and Frederiksen (2005), I hoped to nurture learners who could create theories about "what they are doing and why as they engage in cycles of planning, monitoring, reflecting, and improving" (p. 215). Students in the White and Frederiksen

study created a "problems and solutions" chart as an example of monitoring to help classmates when they felt stuck in their inquiry, a "productivity chart" to help keep track of goals and time management, and a "Toolkit" integrative poster organizing possible tools, when, and how to use them (p. 221). Students in my 5th grade art class also used these strategies in similar and differing formats.

Student "toolkits" were built through creation of the project design packets which included all brainstorming, idea organization, and reflection sheets. The "productivity chart" was executed through the use of daily goals at the start of each class. Our class interpretation of a "problems and solutions" chart, in which students were asked to write down one main challenge they had or noticed other students in class having this year on a white paper, and then asked to help future incoming 5th grade students by providing a possible solution to this problem, is provided below (see Figure 43). I specifically approached this activity with the option to make it personal or impersonal in the identification of problems and introduced the solutions aspect with the lens of helping younger students as suggested in Yeager et al. (2016) which states that students struggling with growth mindset or self-confidence may be hesitant or unable to identify things they struggle with or determine how they could help themselves; however, often people are more willing and able to identify issues *other* people may have and suggest ways to address their deficiency when they are personally removed from the situation (p. 7). For the sake of redundancy, duplicate responses were omitted from the display.

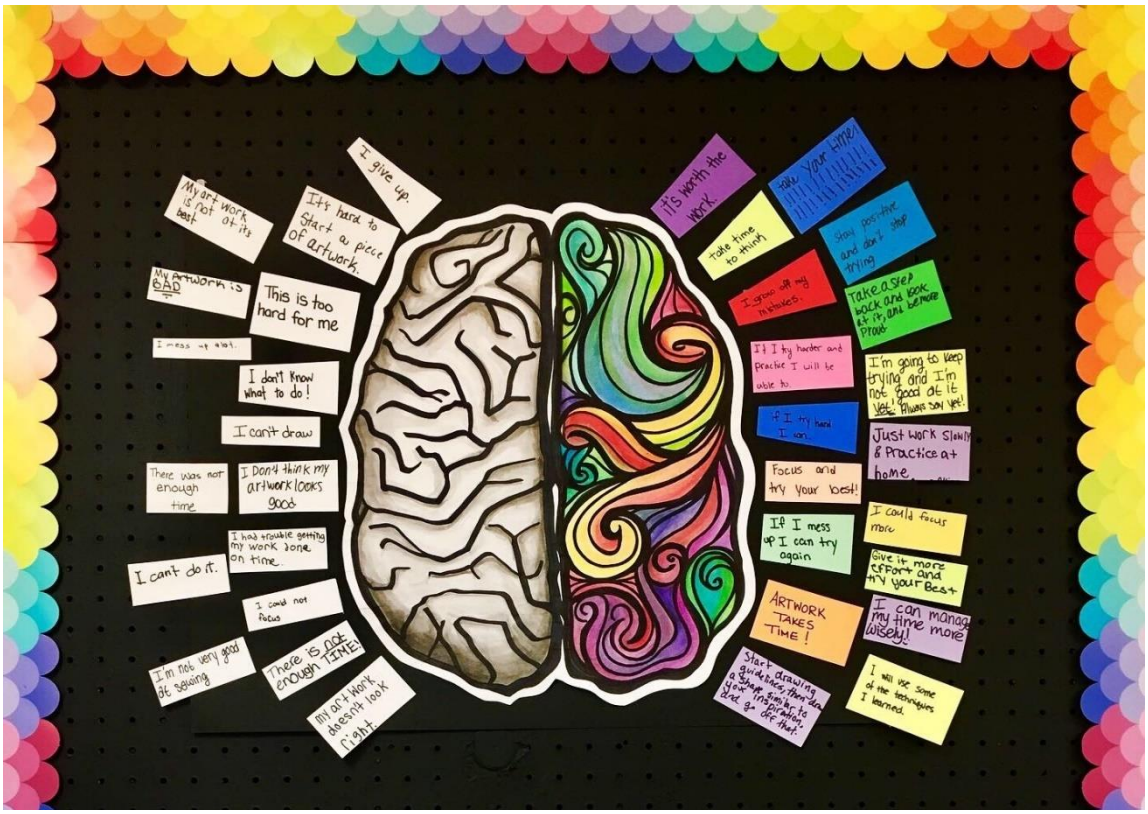


Figure 43. Growth Mindset Problems and Solutions Class Activity

The 'Self' Factor

Students in the early adolescent and adolescent stages of development enter school with constant pressures to fulfill expectations set by parents, teachers, peers, friends, coaches, etc. while also searching for who they are and who they want to be. Blustein and Phillips (1990), Boyes and Chandler (1992), and Marcia (1966,1967) report that "identity achieved youths have scored consistently higher on measures of autonomy and are less reliant on the opinions of others to make their decisions." While independence in ability to make decisions is essential in SRL, the student participants I have interviewed are still in early adolescence and some are still developing their sense of

self and ownership of their identity. "When personal connections are made in the classroom, it becomes a natural way to process the events of one's life, a thinking tool toward the budding of self-perception" (Pellish, 2012, p.19). Student participants expressed a greater interest and pride in their work because it was theirs and made direct connections between their subject and themselves in reflective activities.

Results in Context of the Art Room

Preferred Instruction Method and Teacher and Student Roles: Adopting Project-Based Art Education

Student responses across data collection methods helped me to make the decision to keep my instructional methodology in the moderate choice range. Students in the study openly and repeatedly expressed preferring having the guidance and support of the teacher and balancing this foundation with the freedom of making some choices on their own. In interviews, another concern arose for me— how do I change the perceived class culture that the only way to get students to engage with their work is to be "stricter" or to threaten consequences and punish students? This is a mindset that students have acquired after years of a school culture dynamic that is standing in the way of SRL.

As I admitted in Chapter 1, I was part of this problem. I am one of the many teachers my students have had who has modeled rigid structure and explicit expectations for process. Even though my product expectations have been flexible, and I always differentiated my instruction and considered students' ability when assessing their work and understanding, I existed in the limited choice area of the spectrum and wrote my lessons and art curriculum to reflect this pedagogy.

PBL was used for the purposes of this study to discuss project-based learning which is a form of student-centered learning rooted in constructivism and "real-world activities" that places the learner at the center of the curricular design with an emphasis on learning by doing wherein the teacher/instructor guides students towards a desired end goal with suggested or specific procedures to help students set goals and achieve benchmarks while also allowing for choice and flexibility in process to maintain motivation (Krajcik & Blumenfeld, 2005, p. 317; Savery, 2006). The students were not the only beneficiaries from transitioning my lesson design from teacher directed to student-centered in a PBL style. By allowing for a variety of materials and compositions containing different subject matter, I was forced to change the way I looked at designing projects and have since begun assessing how I can alter more lessons at lower grade levels to allow for more choice and begin introducing EF strategies to younger students.

Pursuing a PBL design required me to let go of some of the structure that both the students and I had become comfortable with over the years we've spent together, but also required me to heighten my ability to organize and manage my classroom including: student behaviors, materials, time, and project design. Just as I was asking students to draw on their strengths while pushing themselves to try something new, I needed to trust myself and my teaching intuition and commit to my decision to allow for some amount of wasted materials, lost time, and functional chaos if I expected my students to learn about themselves as makers and help them to investigate their personal interests. In a way, I was trading my prior comfort zone of teacher-directed lessons with set materials and

limited choice for teacher-directed classroom routines that required tremendous organizational skills and task management systems.

Students shared on their summative *3-2-1 Surveys* that they were often surprised by how "easy" it was to complete their project or use their materials, or that they were able to achieve a result beyond what they had initially expected. When asked what their favorite part of creating their work was, overwhelmingly student listed either that they got to work with the material of their choice or some aspect about the subject matter they chose. Either way, it became clear that as torn as students admitted to being about enjoying choice in verbal interviews, in the end, their favorite parts of their projects resulted from the choices they made in the initial ideation stage and from choosing their subject and material. However, the moderate choice of PBL also provided the support and guidance students were asking for by helping to steer their project plans by providing overarching themes, guided activities, and expectations for finished projects.

After seeing the results of my students' work and hearing them express their interest, pride, and excitement for the work they were creating, the decision to begin transitioning my art room into a PBL model was completely worth the adjustment and a critical turning point for the way in which students enter my room ready to work and approach their art making practice.

Results in Context of Self as an Art Teacher

Artistic Disposition

Student responses on the *Artistic Surveys* indicated that overwhelmingly, students thought others had a higher opinion of their skill level than they saw in themselves. Student responses to this survey also indicated that the ability level I perceived a student to have through my observations of them in class over time was equal or higher than the students' opinions of themselves (see *Figure E1b*). This revealed that students in this participation group, regardless of actual ability, tended to have lower self-confidence than I would have expected from a group that displayed a belief that others thought highly of their artistic ability. This sign of a diminished belief in their own ability helped me to consider the ways in which the formation of personal identity in adolescence may influence the self-confidence and self-esteem of students. For this reason, I made sure to include questions in the individual interviews and rating scales that addressed whether students enjoy making art, if they are proud of the artwork they create, and the importance of ownership over their creation which were all addressed in prior sections of this chapter.

Classroom Management and Focus

As described previously, one of the major challenges students shared that they experienced in their art making was being able to focus on their work and complete their work "on time." The anticipated challenge I identified early on in the study was that the limited time constraints and time of day that students had art would affect their ability to

perform to reach their optimal potential. The topics of focus and feeling rushed came up in individual and group interviews, *3-2-1 Summative Survey*, and *Artist Statements* during the course of the study. By asking students to consider what may be hindering (or hindered) their progress helped them to activate their metacognition and showed that students were able to detect challenges and identify possible remediations for these barriers. However, without making this reflective practice a priority it is difficult to say that students would have made these connections and conclusions on their own. Seating arrangements, phone use, and headphone use are some of the accommodations implemented to help address student concerns and continue to try to create an environment where students felt they could be productive.

The *3-2-1 Summative Survey* given at the end of the project helped to reveal that students were in fact learning about themselves and their tendencies through their artmaking process. Students listed that they noticed they either developed (or desired learning how to have) a more critical eye when evaluating their own work, and how strategies they identified such as removing distractions by changing seating, using headphones, or simply recognizing that focus was an issue they encountered helped them to make progress in their projects as they continued. Each student in this study was unique and revealed the importance of considering all aspects of early adolescent cognitive ability, motor development, and identity development when designing lessons to promote autonomy and independence.

Learning About My Students as Individuals

V.G.

Student V.G. is the participant whom, through observation, I would classify as the most "artistically talented" and self-regulated learner in the grade. Student V.G. is an independent worker and already has a high opinion of herself as a capable artist and learner embodying a growth mindset mentality and a maturity that is "beyond her years." Student V.G. listed adjectives for herself that include independent, musical, unique, intelligent, godly, and biodegradable, but also afraid, weird, and annoying. Other students listed creative, unique, nice, artistic, positive, smart, funny (which V.G. found surprising), and introspective— indicating that V.G. has a positive and realistic image of herself while still acknowledging some areas as challenges (though I would not consider "weird" a challenge and feel that "afraid" after speaking with her is more tentative/hesitant than fearful) and a strong sense of her identity. Student V.G. answered the question "What are you good at?" with the response "logical thinking," and indicates that "My artwork matters because I matter, and I express myself and my thoughts through art" (see Figure F2: V.G. Semi-Structured Individual Interview Transcription).

Student V.G. worked with intense focus and completed her "Eye-dentity" project in four class periods/140 minutes. Her goals were clear, attainable, and incremental and she was able to exceed her own and my expectations on her ability to get started (intrinsically motivated), create an outstanding work of art (artistic ability), and determine what could be changed (critique), and when to consider an artwork finished (which was a concern V.G. mentioned in group interview). Since V.G. completed her

artwork and accompanying planning and reflection sheets before the other students in her class or in this study, V.G. began an independent 6 panel tunnel book project in which I verbally explained the concept and of graduating windows and then left her to work on her own.

V.G. indicated on the *Mid- and Post-Process and Progress Scales* that she believes that setting goals helped her get started quickly and make progress on her artwork increased over the course of the project and that her feelings towards collaboration shifted from indicating that collaboration and talking about her work with others helps her make improvements. Other rating-scale indicators only shifted one measure or not at all which shows consistency in responses over time.

L.L.

Student L.L. proved to be one of my most highly motivated students, but also one of my most inconsistent students during self-reflective and verbal interviews. Student L.L. is struggling with family separation and finding her place in where she fits in two distinct family dynamics. Student L.L. is always happy and positive in class however her listed adjectives include dramatic, fierce, dyslexic, lazy, bossy, depressed, crazy, weird, and stupid. Peer adjectives include funny, kind, caring, smart, nice, helpful, positive, cool, and good at art. It concerned me initially that the self-assigned adjectives were almost exclusively negative. The one peer adjective that she listed as surprising her was that she was nice eventhough I have never observed her being anything other than kind, supportive, and caring towards her classmates. Due to the nature of her adjectives and

the transition at home, I brought L.L.'s diminished self-esteem up to the school counselor out of concern. Throughout the course of the lesson, L.L. remained positive, upbeat, motivated, and willing to participate enthusiastically in all aspects of the study with no further indication of self-deprecating speech or responses.

Student L.L. took six class periods to complete her "Eye-dentity" wolf and was able to create realistic and attainable goals for each class. Despite her classification in special education L.L. created goals that were specific, detailed, and relevant to her progress. Yet, L.L. and K.P. were the only two students to indicate a negative rating for the effectiveness of goal setting in their work habits. When questioned about this change in class discussions, K.P. shared that she felt goal setting was important, but as she made progress on her project she felt that she already "knew what needed to be done" and that the next step was "obvious." Whereas in the beginning, goal setting was more helpful because she wasn't always sure what she needed to do to start. Student L.L. agreed that this is why her opinion of the effectiveness of goal setting in helping make progress decreased also adding it isn't that she didn't think it was important, it just wasn't "as important" now that she "got in the groove." Student L.L. also indicated that she preferred to work alone, and that collaboration does not help her improve her work; however, student L.L. responded to the contrary during the group interview and frequently sought suggestions and had discussions with students surrounding her during class observations. The responses from this student participant showed a pattern of contradiction and inconsistent responses in other areas of the group interview as well.

Although L.L. listed negative adjectives for her identity and struggled with clearly communicating a definitive position on some reflective questions, L.L. did say that she was proud of the work she creates in art class. L.L. was able to identify personal strengths and challenges; however, she had a difficult time accessing her toolkit of strategies independently. Though I would say that L.L. consciously attempts effortful control, her emotions and distractions occasionally required refocusing. Though L.L. is not fully self-regulating her artistic processes yet, I have no doubt that her perseverance and intrinsic motivation will help carry her successfully through her academic and artistic career.

T.R.

Student T.R. is the student I asked to participate in the study due to his positive "can do" attitude and his unique and in-depth verbal explanations of his prior work. T.R. expressed that he is less worried about representing things as they actually look and not really concerned with fine details as long as he feels like he has captured the essence of the subject and he has achieved a clear message through his work. T.R. has shown that he likes to paint his emotions and create "dream-like" backgrounds and scenarios for characters in his work often inspired by music. I found T.R.'s choices over the course of the study to be interesting and his elevated self-confidence in verbal discussions to be a little surprising based on some contradictory responses he provided on written response surveys.

T.R. initially responded on the *Artistic Survey* that he thought he was pretty good at art, especially sketching, but not painting. He also expressed that he felt his parents think he is awesome at comics. However, on this same activity he listed art as a thing that challenges him. I also found it interesting that every time students were given a choice of materials, T.R. chose paint, even though he felt that it was not his strongest material (though he did indicate that he enjoyed using paint on his *Materials Pros and Cons Chart*). As mentioned in my initial student profile, T.R. worked predominantly independently for most of his projects and even when he felt that he could improve on something, he never asked for help or accepted help or suggestions when I offered during work time. He also mentioned that he had a difficult time focusing during class and would prefer to separate himself from other students, use headphones, or use a fidget device to help lower the anxiety he sometimes feels in loud crowded spaces. However, on his *Post-Project Process and Progress Scale* he marked a 1 when asked if he thought he "worked best without help from his friends or teachers" and a 3 in regard to "talking to a friend about my artwork helps me make changes and make my work better," which is contradictory to what I observed during class. Though T.R. did work well and collaborate with students, he often assumed the role of "critic" and freely gave supportive and kind suggestions for how he felt his peers could improve their work.

T.R.'s constant positivity and willingness to share his work and his comments with his peers made him an excellent partner and group member in class activities. He listed positive adjectives for himself such as athletic, nice, 'trustful,' caring, smart, artistic, different, creative, helpful, and curious. T.R.'s list of adjectives reflects his

peer's list, which include positive, smart, funny, kind, hardworking, caring, athletic, unique, nice, and friendly which did not surprise T.R.

Though T.R.'s artistic skills in terms of technique require some patience and refinement, and his answers are sometimes hard to follow or contradictory, his perseverance, willingness to take risks, growth mindset, introspective nature, and distinctive out-of-the-box perspective makes him uniquely artistic with a clearly creative mind. What he may lack in technical skill he more than makes up for in character and positivity. T.R. may not be the highest scoring student in his academic classes but he is very in touch with himself (metacognitive processes) and highly self-regulated in his learning.

C.F.

Allowing for more choice in my art room helped me to get to know my students more thoroughly, especially students who participated in this study for group and individual interviews. Student C.F. is the student I knew the least and learned the most about over the course of this study. Many of the things I learned about him were not even during the course of these interviews, however, I think that opening up a dialogue and forging a familiarity in our relationship helped C.F. to become more relaxed and allowed his personality to come through as an individual, not just as a student in my class.

As discussed in the initial introduction to student participants, C.F. had always presented as a shy, quiet, reserved child who did what he was asked and aimed to please

teachers. While all of that remained true, he also allowed me to see the goofy, funny, creative side of him that he may have been too nervous to show when he was younger or when our relationship was based on instruction-giver vs. direction-receiver instead of as conversational participants and collaborators in an art class. The art room and materials no longer belonged just to me, but to all students. C.F. listed adjectives such as energetic, caring, nice, decent, smart, shy, and likes animals but he also added boring, bad at writing, kind of good at art, and he crossed out funny and creative. Other students listed that he was nice, smart, funny, very creative, good at art, intelligent, quirky, and an out-of-the-box thinker.

It took C.F. 6 class periods to complete his Eye-dentity project because he is so detail oriented and also spent time to go back and edit his work after his peer critique and meeting with me where he made a list of things that he wanted to work on. His final goal for the project was "finish list of things." C.F. was the only student who shared that he thought it was more important for me to like his artwork than for him to like it, which at the time surprised me, but in retrospect aligned with how he has always presented in art class. When I asked him about why he responded that way, he said, "I don't really care if my art is good because art is just fun for me. I don't know why I care what you think either though because I'm the one who made it" (see Figure F5**:** C.F. Semi-Structured Individual Interview Transcription). On the Mid-and Post-Process and Progress Scales C.F. responded with high scores of 3 and 4 respectively when asked if he tried his best on his work and 3's (this is true almost all of the time) for both rating scales when asked if he liked his artwork and enjoyed making art. I hope that by allowing for more choice, making projects more personal, and bringing the question of ownership to the forefront of discussion,

C.F. continues to enjoy making art whether or not other people think it is "good." I hope he considers why he is making his work and who he is making it for in the future as he continues to use EF strategies to focus, draw personal connections between himself and his work, and improve his self-regulatory behaviors while discovering more about himself.

D.M.

D.M. was the student in the study that required the most reassurance and emotional support as well as the most technical support during the art making process. Although D.M. was eager to share responses to verbal interview questions with lengthy in-depth answers, her answers often rambled or went in circles and were strung together with "I don't knows" and confounding opinions. For example, in regard to goal setting D.M. shared extensively that she felt she didn't always need a plan and enjoyed when the result of her artwork surprised her, but underscored this statement by sharing that

> It's kind of cool not knowing the ending, because like if you're trying to plan it and then you do something like to kind of mess it up that you weren't really thinking in your head, you kind of don't feel as good about it as if you were just to jump not it and not know the ending, and say like this could go worse. But when you have a plan it's like I wanted this not that (see Figure 27**:** Color-Coded Transcribed Verbal Semi-Structured Moderated Group Discussion).

The phrasing of this statement indicated that D.M. was adverse to goal setting and making plans not because she didn't find them helpful (she indicated on the Mid- and Post- Process and Progress scales that setting goals helped her get started most of the

time and helped her think about what she needed to do almost all of the time), but because she associated a plan with her inability to reach her set goal.

Overall, it took D.M. 7 class periods to complete her Eye-dentity project, however, some of these days D.M. was dismissed early and made very little progress during that class period. Due to D.M's increasing anxiety that she would not have time to finish coupled with her hesitancy to work until I came over and showed her exactly how to begin, D.M. was invited to attend art class twice in a weekly period in place of a gym class which students attend twice weekly regularly.

D.M. listed adjectives for herself which include weird, smart, brave, creative, strong, fast, neat, unique, different, and caring with peer adjectives comprising of unique, nice, amazing, funny, creative/good artist, leader, smart, intelligent, and friendly. From this list it would appear that D.M. is a confident self-assured young adolescent. However, despite self-assigning positive characteristics, in verbal interviews D.M. often classified herself as "not the best but not the worst." D.M. is an example of a student where her lack of self-confidence in her ability not just to create her work and use proper technique, but to trust her own thought process, feelings, and opinions greatly inhibits her ability to work autonomously towards the goal of SRL. The following table includes examples of D.M.'s indication of diminished self-confidence as taken from the individual and group verbal interviews.

Question Relevance	**D.M. Response**
Strengths and Weaknesses	I don't think I am really bad at anything. I don't like think I'm like amazing at everything, but I just don't think I'm like at level 0 with everything. It's like sometimes I'm like good at it, and sometimes I

	just like can't think. I don't I'm really in the middle though. I don't know. Well, I mean kind of. I'm not like amazing at it, but I'm like okay sometimes. It's either like I'm better and I don't want to say anything or like two, it's like I'm worse and I try to do something more and I just mess up my painting…or whatever we're doing.
Ideation and Getting Started	I feel like it's kind of hard for me to come up with ideas. But I kind of feel like if we're using a picture, I try to base it off of that, but as we go I kind of change it to make it better or more what I was thinking. Coming up with ideas randomly is like, I don't know, I'm not good at thinking of ideas.
Pride in Artwork	I'm just trying to think. Most times I am kind of like, that kind of looks bad I guess. That's why I like doing projects with multiple parts. Because like with the fruit, we did the oil pastel and the paint and the chalk pastel and I was like proud of the chalk pastel but the others I like wasn't. Cause when we did the portraits and then I looked at other people's portraits I was kind of like, mmm, but like if I had like two I could have more choices.
Critique	Well sometimes I am a little like, I don't want to say like mad, because I am never like mad at them, but sometimes I am a little upset because like if I'm proud of something and then someone says, "oh you could have done that, or added that," I am a little upset but then most times I kind of know I could have improved on that but then when someone says it I'm like "yeah, I know." But, like if you say it I know it's to help me, and I guess it's the same with someone next to me, but most times no one next to me is working on same thing I am. When you say it, I know it's going to make it better. But then, when someone else says it I can either like tell because I am not doing the best on something, so I am like, "yeah I kinda could do that," but then other times if I'm already working on one thing and I just want to get it finished and be done and someone give me suggestions it is kind of like too much and could ruin it. I trust you more to help me, I trust what they are saying but sometimes I feel like it can be just too much. It depends. With you it always makes it better.
Artistic Disposition	I mean, I think I am like good as an artist, but I don't think I'm like amazing. Like I guess I would be half way between good and pretty good instead of just okay. Some things I do I think are pretty good but when I make art I feel like I do more kind of like my own style than trying to make it look realistic or more like kind of I don't know. I also like clay and stuff and pop ups.

*Figure 44***.** Table of DM Responses Indicating Self-Confidence

D.M. did indicate on her *3-2-1 Summative* survey at the end of her process that she noticed that she got nervous and was afraid of ruining her work, however, she also indicated that one thing she thought she could work on was "being prouder of her work." She stated that she was surprised at how good it looked at the end and that she really enjoyed the process of seeing her work change from a sketch to a finished work of art. I think these indications are paramount in helping D.M. to embrace a growth mindset and begin to really believe the adjectives she listed for herself to help her work through challenges in the future.

K.P.

Student K.P. appeared to have the most consistent interpretation and understanding of her abilities and her perceived abilities on the *Artistic Survey* in that she was the only participant to rate her own disposition evenly with her idea of what other thought which is consistent with where I would place her "artistic ability" as well ranking all three at "pretty good." This student indicated that they are not upset by constructive criticism from their peers and use suggestions to get better and also that they are proud of the work they created and are motivated by their family and their interests. The only inconsistent indication K.P. recorded was that she felt that goal setting was less important to her process as she neared the end of creation and completed her summative assessments as indicated in discussing L.L.'s progress.

K.P.is a very caring and nurturing person who responded with interesting and modest answers to questions in verbal and written formats. In fact, she chose a dolphin

eye because of dolphins caring and helpful nature, which I would classify as a perfect fit. To support this characteristic, K.P. even listed "to help others who need help" on her goals sheet when she finished her project earlier than many other students in the class. K.P. listed adjectives for herself as caring, brave, thoughtful, kind, friendly, smart, athletic, loyal, independent, and protective. K.P. indicated about peer listed adjectives that, "None surprised me, but I love how everyone was so nice and thoughtful" (see Figure L5: K.P. Personal Identity Adjective Collection). Peer adjectives included always caring, nice, creative, unique, helpful, artistic, kind, thoughtful, honest, intelligent, and a great friend.

K.P. is a student who is constantly striving to do her best, make her parents proud, and find ways to grow artistically, academically, and personally. I would add empathetic and supportive to K.P.'s impressive adjective collection. It is evident that K.P. exhibits effortful control and constantly is in touch with her metacognitive ability. Student K.P. entered this study with her own toolkit of EF strategies and has built upon these to become a highly self-regulated learner, even though she still enjoys the support and guidance of teachers and parents.

Implications for the Field

Though I feel that this intense focus on building EF to promote SRL has helped me to adjust and refine my teaching on a personal level through increasing choice, I hope that teachers who are hesitant to give up some of the control and structure in their own classrooms gain the confidence to allow for more choice with the understanding that

there is a spectrum for choice and that it does not have to be an all or nothing approach. Each classroom dynamic and educator is different and the level of choice that is appropriate for students depends on many factors.

It has become my belief that this adjustment to the art curriculum is important, however, encouraging these behaviors across interdisciplinary curricula is critical in helping to support and reinforce quality thinking systems and EF skills. Thomas (2000) contends that it is important to promote metacognitive and self-regulatory capabilities in planning and self-monitoring skills with inexperienced young problem solvers, which places the burden of helping students develop these expert skills on the shoulders of elementary, middle, and high school teachers. No one teacher or one classroom environment can fulfill this task alone.

However, as mentioned several times throughout this paper, as strongly as I feel that EF skills need to be at the forefront of educational instruction across curricula to make a substantial difference in the development of cognitive skills, the art room still has a unique freedom and responsibility to help students use their creative outlets in combination with their cognitive capacity to explore, invent, think, share, and design work that is unique and essential for developing the whole child. The artistic process is a culmination of the skills students use to prioritize information in a mathematical word problem, create an experiment in science, brainstorm and gather ideas for writing assignments, and sharing and communicating ideas in a social environment.

Another important implication this study could have on the field of art education is stressing the importance of goal setting, collaborating, sharing, and reflecting on work.

These skills and steps in the creation process are just as important as the making stage even if they are behind the scenes. Without the focus on reflection, I cannot say that students would have stopped to think about what they were doing, why they made the decisions they did, or what they themselves were taking away from their creative process in addition to a finished work. With the time constraints many art teachers face and the sometimes erratic and inconsistent schedule and student attendance, it is important to remember the mantra of "process over product." However, it is completely plausible that some art teachers may not be ready to fully overhaul their curriculum at every level. I for one am still one of those teachers some of the time. So even if art teachers can remember to place process on an equal scale as product, students will benefit more than if they are only participating in the making portion of their creation.

Finally, and perhaps most importantly, I hope this study helps to reinforce the importance of reflective practices in art education throughout the creative process. As art teachers, again many of which have limited time, it is easy to get caught up in what needs to be made or completed each period to keep the students and classes on track. However, I learned more *from* my students and *about* my students this year by touching base with them in goal setting check-ins each class, reading their reflective responses at the beginning and end of their process, asking them questions to help them access deeper meaning, and listening to them collaborate and share their Artist Statements than I did in the previous 5 years I taught these children. It is important for art educators to remember to consider the identity of their students when designing lessons that requires helping

students develop metacognitive awareness and EF strategies while creating artwork they care about.

Implications for Future Research

Limitations Upheld

Entering this study, I identified several possible limitations that could affect the results of my effort. One of these limitations is that I was solely implementing these strategies with 5th grade students and they did not have past experiences or practice to build on. Holmes et al. (2009), and Klingberg et al. (2005) determined that tasks "need to be continually incrementally increased or few gains are seen" in students' ability to utilize EF skills. Without allowing for more time and greater practice across grade levels both before and after this exercise, it is hard to determine how these strategies could help to develop growth in self-regulatory behaviors in the future.

Klingberg et al. (2005) also found that repeated and consistent practice is key. In addition to this, Diamond et al. (2007), Lillard and Else-Quest (2006), and Riggs et al. (2006) determined that whether EF gains are seen depends on the amount of time students spend rigorously practicing these skills and how well EF skills are embedded in the school curriculum throughout the day, not just in an isolated exercise. Finally, Farran and Wilson (2011) reported that after the first year of data collection in their full computerized EF program, limited to no evidence of EF benefits were observed in their study. These findings are essential in supporting the limitation that solely implementing EF strategies in the art room alone during a constrained time frame may not be sufficient

enough to show significant gains in students' adoption of these practices. Practicing EF skills once a week for 35 minutes is excellent exposure for students to begin becoming familiar with the routines and strategies they have available to help them help themselves, but without more frequent practice, it is unrealistic to expect students to fully embrace and implement EF skill independently without support.

Students also upheld a major concern I anticipated before beginning the study. Time constraints of class periods and the once a week frequency of the class presented them with one of their greatest challenges. Students expressed frustration, anxiety, and disappointment when they were unable to finish a portion of their project that they were actively working on. It is difficult to reach "flow" when you are constantly racing against the clock. However, even with the understanding that more practice and time is needed, Diamond (2013) found there is little evidence supporting what the adequate frequency of practice is, how long the effects of EF training last, or whether additional practice sessions need to be revisited or for how long to maintain any gains. In addition to this, there are questions about the optimal dose of frequency by age and which EF interventions and processes would be most beneficial.

It became evident that the effects of promoting EF strategies may not be immediately recognizable or entirely measurable during this study. Though data was collected over the course of twelve weeks (seven cumulative instructional class hours), each strategy was presented as an introduction to EF instead of a full immersion in these practices. Student responses allowed me to see initial trends, however, I acknowledge it will take time to embed these skills. This study shows that building EF and SRL in

students takes time, repetition, and the opportunity to apply new strategies to various situations. In addition to this, the amount of time it could take for each student to adopt new habits and begin to use them independently is difficult to predict and can vary greatly depending on student academic skill level, cognitive ability, presence or absence of medical diagnosis or learning disability, and predisposition to exercise EF skills prior to this study. For these reasons, the importance of future studies to fully observe how planning, goal setting, and reflective strategies help build SRL in an art room setting is needed in an extended capacity. It would be beneficial to implement a longitudinal study to help observe student growth and adoption of strategies over the course of full year art curriculum or longer to see how EF effects SRL when using EF practices is routine.

Impact on Students with Diverse Learning Needs

This study focused on the responses from six neurotypical students who were enrolled in the general education and special education programs at Peter Muschal Elementary School and who varied in academic and artistic performance. These students each expressed how taking ownership of the planning, goal setting, and art making stages of their project creation affected their overall emotional and physical investment as they worked; however, there is an opportunity for future research to be conducted in the areas of EF and SRL for students with diverse learning needs. Investigation through the lens of students with a cognitive or physical disability, students who have experienced trauma, or students who suffer from emotional or behavioral disorders could examine how increased choice and autonomy could benefit students in these populations.

Conclusion

The literature surrounding the areas of child cognitive development, executive function, self-regulated learning, educational psychology, project-based education, identity in adolescence, and art education are often explored and written about in isolation. However, the information gleaned from the literature overall was upheld by my findings during this study and supported the design and implementation of as well as the motivation for introducing more choice into the art curriculum following a PBL model.

Data from verbal, written, and visual collection methods varied slightly from participant to participant, but overall conclusions can be drawn that — increased student choice heightens motivation, independent goal setting helps to drive planning and process which promotes ownership, and reflective practices help students make connections with themselves, their process, and their artwork and that all of these are rooted in cognitive development and formation of identity for early adolescent students.

As mentioned previously, it is difficult to determine if EF strategies introduced during the course of this study will have a lasting impact on students' ability to self-regulate their learning, but the data collected indicates student growth and potential for the arts to promote executive function skills and help students work towards building independent skills needed to become self-regulated learners as they progress through their educational and artistic careers.

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APPENDIX A: Permission and Consent

RESEARCH SITE SUPPORT FORM

Principal: Megan Geibel
Peter Muschal Elementary School
323 Ward Ave.
Bordentown, New Jersey 08505

To Whom It May Concern:

I, Megan Geibel, give permission to Kathryn Sakowski to conduct an action research study at Peter Muschal Elementary School during the spring 2019 semester in order to fulfill the requirements of her master's thesis at Moore College of Art and Design. I understand that this project is intended to research the effects of integrating executive function strategies into the design process to promote self-regulatory behaviors in 5th grade students.

I understand that Kathryn will be a teacher-researcher who will be teaching art while gathering data during the school day. I understand she will be collecting data using various methods including surveys, observations, interviews and artifacts with selected students after obtaining parental/guardian consent for participation.

Sincerely,

_____ Date: _____

Megan Geibel
Principal, Peter Muschal Elementary School
Bordentown, NJ 08505
609-298-2600
mgeibel@bordentown.k12.nj.us

RECRUITMENT LETTER FOR CHILD PARTICIPANT

Dear Parent / Guardian,

I am contacting you to request permission for your child,

_____, to participate in a research study at Peter Muschal Elementary School. My name is Kathryn Sakowski and I am the art teacher at PMES. I am also a Graduate student at Moore College of Art and Design conducting my thesis research where I will be examining the impact of integrating cognitive executive function strategies into project design processes to promote self-regulatory behaviors in 5th grade students. The purpose of this study is to explore how helping students identify strategies that they use every day can help them to think about what they are doing and why they are doing it, make independent choices regarding what they want to learn about and how to proceed with their processes, and focus on self-reflection and communication about what they did and why. Students have been invited to participate based on careful selection, with the intention of ensuring a heterogeneous group, for the purpose of gaining student opinions from multiple perspectives. This study is completely voluntary and there will be no effect on a student's standing in the program or class should they decide not to participate in this study.

This research will be conducted at your child's identity will be kept confidential, as pseudonyms will be used on all data collected at Peter Muschal Elementary School. This study will be conducted during your child's regularly scheduled art class except for 2 scheduled interviews (one group and one individual) which will be held outside of their normal art time. The research study will take place over 10 weeks, with students participating in art class as they normally would. Participants and non-participants will all complete the same written data reflection sheets as part of their class requirements. In order to effectively collect data during interviews, students will be audio-recorded. Student artwork will be photographed. All audio, visual, and digital data will be destroyed upon conclusion of the thesis Attached you will find PARENTAL CONSENT and PARTICPANT'S RIGHTS forms which further detail the research study. Should you have any questions at all, please do not hesitate to contact me at (609) 502-5522 or ksakowski@bordentown.k12.nj.us at any time. If you have no further questions, you may sign and return these forms before January 11, 2019.

Sincerely

Kate Sakowski
ksakowski@bordentown.k12.nj.us

PARENTAL CONSENT FORM FOR PARTICIPATION IN RESEARCH
Peter Muschal Elementary School

I give consent for my child _____ to participate in the research study entitled, "Thinking About Thinking: Exploring Strategies to Increase Executive Function Skills and Foster Self-Regulatory Behaviors in Elementary Art Students," that is being conducted by Kathryn Sakowski, a Graduate Student in Art Education at Moore College of Art & Design.

I understand that this participation is entirely voluntary; I or my child can withdraw consent at any time without penalty, and have the results of the participation, to the extent that it can be identified as my child's, returned to me, removed from the records, or destroyed.

1. The reason for the research is to explore how helping students identify executive function processes that they use every day can help them to think about what they are doing and why they are doing it, make independent choices regarding what they want to learn about and how to proceed with their processes, and focus on self-reflection and communication about what they did and why.

2. The timeline for the research is as follows: The data collection for this study will begin at the beginning February before beginning a project built into the normal art curriculum. At this time, a group interview will take place with all participants to introduce them to the study and explain why I am exploring this topic and asking them for their feedback. Each week ALL students will fill out goal setting sheets to help them define their focus for the day. As the project progresses, students will reflect on their mid-way process thorough a short, written, questionnaire. Students will then complete their project, write an artist statement to put their process and artistic meaning into words, and share their work in a class critique. Throughout this time, participants will also be interviewed individually to see how their work is progresses and to gather their insight into how they think these strategies are helping or hindering their art production.

3. The procedures are as follows: The child will complete an artistic survey which will measure the child's artistic self-efficacy (opinions and dispositions) about their own ability and their metacognitive strengths and weaknesses. They will continue to monitor their dispositions to their artwork and art process through subsequent surveys as they proceed with their projects. Students will then be asked to reflect on their artwork and participate in a group critique to present their artwork. Peter Muschal Elementary school will serve as a control for the study. Nothing will be changed in classroom routines or procedures. All students will be completing the same written surveys and reflections whether they participate in the study or not as they are part of the art curriculum.

The difference between study participants and non-participants is: Student responses from study participants will be collected, categorized, and recorded carefully using specific analysis procedures to help analyze the changes in the students' use of executive function skills and the way this effects their opinions over time. Student participants will also be asked to participate in a recorded verbal interview (which will be kept confidential) to

help interpret their written results and gather additional information about how their process effects their art creation.

4. No risks are foreseen. Your child's participation is voluntary. Non-participating students will not be penalized in any way. Grades will not be affected if a student elects to not participate. This is strictly to help design instructional methods to help students take ownership in their learning and artmaking.

5. Participant's identities are strictly confidential. Results will not be personally identifiable. Data collected from the research will be kept secure, locked in a file cabinet off site. Pseudonyms will be used when quotes from individual children are transcribed into data.

6. If there are further questions now or during the research, I can be reached at
Phone: 609-502-5522
Email: ksakowski@bordentown.k12.nj.us

7. If your child is NOT part of Peter Muschal's Art Club, as a token of appreciation for participation I would like to invite your child to join the Art Club students on the Spring Field trip to Grounds for Sculpture as a thank you for their commitment to art education.

8. If you have any further questions, you may also reach out to my professor, Amanda Newman-Godfrey at anewmangodfrey@moore.edu or my MA Program Director, Lauren Stichter at lstichter@moore.edu Please sign both copies of this form. A duplicate will be provided for you.

Signature of Researcher: _____ Date: _____

Please indicate your **consent** for the following areas of data collection by initially on the line provided:

_____Written responses and artwork are permitted to be collected for the purposes of this study.

_____ Confidential interviews are permitted to be audio-recorded for authenticity in transcription

_____ Photographs of my child and/or their artwork are permitted to be included in the results of this study and published in an educational thesis for work towards my Masters in Art Education with an Emphasis in Special Populations degree from Moore College of Art and Design. (No names or identifying information will be included with photographs)

My signature means that I consent for my child to participate in this study.

Signature of Parent/Guardian: _____ Date: _____

My signature means that I agree to participate in this study.

Student Participant's Signature: _____

PARTICIPANTS RIGHTS FOR STUDENTS

Researcher: Kathryn Sakowski
Research Title: Exploring Strategies to Increase Executive Function Skills and Foster Self-Regulatory Behaviors in Elementary Art Students

- I have read and discussed any questions or concerns about the Research Description with the researcher. I have had the opportunity to ask questions about the purposes and procedures regarding this study.
- My child and my participation in this research is voluntary. I may refuse to participate or withdraw from participation at any time without jeopardy to my child's grades, future student status, or other entitlements.
- The researcher may withdraw my child at her professional discretion at any time.
- If, during the course of the study, significant new information that has been developed becomes available which may relate to my willingness to continue to participate, the investigator will provide this information to me.
- Any information derived from the research project that personally identifies me or my child will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.
- If at any time I have any questions regarding the research or my participation, I can contact the researcher, Kathryn Sakowski, at (609) 502-5522 or ksakowski@bordentown.k12.nj.us to answer my questions.
- If I have comments, or concerns regarding the conduct of the research or questions about my rights as a research subject, I will contact Amanda Newman-Godfrey, Assistant Professor Art Education, 1916 Race Street, Philadelphia, PA 19103, 215.965.4034, anewmangodfrey@moore.edu or Lauren Stichter, Director of Art Education, Moore College of Art & Design, 1916 Race St., Philadelphia PA 19103-1179. lstichter@moore.edu (215) 667- 6811
- I have received a copy of the Research Description and this Participant's Rights document.

Consent: Please read the following and consent to each form of data collection.

- If audio recording* is part of this research:
  _____I consent to having my child audio recorded for the purposes of this study.
  _____I do NOT consent to having my child audio recorded.
- If video recording is part of this research,
  _____I consent to having my child video recorded for the purposes of this study.
  _____I do NOT consent to having my child video recorded.

****Any audio or video taped materials will be transcribed using pseudonyms and original materials will only be viewed by the researcher. All materials will be kept in a secure, locked, location during the duration of this study and originals will be destroyed following the study.*

- Written responses and artifacts (artwork, photographs, self-report questionnaires)
  _____ Responses and artifacts are permitted to be collected for the purposes of this study.
  _____ Responses and artifacts are NOT permitted to be collected for the purposes of this study.
  _____ Photographs* of my child and/or their artwork are permitted to be included in the results of this study and published in an educational thesis.

****No names or identifying information will be included with photographs*

My signature means that I agree for my child to participate in this study.

Participant's Guardian's signature: _____ Date:___/____/___

RESEARCH CONSENT FORM

DESCRIPTION OF THE RESEARCH: Select fifth grade students assigned to Kathryn Sakowski's roster at Peter Muschal Elementary School are invited to participate in a research study that investigates ways in which presenting specific strategies to improve executive function (EF) skills within the art curriculum can help to develop self-regulated learners. Through discussions and written self-report measures it is hoped that valuable information will be gained on how to best structure art education lessons so students can begin setting their own goals, take initiative and ownership of their work, and reflect on their processes throughout the course of this research study. For this study, students will participate in research sessions over the course of 10 weeks during the Spring, 2019. This research study is primarily conducted during regular scheduled class times, so there will be no effect on the regular program. In addition, two scheduled interview sessions will be audio recorded and transcribed. These audio and video recordings will provide information that I will use in writing my thesis. The audio and video recordings will be destroyed upon the completion of my study. This study will take place at Peter Muschal Elementary School in the Art room during class time and I, Kathryn Sakowski, will conduct the research study.

RISKS AND BENEFITS: Participation in the study is completely voluntary. Non-participating students will not be penalized in any way if you should refuse to participate. No child will be singled out or pulled from any activities if he/she chooses not to participate in the study. There are no foreseen risks unique to this study that students would not encounter during a usual art or classroom activity. If a participating child feels uncomfortable at any point in this study, special arrangements can be made, and/or a student can be pulled out of the study without penalty or repercussions. Grades will not be affected if a student elects to not participate. The purpose of this study is strictly to help me, Kathryn Sakowski, design instructional methods to help students take ownership in their learning and artmaking through the use of executive function/cognitive strategies.

PAYMENTS: There will be no payments for anyone's participation in this study, however, if a child is NOT part of Peter Muschal's Art Club, students will be invited to join Art Club for the remainder of the 2018-2019 school year.

DATA STORAGE TO PROTECT CONFIDENTIALITY: Subject's confidentiality will be preserved. I am the sole researcher of this study. For the collection, analysis and reporting of all data, all of the participants will be assigned a pseudonym to prevent individuals from being identified. Any charts used in my thesis or presentations will be coded. All the data that I collect for this research project will be kept in a locked file cabinet in my classroom. The audio recordings will be destroyed upon the completion and presentation of this study in the form of a master's thesis. If consent is given, I will reserve the right to use the data and photographs of student artwork but the students' identity will continue to remain confidential.

TIME INVOLVEMENT: Participation in the study will take approximately 10 weeks.

HOW WILL RESULTS BE USED: The results of the study will be used to design lesson plans and unit plans within the Bordentown Regional School District's Visual Art Curriculum (pre-K through 5th grade). Conclusions from the investigation on the implementation of EF strategies and the effect on students' ability to self-regulate their learning and their motivation will be driving factors in project design. The results will also be included in a thesis, which serves to fulfill my requirements for a master's degree in Art Education with an Emphasis on Special Populations from Moore College of Art and Design.

APPENDIX B: Interviews and Protocols

Kathryn Sakowski
Semi Structured Individual Interview

Interview Protocol Form

Open Ended Data Collection: **Teacher Role vs. Student Role- How the art making process effects student opinions about their effort and ability?**

Date: _____

Time: _____

Location: Peter Muschal Elementary School Art Room

Interviewer: Kate Sakowski

Interviewee: _____

Release form signed? ____

Protocol
The questions / dialogue will be conducted in an identical fashion to demonstrate experimental control. All students in the study will be asked individually the same series of questions regarding their feelings about their art, their ability, and their process. The structure of the questions is designed to engage students in active conversation to encourage deep, meaningful, and personal responses to their art production and self-reflection on their effort and ability. The process scaffolds questions to maintain an active and responsive student-teacher dialogue. Positive reinforcement will be provided after each response. Positive reinforcement is defined as the researcher repeating the student response enthusiastically or asking the student to consider or expand on their answer further. Students will also be allowed to ask the researcher questions should they choose to do so.

The steps for questions / dialogue will be as follows:

1) The conditions will be as follows:
   a. Each student will meet with the researcher in a one-on-one ratio;
   b. All sessions will be for the same fixed interval of time;
   c. Any known antecedents to the baseline sessions will be reported in results;
   d. The setting will be the art room at Peter Muschal Elementary School
   e. The student will be seated at the demonstration table across from the researcher
   f. Additional school staff members such as a paraprofessional may be present but be asked to remain silent;
   g. Experimental control will be demonstrated through the use of a digital voice recorder using a fixed length event recording system to capture each participant's full response to each question presented;
   h. Transcripts of each session will be created in a word processing program;
   i. Each transcript will be identified with the student pseudonym, date, and print set;
2) The researcher will greet the student and begin with the topic question scripted below.

Kathryn Sakowski
Semi Structured Individual Interview

3) The student will be prompted with a question and the verbal response will be recorded.
4) If no verbal response is provided after ten seconds, the question will be repeated. If no response is given after another 10 seconds, the next question in the sequence will be asked.
5) Each student will be asked the same series questions in the same order to ensure consistency.

Scripted Introduction
I am going to ask you 16 questions about how you think and feel about your artwork, learning, understanding, and process. I will ask you one question at a time and would like you to answer as honestly as you can. I will be audio recording this conversation so try to speak loudly and clearly. This will help me remember your answers after you leave so I don't leave anything out. None of your classmates, other teachers, or parents will read your responses. All of your answers will be confidential.

Spark
Question (Q): How are you doing today?
(Participant:):

Researcher
Response (RR): *We are going to discuss how you feel during art class and what you think could help you better come up with ideas, set goals for yourself, stay on task, and complete projects that are well thought out and meaningful to you.*

(Q): Are you ready to begin?
(Participant):

(RR): *I want you to think carefully about how you feel when you make your artwork and how you think your learning could be supported better if you could change or alter anything about the way you are making art. The purpose of these questions is to help me build an art room where students like yourself feel like they can create, learn, and succeed. As a student, your opinion is very important in helping me help you and other students when they are in my class. There is no wrong answer to any of these questions since we all learn and work differently and nothing you say will change the way your artwork is graded or my opinion of you as a student.*

(Q): Do you think you can answer some questions to help me become a better art teacher? Do you have any questions before we start?

Teacher/Student Role:
(RR): *This question is about the type of artwork you like to create.*

(Q): Would you rather make artwork that you come up with on your own or do you prefer when the teacher tell you step by step what needs to be done to complete a project? Why?

Kathryn Sakowski
Semi Structured Individual Interview

(Participant):

(RR): *You bring up some really good points about why you feel that way. I can see why you think it may be (easier, more enjoyable, better) when you are able to create your artwork in that way.*

(Q): Do you think there is anything about the (the other method of creating artwork) that is beneficial for you when you are making your work? Why?
(Participant):

(RR): *Your ideas are very helpful. It is important for me to understand how I as a teacher can help my students by giving more or less instructions at different times of the lesson.*

Effort and Motivation:
(Q): When you start a project, what is something that you think helps you come up with an idea?
(Participant):

(Q): Is it easy or hard for you to come up with ideas?
(Participant):

(Q): What is something that you think makes it difficult to begin a new project? What is something that could help you overcome this roadblock? What strategies could help you get started?
(Participant):

(Q): What strategies could help you get started when you are having difficulty? If you tried something and it didn't work and you want to try it again, how do you go about doing that?
(Participant):

(Q): When it comes to goal setting, do you feel more confident working when you decide what you think you can complete in a class period or do you prefer when the teacher tells you how much work is expected to be completed by the end of each class period?
(Participant):

(Q): Do you think you always try your hardest on your artwork? What makes you want to try to do your best or improve?
(Participant):

(Q): What is something you would change about your time in art class that you think could help you progress through your projects more smoothly with less distractions or wasted time?
(Participant):

Kathryn Sakowski
Semi Structured Individual Interview

Recap
(RR): *Wow, you have a lot of insight into how you learn in art class and what kinds of things might be able to help you become a better artist. I just have a few more questions to ask you before we are finished. Remember, your answers are to help me teach future students and the best way you can help me is to be honest. Nothing you say is going to hurt my feelings. Even teachers need to listen to learn, it's the only way to keep growing our brains and become better teachers.*

Self-Reflection
(Q): Are you proud of the work you create in art class?
(Participant):

(Q): Do you think it is more important for you to like your artwork or for me to like your artwork? Why?
(Participant):

(RR): *When I am making artwork it sometimes helps me to take a picture of it and look at it later or ask other people what they think about it before I decide what to do next.*

(Q): How do you know when you are finished with a work of art that you make?
(Participant):

(Q): How does it make you feel when teachers or other students give you suggestions that they think could improve your work?
(Participant):

(Q): Has your opinion of your ability as an artist changed at all since we started this study? If so, how? *(shown their initial Artistic Survey)*
(Participant):

Closure
(RR): *Thank you so much for taking time to answer these questions so honestly and spending time with me today to help me learn how to better teach you and other art students.*

(Q): Is there anything else you would like to add or say about your experience in art class? Is there anything you'd like to ask me before you go?
(Participant):

Figure B1. Interview Protocol Form-Individual Semi-Structured Verbal Interview

Scripted Introduction: As you know I am in graduate school to get my master's in art education. For my master's I am writing a thesis research paper and I need your help. I have asked all of you to meet with me to help me get an idea of how 5th grade students think and what strategies 5th graders think could help them and their classmates become better thinkers and creators. Art class requires a lot of thinking since there is not always a set of directions or a right answer. Artists need to consider different possibilities, try new techniques, explore new ideas, and do things that they might not be used to doing. I am going to ask you all some questions and I want you to feel comfortable responding to the questions and to each other.

Open-ended Questions: (questions about executive function, metacognition, and available strategies)

1. How often do you all actually think about your thinking process? How often do you think about how to organize your thoughts, reconsider things, or reflect on an idea??

2. How important do you think it is to make a plan when you start something new?

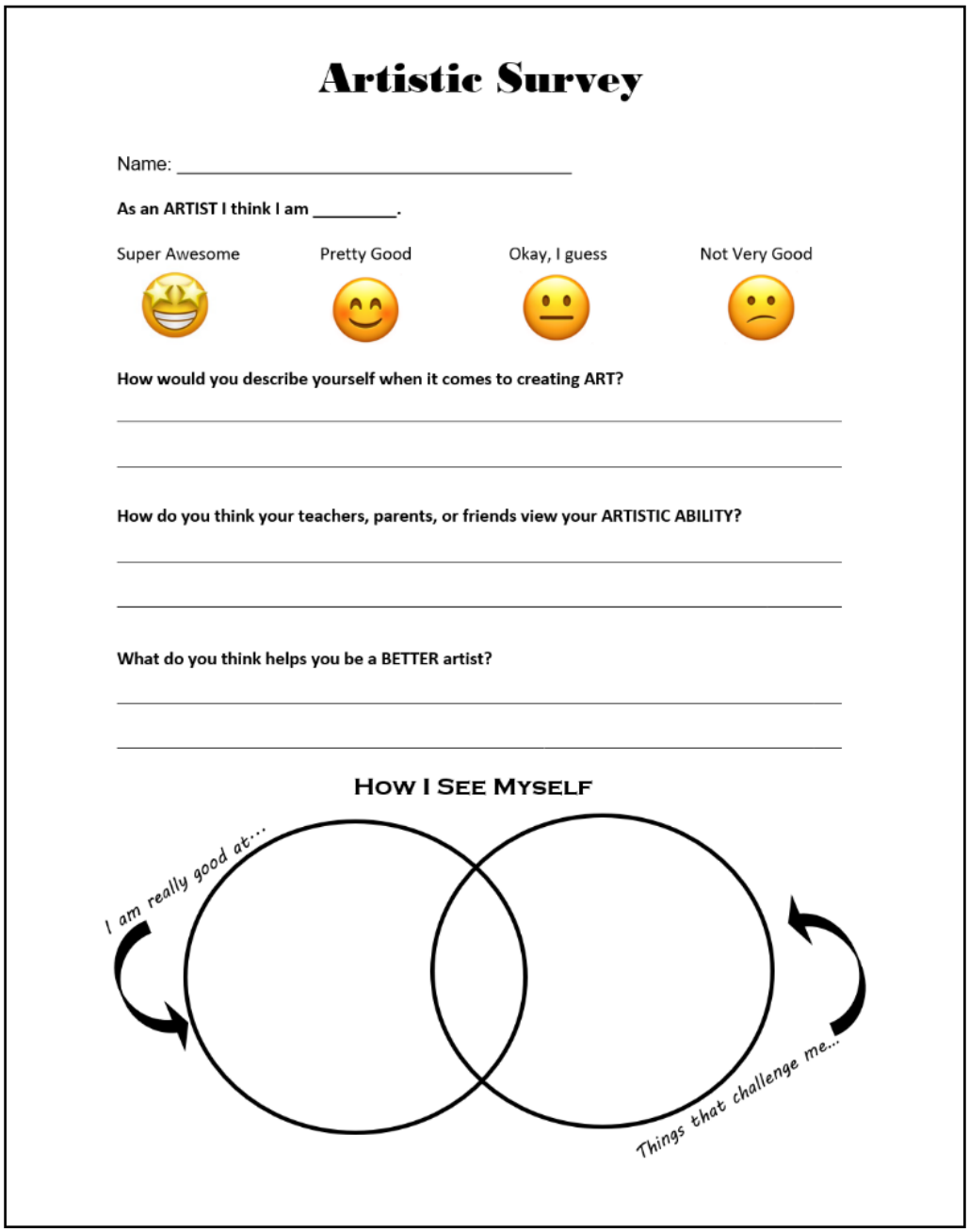
3. Do you think some people are naturally smart and some people are less smart? Do you think this can ever change or are some people just good at things and other people are bad at things?

4. Is there anything you think you are really good at or really bad at? How do you know you are good or bad at these things?

5. What are some things someone could do if they think they aren't good at something to help them get better?
   What strategies you can use when you get stuck? (Strategies- List strategies on a visual board so students can reference this strategy use later)

Figure B2. Moderated Semi-Structured Group Discussion

APPENDIX C: Self-Report Questionnaires, Strategy Builders, Unit Lessons, and Assessments



Artistic Survey

Name: _____

As an ARTIST I think I am _____.

Super Awesome | Pretty Good | Okay, I guess | Not Very Good

How would you describe yourself when it comes to creating ART?

_____

_____

How do you think your teachers, parents, or friends view your ARTISTIC ABILITY?

_____

_____

What do you think helps you be a BETTER artist?

_____

_____

HOW I SEE MYSELF

Figure C1. Artistic Survey
(Adapted from "Know Yourself" Venn Diagrams of Systems (www.smarts-ef.org))

Name: _____ Class Initials: _____

Project Focus: _____ Date: _____

Artistic Process & Progress Scale
(Mid-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.

0	1	2	3	4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.

0	1	2	3	4

3. I work best alone without help from my friends or teachers.

0	1	2	3	4

4.Talking to a friend about my artwork helps me make changes and make my work better.

0	1	2	3	4

5. I get upset when other people point out things they think I could do better.

0	1	2	3	4

6. I take other people's suggestions and spend time to fix, change, or improve my art.

0	1	2	3	4

7. I try my best and push myself to get better.

0	1	2	3	4

8. I like my artwork and enjoy being able to make art.

0	1	2	3	4

Name: _____ Class Initials: _____

Project Focus: _____ Date: _____

Artistic Process & Progress Scale
(Post-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.

0	1	2	3	4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.

0	1	2	3	4

3. I work best alone without help from my friends or teachers.

0	1	2	3	4

4.Talking to a friend about my artwork helps me make changes and make my work better.

0	1	2	3	4

5. I get upset when other people point out things they think I could do better.

0	1	2	3	4

6. I take other people's suggestions and spend time to fix, change, or improve my art.

0	1	2	3	4

7. I try my best and push myself to get better.

0	1	2	3	4

8. I like my artwork and enjoy being able to make art.

0	1	2	3	4

Figure C2.1 & C2.2. Mid-Project & Post-Project Artistic Process & Progress Scales

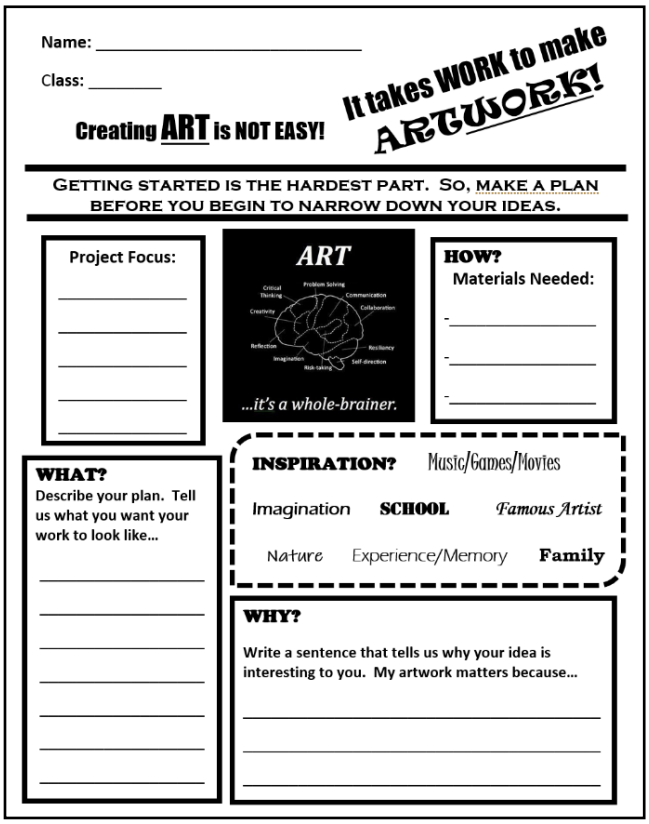


Figure C3. Project Plan

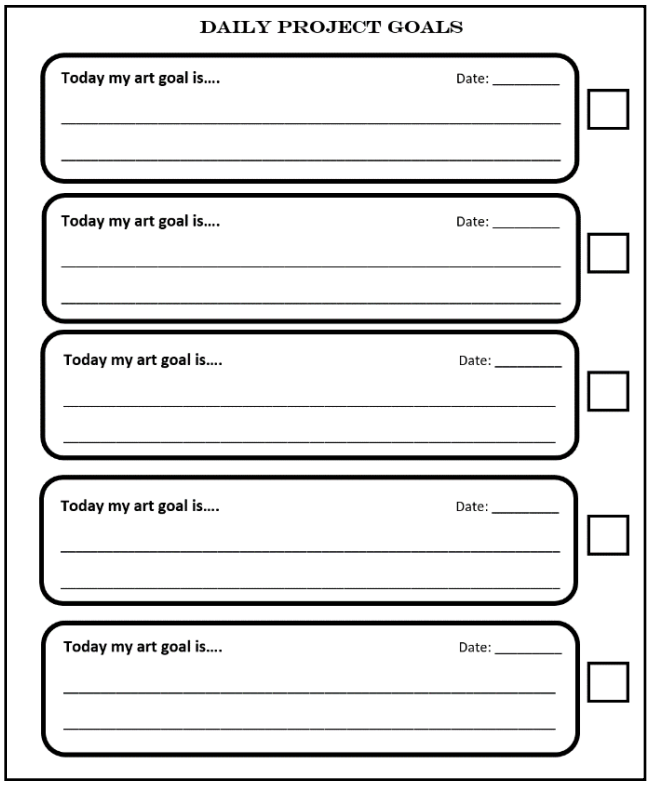


Figure C4. Daily Project Goals

GOAL SETTING

HELP! WHAT DO I DO NOW?

The design process has many stages. *Where are you?*

*****Stay on track! Place a ✓ on the ___ when you complete a step!*****

1. IDEA

- **Imagine-** *Take time to THINK (not talk)*
  - -What things interest me?
  - -Where can I find an idea?
  - -How can I use lines, shapes, colors, or images to get started?
- **Brainstorm-** *Gather ideas independently or collaborate with a group*
  - -Make a list of things you like
  - -Look at artwork that inspires you
- **Sketch-** *Just start drawing, see what happens…*
- **Research**
  - -Look at books, magazines, famous artworks, or videos
  - -Do an internet search (with parental or teacher guidance and supervision)

2. PLAN

___ **Choose materials-** *Make a list*
- -What materials would be best for my design?

___ **Sketch-** *How will it look? Your teacher is **NOT** a mind reader!*
- -Make a few thumbnail sketches and pick the BEST composition.
- 1st is NOT always best!

___ **Pick a size and shape**
- -How big or small is your work?
- -Does the size match your material and can you realistically complete it in time?

___ **Gather Materials**
- -What do you need to complete what you are going to do today?
- -Do you need to store these materials or get them each day?

___ **Experiment**
- -How do you need to create your work? **TRY** it out first! What works?

3. Make

- **GET STARTED!**

___ Set work goals for what you want to complete this class period.

___ **Get your supplies**-*What do you need?*
- -Do you need to draw your composition first or are you using multiple sheets of paper? It is easier to add on top than to take away!
- -What is the base of your structure?

___ **DO IT!-** *Go ahead, make some marks on your paper, add some paint, glue something, build something! What's the worst that could happen? It doesn't work? TRY again?* ***NO BIG DEAL!***

- **Do some more-** *Make a new goal.*
  - -Do a new part
  - -Try something new-ask for help if you don't know how
- **Keep going!-** *Don't give up now!*
  - - Did you run into a problem? How can you fix it? Do you need new materials? Do you need to start again? WHAT DO YOU NEED?

___ **REFLECT!-***THIS IS IMPORTANT!!!!!*
- -How is it going? How are you doing? Don't ask me, ask yourself!

___ **Make Improvements-** This does not mean it is bad! There is always something that you can make better at some point. Take a minute to look.

- **"Am I done yet?"** *-I don't know….ARE YOU?*

___Did you do your best?

___Did you make improvements?

☆ ___Did you do a ***Think, Pair, Share Critique*** to help each other improve?

★ ___**Sign it!** You're the artist.

4. Share

___ Explain your artwork to a friend. Does it make sense? Is it clear?

___ Write an **Artist Statement**

- Display your work
  - -Share your **Artist Statement**
  - -Listen to other peoples' caring comments and constructive criticism

___ Decide if there is anything you heard in the critique that you'd like to do before submitting your final work.

Congratulations! You did it!

Figure C5. Goal Setting

Still Life Materials List

- **Pencil:** Pencil is the **most detailed** of the materials we will be exploring. For pencil drawing you will need to translate your object or color image into black, white, and grey values. If you have access to technology, you can get a head start by using a filter to turn a color picture into a black and white photograph. When using pencil be sure to pay attention to the direction your pencil is moving. Pencil lines can be great when adding texture and details, but if you are not careful you could end up with a scribbly scratch mess.
- **Colored Pencil:** Colored pencils also require a lot of detail. Colored pencils can help you get vibrant colors, however, you will need to make sure to avoid the scratchy scribble look again. Colored pencils will not blend like regular pencils but can be layered to achieve value.
- **Oil Pastel:** Oil pastels provide the artist with bright colors and a smooth creamy finish. Oil pastels are wonderful for layering and blending and can act as paint sticks without the long drying time. However, it is hard to do small fine details with oil pastels so keep this in mind. Using oil pastels in multiple directions or small circles can help create a nice base and enable the material to get into the grooves of the paper.
- **Paint:** Paint is great for experimenting with color mixing and adding depth and layers to your work for a smooth even look, a dry scratchy finish, or a thick layered texture. There are many brushes to choose from that come in all shapes and sizes. Remember to choose the right brush and to fill in **ALL** the white spaces (even white areas should be painted).
- **Watercolor:** Watercolor paint is a transparent medium which is great for blending but NOT great for adding small details and intricate perfections. You have to let the looseness of the watercolor show in your work without making a soupy puddle. Allowing the paint to dry between layers can add a helpful for getting details to stay in place without spreading.
- **Chalk Pastel/Charcoal:** A **VERY MESSY** favorite. Chalk pastels are great for capturing the colors and essence of your object in free loose motions. It can be difficult to get small details with chalk due to the dust, smudging, and shape of the pastel. This does not mean it should look like a mess, so be CAREFUL!

Figure C6. Materials List

Name: _____ Class Initials: _____

Materials PROS and CONS

Material	Pros	Cons	Did you like using this material: Yes/No
Oil Pastel			
Tempera Paint			
Watercolor Paint			
Chalk Pastel			
Colored Pencil			
Graphite Pencil			
Other:			

Figure C7. Materials Pros and Cons Chart

Personal Identity Adjective Collection

Directions:
1. Fold this paper in half on the vertical line
2. On the left side, fill in 10 adjectives that you think describe you
3. Flip the paper over
4. Walk around the room and fill in ONE adjective that you think describes SOMEONE ELSE. Do not repeat adjectives.
5. Fill in the "Reflection Section"

Name: _____	Name: _____
How I see Me	**How OTHERS See Me**
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____
6. _____	6. _____
7. _____	7. _____
8. _____	8. _____
9. _____	9. _____
10. _____	10. _____

Reflection Section:

How many words match from your "I" side and your "Others" side? _____

Are there any adjectives from your "Others" side that surprised you? If so, which? Why?

_____

_____

Figure C8. Personal Identity Adjective Collection

Name: _____ Class Initials: _____

My EYE-dentity

For this project you will be illustrating your identity "through the eyes" of someone/something else. Fill in the boxes below to help you decide whose eyes the world will see you through....

1. Who Inspires Me?	2. What are some characteristics of my personality?
3. What animal do I think could represent me?	**4. What do I want this EYE to communicate to the viewer?**

Figure C9. My EYE-dentity Brainstorming Sheet

Critique Checklist:

Think, Pair, SHARE!

Compliment: - What is something I like about my partner's work?
- What did they do well?

Critique: - What is something I think my partner could improve on?
- What do they need to do to improve the problem area or keep in mind for later?

Interpret: - What do I think about my partner's art?
- What does it mean?
- How were they creative?
- How does it make you feel?

Remember, CRITIQUES are used to HELP us be better thinkers and artists.
You're doing great!

Figure C10. Think, Pair, Share Critique Checklist

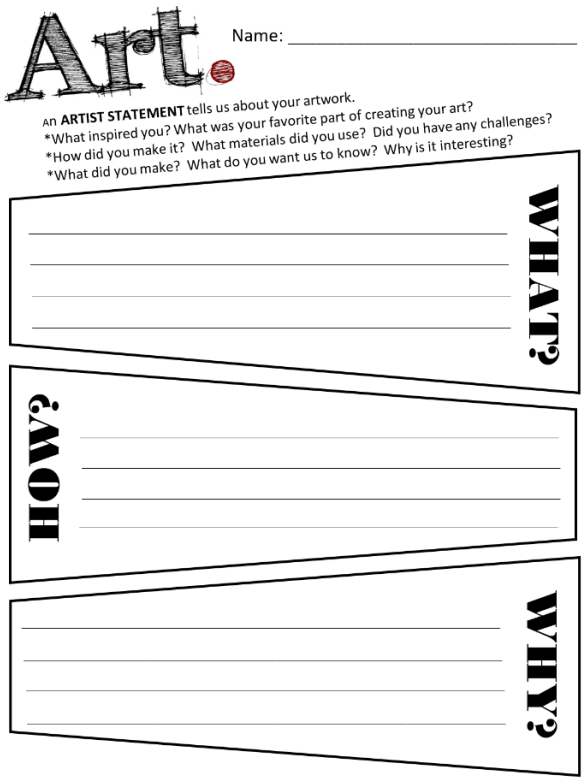


Figure C11. Artist Statement

Name: _____ Class Initials: _____

3-2-1

3- THREE things I learned about how I make art work:

- 1 thing I noticed I do-

  _____

- 1 thing I think I could work on-

  _____

- 1 thing that helped me with my artwork-

  _____

2- TWO things that surprised me while I was working:

- 1-_____
- 2-_____

1- ONE thing that I enjoyed most about making this artwork is:

_____

_____

Figure C12. 3-2-1 Summative Assessment

Name: _____ Class Initials: _____

Tell Me About It!

You've created a work of art! That's **FANTASTIC!** Now it's time to find a friend or teacher to tell about what you've created.
Your partner will keep track of what you've said using the checklist at the bottom. Cut on the line and give the questions at the bottom to your partner so they can follow along.

Try answering the following questions as you talk about your artwork:

*What inspired you?
-Why did you pick the animal, person, or character that you did?
-How does it reflect your identity?

*How did you make it?
-What materials did you use?
-Did you have any challenges while you worked?

*What did you make?
-What was your favorite part of creating your art?

Cut on the dotted line to hand this portion into the teacher ☺

Student Artist Name: _____ **Project Focus:** _____

Directions: Place a check in the box if your partner has answered all parts of the question.

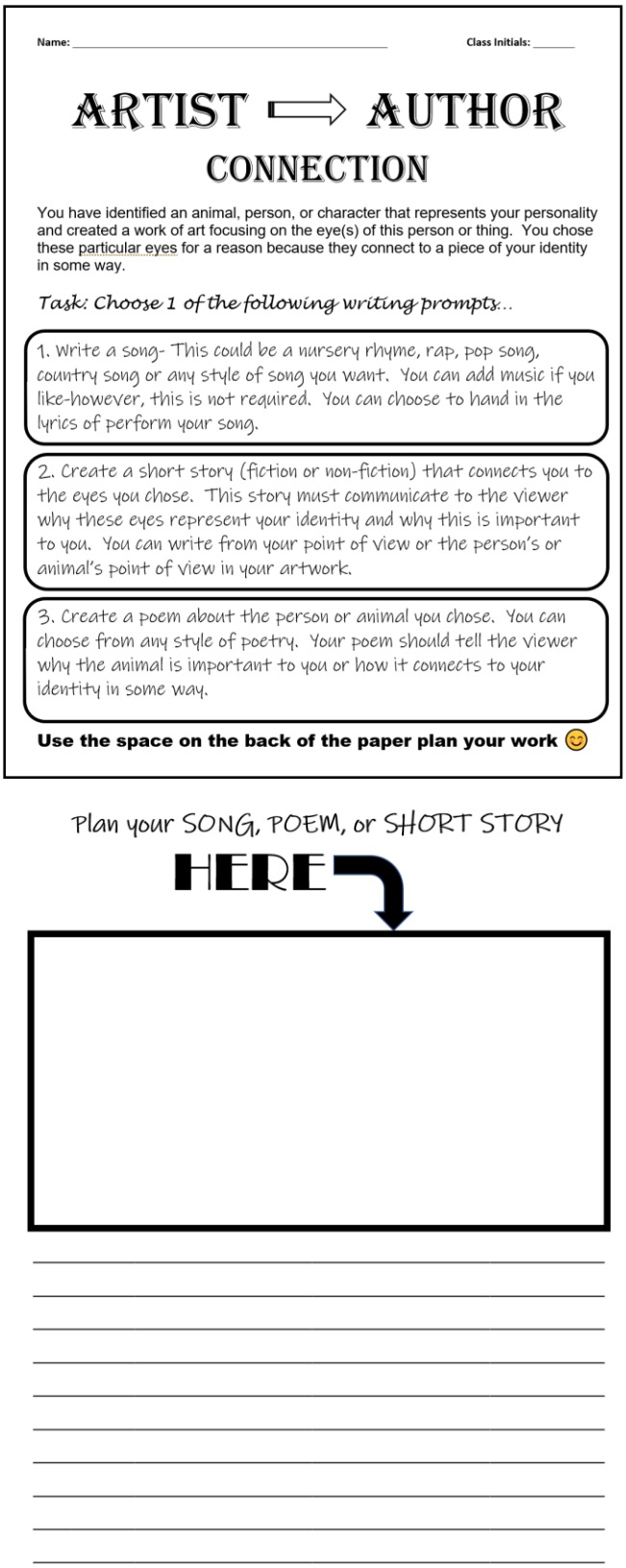
☐ What inspired you?
-Why did you pick the animal, person, or character that you did?
-How does it reflect your identity?

☐ How did you make it?
-What materials did you use?
-Did you have any challenges while you worked?

☐ What did you make?
-What was your favorite part of creating your art?

This artwork was reviewed by: _____
Student Partner Name

Figure C13. Tell Me About It: Alternative Verbal Assessment Option in Place of Artist Statement



Name: _____ Class Initials: _____

ARTIST ⟹ AUTHOR

CONNECTION

You have identified an animal, person, or character that represents your personality and created a work of art focusing on the eye(s) of this person or thing. You chose these particular eyes for a reason because they connect to a piece of your identity in some way.

Task: Choose 1 of the following writing prompts…

1. Write a song- This could be a nursery rhyme, rap, pop song, country song or any style of song you want. You can add music if you like-however, this is not required. You can choose to hand in the lyrics of perform your song.

2. Create a short story (fiction or non-fiction) that connects you to the eyes you chose. This story must communicate to the viewer why these eyes represent your identity and why this is important to you. You can write from your point of view or the person's or animal's point of view in your artwork.

3. Create a poem about the person or animal you chose. You can choose from any style of poetry. Your poem should tell the viewer why the animal is important to you or how it connects to your identity in some way.

Use the space on the back of the paper plan your work 😊

Plan your SONG, POEM, or SHORT STORY

HERE

Figure C14. Artist Author Connection: Alternative Assessment Option in Place of Artist Statement

Art Project Rubric

Student Name: _____ **Class Initials: _____**

Criteria	Master/ Professional 4	Journeyman/ Semi-Pro 3	Apprentice/ Varsity 2	Novice/ Beginner 1	Score
CRAFTSMANSHIP & ART MAKING	➢ Student used materials with great care and proper technique. ➢ Artwork is created skillfully with attention to detail and composition.	➢ Student used materials well but lacked some technique. ➢ Artwork is created with some attention to detail and composition but lacks finishing touches.	➢ Student attempted to use materials but struggled with technique. ➢ Artwork is created with little attention to detail or composition.	➢ Student used materials carelessly or inappropriately. ➢ Artwork is created with no attempt at details or composition.	
WORK ETHIC & TIME MANAGEMENT	➢ Student completed project within the allotted timeframe. ➢ Student is self-motivated and self-starting	➢ Student completed project within the allotted timeframe. ➢ Student needed some reminders to begin work and stay on task.	➢ Project is incomplete but shows evidence of effort. ➢ Student needed frequent reminders to begin work and stay on task.	➢ Project is incomplete and shows little evidence of effort. ➢ Student needed constant reminders to begin work and stay on task.	
ATTITUDE & RESPONSIBILITY	➢ Student is interested and engaged in class ➢ Student consistently cared for materials and workspace.	➢ Student worked respectfully and responsibly ➢ Student mostly cared for materials and workspace.	➢ Student attitude was inconsistent or indifferent. ➢ Student had difficulty caring for materials and workspace.	➢ Student was disruptive, negative, and showed a poor attitude. ➢ Student did not take care of materials or workspace.	
REFLECTION & EDITING	➢ Student made outstanding effort to reflect on their work and make improvements.	➢ Student made some effort to reflect on their work and make improvements.	➢ Student made minimal effort to reflect on their work and make improvements.	➢ Student showed no attempt to reflect or make any changes or improvements	
SHARING & COLLABORATION	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully with some clarification.	➢ Student struggles to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is unable to unwilling to communicate clearly and respectfully about their artwork.	
				Total Score:	

Teacher Signature: _____ **Student Signature: _____**

Figure C15. Art Project Rubric

Art Project Rubric

Student Name: _____ **Class Initials: _____**

	4	3	2	1
Criteria				
USED MATERIALS PROPERLY & COMPLETED WORK CAREFULLY				
GOT STARTED QUICKLY & USED TIME WISELY				
HAS A POSITIVE ATTITUDE & CLEANS UP RESPONSIBLY				
MAKES IMPROVEMENTS BEFORE HANDING IN WORK				
UNDERSTANDS CONCEPTS & SHARES IDEAS				
				Total Score:

Figure C16. Art Project Rubric Alternative

Unit: Exploring Identity: A Materials Exploration and Illustration of 'Self'

Materials Exploration Through Still Life

Designed by: Kate Sakowski
Grade: 5th
Time: 9 lessons

Domain and Concepts:

Color	Determine that color is affected by surrounding color. Create shades by adding black to a color. Create tints by adding white to a color. Create tertiary colors by mixing two primary colors and one secondary color that are analogous.
Shape	Recognize that rectangles, squares, triangles, circles, and ovals are all geometric shapes. Demonstrate that shapes are two-dimensional. Demonstrate that shapes can be combined to create other shapes.
Space	Relate that space can be divided by: line, color, shape, and objects.
Line	Use lines to create values, textures, and/shading. Illustrate how line can create the illusion of depth.
Texture	Illustrate how visual interest can be enhanced by texture. Conclude that visual texture is two-dimensional.
Aesthetics	Constructive evaluation can be made about a work of art. Reflection and assessment can be made about the merits of their work and the work of others.
Art Criticism	Art work can be constructively self-evaluated. Responds, respects, and learns from the criticism of others.

Problem Statement: Students will create a series of small drawings exploring a consistent subject matter using a variety of media and materials with the goal of experimenting and learning how to achieve similar effects with various materials and techniques.

Enduring Idea: After coming up with an idea, there are still decisions an artist needs to make to proceed with a project: size, composition, and material/media are three major choices that will determine the final look of a project. Through practicing a still life drawing in multiple compositions and materials, students will begin to look at the object with a critical eye and decide how to best execute a new project based on past experience and prior knowledge. Experimentation can be scary for student if the material is unfamiliar. This lack of confidence can cause some students to exhibit "self-protections tendencies" in which they will protect their self-esteem and possibility of failure by intentionally distracting behaviors on which to blame failure. It is important to use this activity as a working process in which experimentation and risk taking in encouraged and "failure" is discussed as an opportunity for growth and learning.

Anticipated Skills: Students will need to create 4-6 sketches in pencil that represent an object .
Students will need to be able to make decisions about the size and composition of each drawing in their still life series
Students will need to be able to experiment with a variety of materials attempting specific techniques.
Students will need to be able to reflect on their processes and relationship they form with materials as they work.

Standards (National Art Education Standards for Visual Art):
VA:Cn10.1.5a VA:Cn11.1.5a VA:Re8.1.5a VA:Re7.2.5a VA:Pr5.1.5a VA:Cr3. 1.5a
VA:Cr2.1.5a VA:Cr2. 2.5a VA:Cr2. 3.5a VA: Cr1.1.5a VA:Cr1.2.5a

Objectives: Students will be able to: 1. Create a series of 4-6 drawings using multiple materials 2. Create a pros and cons lists for each material they use to help them in future materials choices and as a reflective practice. 3. Translate a 3-D object onto a 2-D space. - 4. Extension: Translate a 3-D object into a 3-D form or .jpeg file using a camera and computer application.	**Assessment**: 1. Students will be assessed on their work in terms of effort, time management, and understanding of materials techniques. 2. Students will be assessed on their ability to use various materials to illustrate a consistent subject matter through critique evaluation. 3. Students will be assessed on their ability to reflect on process through recording materials pros and cons. 4. Students will be assessed on their understanding of
Vocabulary: Still Life — Blending Materials Exploration — Layering Texture — Highlight Composition — Shadow Cropped Composition — Crop Edit	**Questions/ Statements**: -What is composition? -How can you change a composition? What does this change do to affect the look of the final project? -How do you think using different materials will change the look of the final project? -What materials do you think are easiest to use? Hardest to use? Why? (Follow-up: Materials Pro's and Con's) -Did anything surprise you about which materials you liked using or which materials were more challenging for you?
Materials: -Project Plan Unit Packet -pencil -colored pencil -water color -oil pastel -chalk pastel -tempera paint -paint brushes -water bowls -tortillon stumps -kneaded erasers -White paper (various sizes) -Phone or digital camera device (optional) -Various still life objects (fruit- real or fake, bottles, etc.)	**Resources/ Supportive Materials:** -teacher created examples -Unit Packet -Materials list -Materials Pros and Cons chart **Technology**: -iPod touch or cell phones Camera Roll
Motivation Activity: 1. Discussion Questions 2. Cropping demonstration 3. Materials demonstration	**Individualization/Extension**: - For students with physical disability who may benefit from technology, allow students to draw on an iPad or take a digital photo and alter it in some way.
Clean Up: - Students are expected to put all materials back in supply cabinets. -All papers are stored either in sketchbooks or on drying racks - All work spaces must be cleared and cleaned -If painting-allow 5 extra minutes for clean-up and review clean up procedures for painting supplies	**Conclusion/ Critique**: Students will choose what they consider to be their strongest pieces of work (between 2-6) to be displayed together in a series at their table space. Students will walk around and stand in front of another student's work. Students will each have an opportunity to share one caring comment, constructive critique, and/or inquiry question about the other student's work. Students may respond to the work as a whole comparing and contrasting artwork, or a specific selection from the artwork presented. Students will then have the rest of the class period to respond and make adjustments to their work before final submission.

Figure C17. Introductory Teacher Directed Lessons: Materials Exploration

MY "EYE-DENTITY"

Designed by: Kate Sakowski
Grade: 5th
Time: 5 lessons
Domain and Concepts:

Color	Recognize that colors can be mixed by the eye which is known as "optical mix." Determine that color is affected by surrounding color. Create shades by adding black to a color. Create tints by adding white to a color. Create tertiary colors by mixing two primary colors and one secondary color that are analogous.
Shape	Recognize that rectangles, squares, triangles, circles, and ovals are all geometric shapes. Demonstrate that shapes are two-dimensional. Demonstrate that shapes can be combined to create other shapes.
Space	Relate that space can be divided by: line, color, shape, and objects.
Line	Use lines to create values, textures, and/shading. Illustrate how line can create the illusion of depth.
Texture	Illustrate how visual interest can be enhanced by texture. Conclude that visual texture is two-dimensional.
Aesthetics	Constructive evaluation can be made about a work of art. Reflection and assessment can be made about the merits of their work and the work of others.
Art Criticism	Art work can be constructively self-evaluated. Responds, respects, and learns from the criticism of others.

Problem Statement: Students will either take a digital photograph or find a printed image of an eye that they think represents them. This could be a picture of their own eye, the eye of a family member or "hero," the eye of an animal that they think shows characteristics of their personality, or the eye of something they aspire to be. Students will zoom in to create a cropped composition of the eye and compose it using paint, pencil, colored pencil, or oil pastel.

Enduring Idea: A persons' identity has a lot more to do with how they act, what they believe in, or how they identify than with how they look. People cannot always control how they look, but they can control how they act and the person they strive to be.

Anticipated Skills: Students will need to be able to choose an appropriate material or materials to execute the style of drawing, painting, or sculpture they wish to complete.
Students will need to be able to make decisions about size and composition based on their personal goals including: time management, materials choice, and subject matter.
Students will need to be able to use materials with skill and care to execute techniques such as layering and blending.
Students will need to use goal setting practices to self-motivate and self-regulate their work.
Students will need to reflect on their process mid-project to decide if they need to make changes or how they could better apply goal setting or planning to help them stay on track and make in their work.

Standards (National Art Education Standards for Visual Art):
VA:Cn10.1.5a VA:Cn1 1.1.5a VA:Re8.1.5a VA:Re7.2.5a VA:Pr5.1.5a VA:Cr3. 1.5a
VA:Cr2.1.5a VA:Cr2. 2.5a VA:Cr2. 3.5a VA: Cr1.1.5a VA:Cr1.2.5a

Objectives: Students will be able to:	**Assessment**:
1. Create an "eye" that symbolizes something that student relate to their own identity. 2. Use varied and combined materials to execute a project 3. Begin exploring self-regulated learning	1. Student will self-assess by reflecting on their project goals for the day to see if they have met their goal. 2. Students will be assessed on their ability to begin to make realistic and attainable goals for themselves. 3. Students will be assessed on their work in terms of effort, completion, and care. 4. Students will self-assess mid and post project to communicate how they think their work process is going. 5. Students will be assessed on their ability to translate learned techniques from prior work to help them make progress in independent work.

Vocabulary:	**Questions/ Statements**:
Self Portrait Mixed-media Self-reflection Goal setting Composition Cropped Composition Blending Layering Texture	-What is an eye? -What are the differences between some eyes? -What is identity? -How do you think identity is formed? (family, religion, friends, interests, etc.) -How can identity be expressed or communicated? (hobbies, clothes, activities, beliefs) -What does your identity say about you? -Is there anything you wish you could work on when it comes to your identity? Are there any traits you admire in other people, animals, etc., that you wish you could possess?
Materials: -Project Plan Unit Packet -pencil -colored pencil -water color -oil pastel -chalk pastel -tempera paint -paint brushes -water bowls -tortillon stumps -kneaded erasers -Phone or digital camera device (optional) -sharpie -White paper (various sizes) -optional other materials if students choose to pursue cardboard sculpture or mask making for example.	**Possible Resources/ Supportive Materials**: -Ranger Rick Magazines -National Geographic Magazines -Animal books -Animal calendars -Printed images of eyes -eye drawing examples **Technology**: -eye PowerPoint -Digital Photographs of Eyes -iPod touch or cell phones Camera Roll
Motivation Activity: 1. Discussion Questions 2. Identity Adjective Activity 3. Eye-dentity worksheet 4. Project Planning and Goals Sheet 5. Image Searches (In-class or at home) **Demonstration:** 1. Due to the goal of allowing students to begin self-regulating students will be encouraged to reflect on their prior knowledge and decide what they need to do to proceed without an explicit demonstration.	**Individualization/Extension**: -Some students may need help choosing an eye identity. Provide choices for these students. Have student list 3 adjectives for each option and then decide which fits best with them. - If students come to school without an image have some images for them to choose from or take a digital photo and print it of their own eye. - For students with physical disability who may benefit from technology, allow students to draw on an iPad or take a digital photo and alter it in some way.
Clean Up: - Students are expected to put all materials back in supply cabinets. -If students chose to use paint they are responsible for cleaning paint and paint materials in the bathroom and leaving work on the drying rack to dry.	**Conclusion/ Critique**: Students will fill out the Artist Statement Worksheet and use it to introduce their Eye-dentity project to the class. After reading their artist statement students will have the opportunity to reflect or share thoughts about each other's artwork. Students will also complete a post-project reflection to help them start to think about what they will do next and where they need to work on their own methods.

Figure C18. Increased Choice Lesson Incorporating Self-Regulation and Executive Function Strategies: My Eye-dentity

APPENDIX D: Thesis Timeline

Month	Process	Steps to Accomplish
December	Thesis Proposal Presentation	-Complete AEGR618 -Gather research literature -Participate in proposal hearing
	Design Project-Based Curriculum Work	-Design Unit Lesson -Create and gather materials
	Draft Permission Letters	-Create approved permission forms
	IRB Approval	-Design Methodology -Submit final proposal
January	Gain Administrative Site Approval	-Meet with administration -Clarify IRB policy -Present initial letter
	Gain Parental Permission	-Distribute letters to parents/guardians via students take home folder -Gather approved permissions -Contact participant parents/guardians via email and explain process.
	Begin Field Study	-Organize materials and introduce study
	Data Collection & Data Analysis	- Continue to categorize, code, and analyze data collection and reflective journal
February & March	Administer Initial Artistic Survey	-Administer and collect initial surveys outlining student dispositions
	Administer Group Moderated Interview	-Reflect on processes so far, moderate and guide discussion to gather more information regarding student metacognition and executive function
	Complete Literature Review	-finalize sources and editing
	Data Analysis	-Code and analyze collected data
April & May	Introduce Project Planning and Goal Setting	-Introduce unit of study -Walk students through project design -Discuss realistic vs. unrealistic goals
	Administer Mid-Project Process Scale and Partner Critique Checklists	-Present ideas of growth mindset and self-reflection
	Administer Individual Semi-Structured Interviews	-Continue gathering verbal data
	Data Collection & Data Analysis	-Finalize data collection
	Draft Chapter IV & V	-Articulate data into organized paragraphs
June & July	Introduce Artist Statement or Alternative Assessment Choice	-Guided artist statement or alternative assessment activity
	Hold Class Critique	-Share about their work using artist statements or alternative assessment choice and discuss how strategies assisted in completing goals -Add strategies to the visual
	Administer Post-Project Progress Scale	-Compare mid and post reports
	Finish Recording and Analyzing Data	-Complete charts, graphs, and documentation of recorded data -Transcribe all audio recordings
	Complete Thesis Draft	-Complete Chapters IV & V
	Create Presentation	-Create Thesis PowerPoint and presentation
August	Thesis Presentation	-Present thesis work

APPENDIX E: Data Collected from Student Self-Report Measures

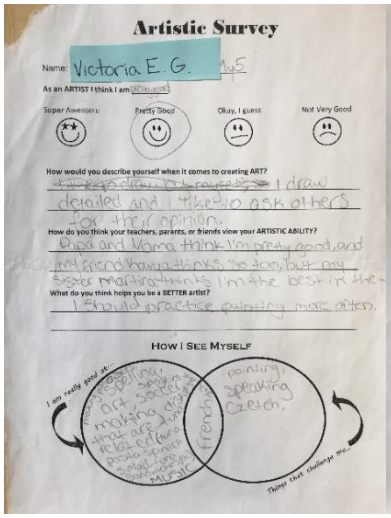


Figure E1a: V.G.

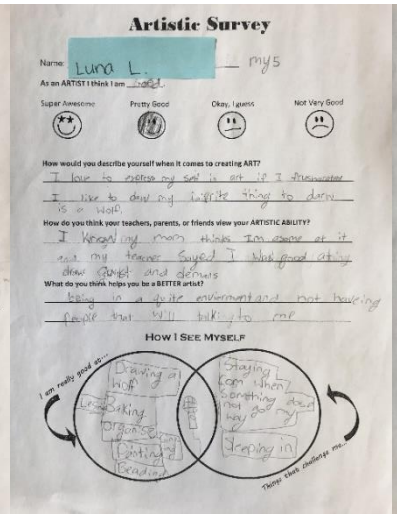


Figure E1b: L.L.

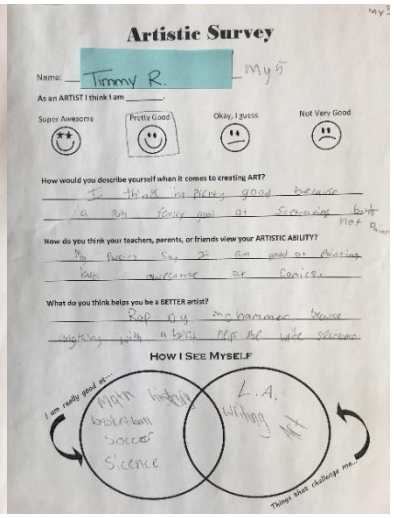


Figure E1c: T.R.

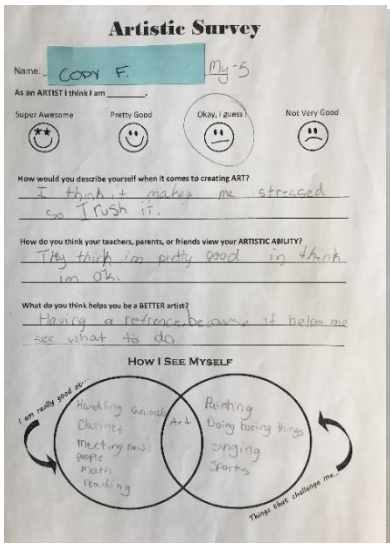


Figure E1d: C.F.

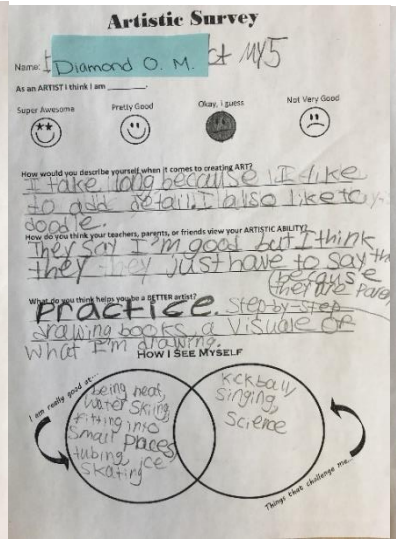


Figure E1e: D.M.

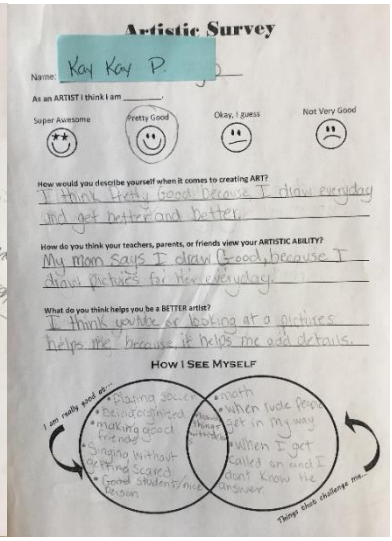
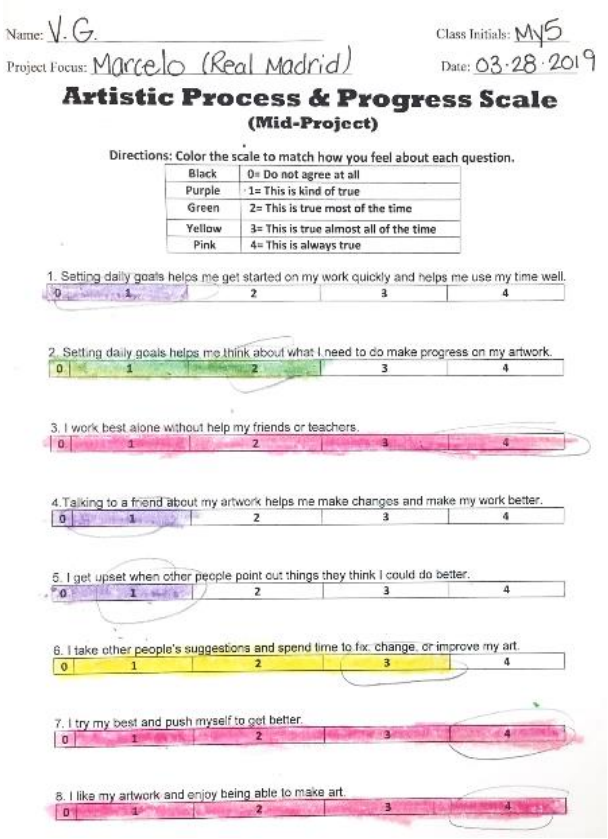


Figure E1f: K.P.

Figures E1a-E1f: Initial Artistic Survey Responses



Name: V. G. Class Initials: MY5

Project Focus: Marcelo (Real Madrid) Date: 03·28·2019

Artistic Process & Progress Scale

(Mid-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4. Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

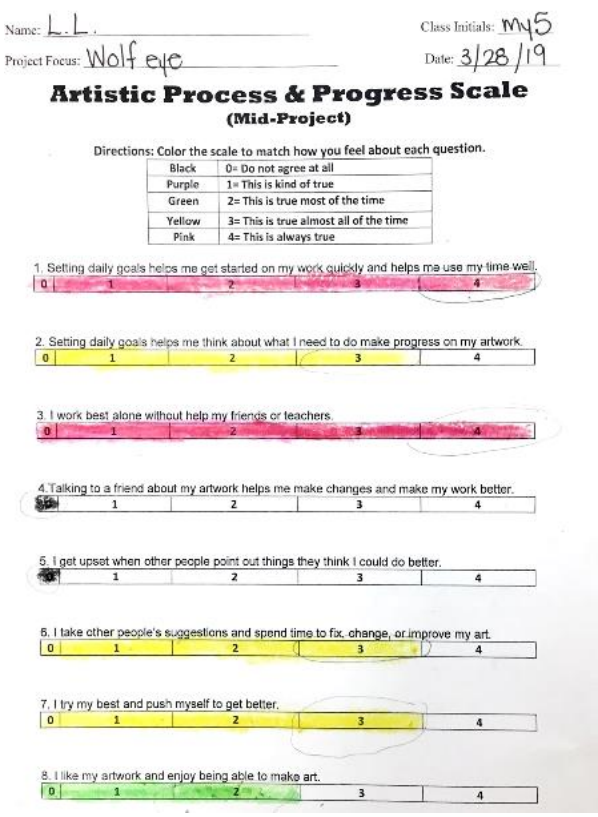
5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E2a: V.G. Mid-Project: Artistic Process & Progress Scale



Name: L. L. Class Initials: MY5

Project Focus: Wolf eye Date: 3/28/19

Artistic Process & Progress Scale

(Mid-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4. Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

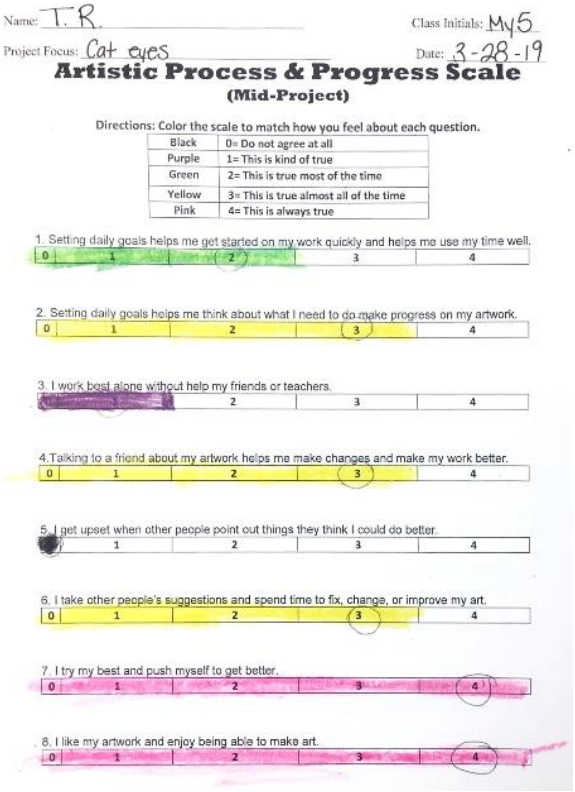
5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E2b: L.L. Mid-Project: Artistic Process & Progress Scale



Name: T.R. Class Initials: My5

Project Focus: Cat eyes Date: 3-28-19

Artistic Process & Progress Scale

(Mid-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
2 | 3 | 4

4. Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

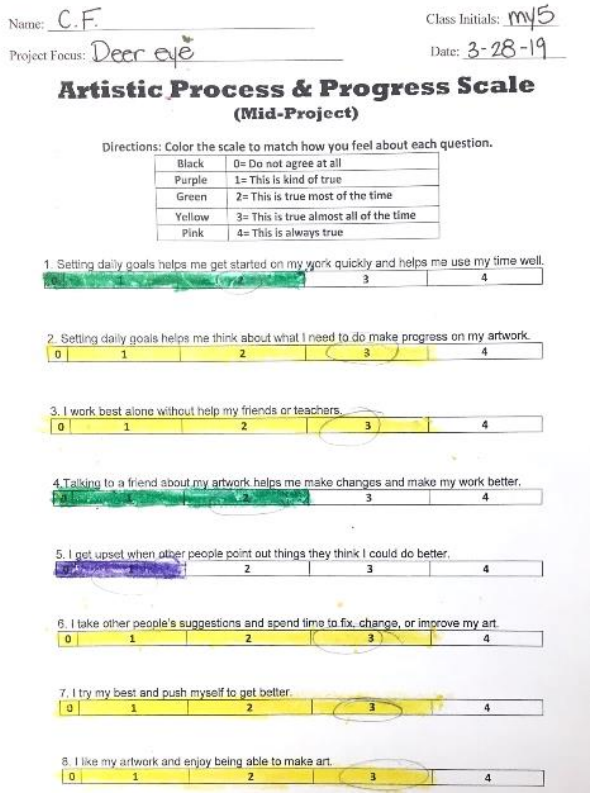
5. I get upset when other people point out things they think I could do better.
1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E2c: T.R. Mid-Project: Artistic Process & Progress Scale



Name: C.F. Class Initials: my5

Project Focus: Deer eye Date: 3-28-19

Artistic Process & Progress Scale

(Mid-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4. Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

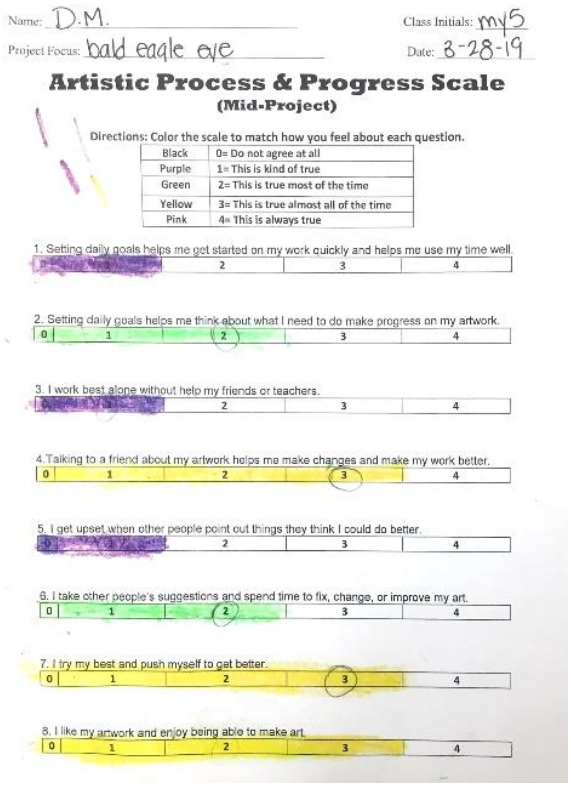
5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E2d: C.F. Mid-Project: Artistic Process & Progress Scale



Name: D.M. Class Initials: my5

Project Focus: bald eagle eye Date: 3-28-19

Artistic Process & Progress Scale

(Mid-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

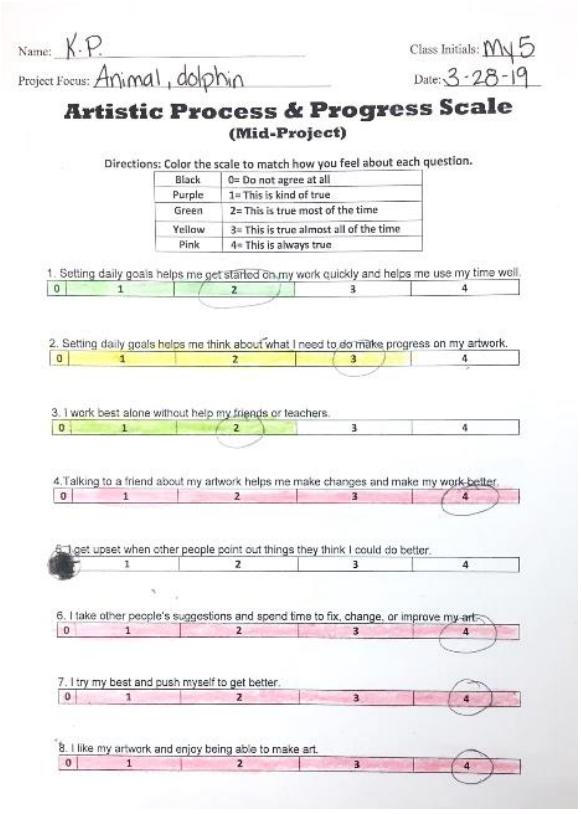
5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E2e: D.M. Mid-Project: Artistic Process & Progress Scale



Name: K.P. Class Initials: my5

Project Focus: Animal, dolphin Date: 3-28-19

Artistic Process & Progress Scale

(Mid-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

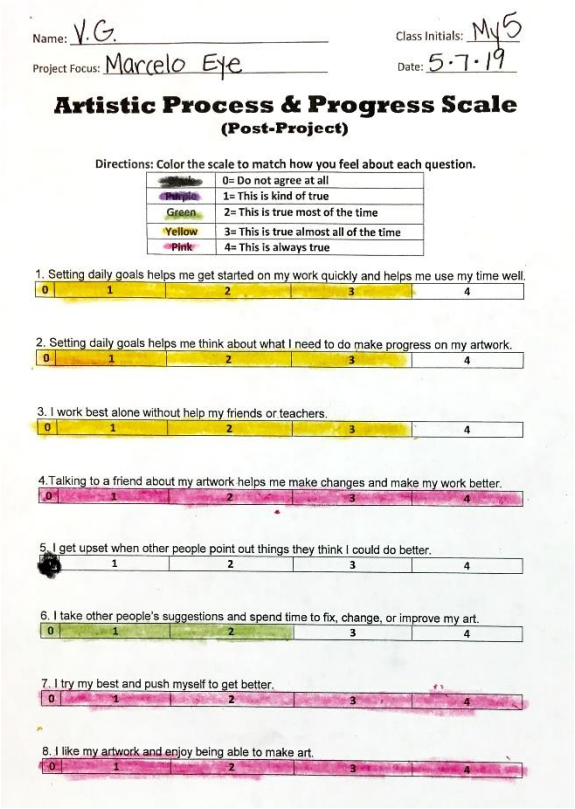
5. I get upset when other people point out things they think I could do better.
1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E2f: K.P. Mid-Project: Artistic Process & Progress Scale



Name: V.G.
Class Initials: My5
Project Focus: Marcelo Eye
Date: 5·7·19

Artistic Process & Progress Scale
(Post-Project)

Directions: Color the scale to match how you feel about each question.

[redacted]	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

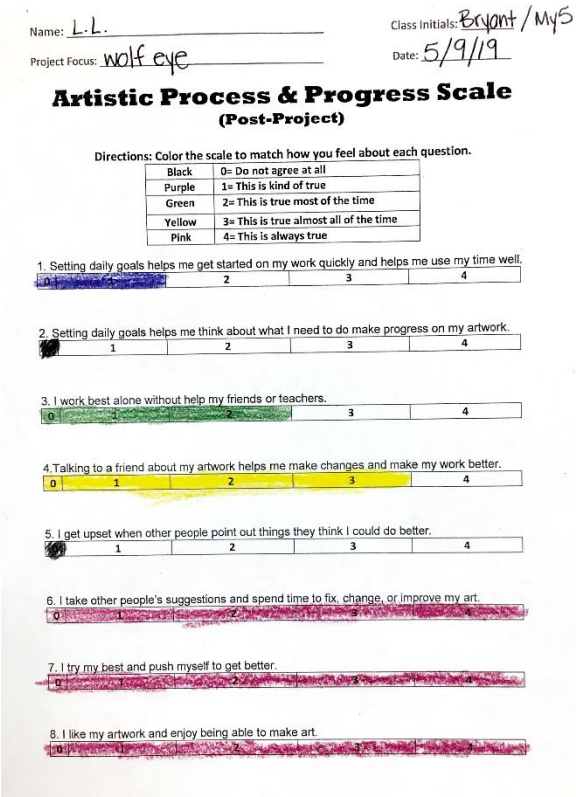
5. I get upset when other people point out things they think I could do better.
[redacted] | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E3a: V.G. Post-Project: Artistic Process & Progress Scale



Name: L.L.
Class Initials: Bryant / My5
Project Focus: wolf eye
Date: 5/9/19

Artistic Process & Progress Scale
(Post-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
[redacted] | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

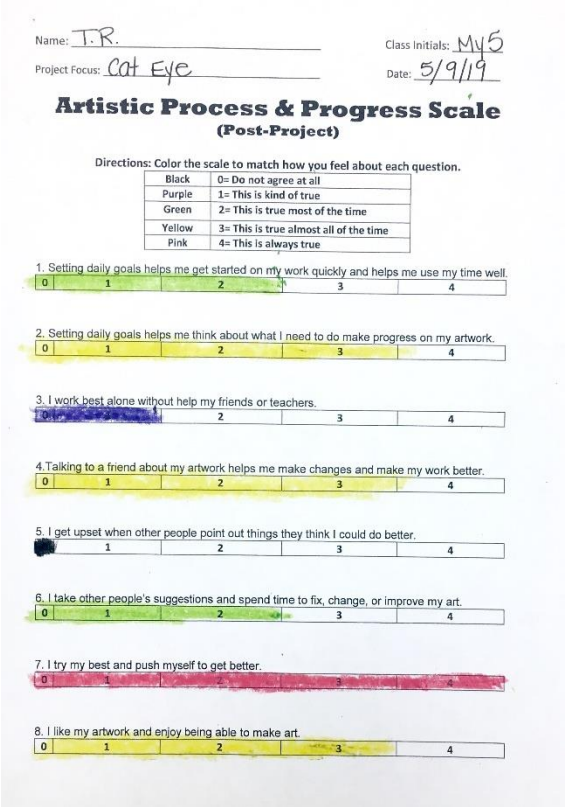
5. I get upset when other people point out things they think I could do better.
[redacted] | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E3b: L.L. Post-Project: Artistic Process & Progress Scale



Name: T.R.
Class Initials: My5
Project Focus: Cat Eye
Date: 5/9/19

Artistic Process & Progress Scale
(Post-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

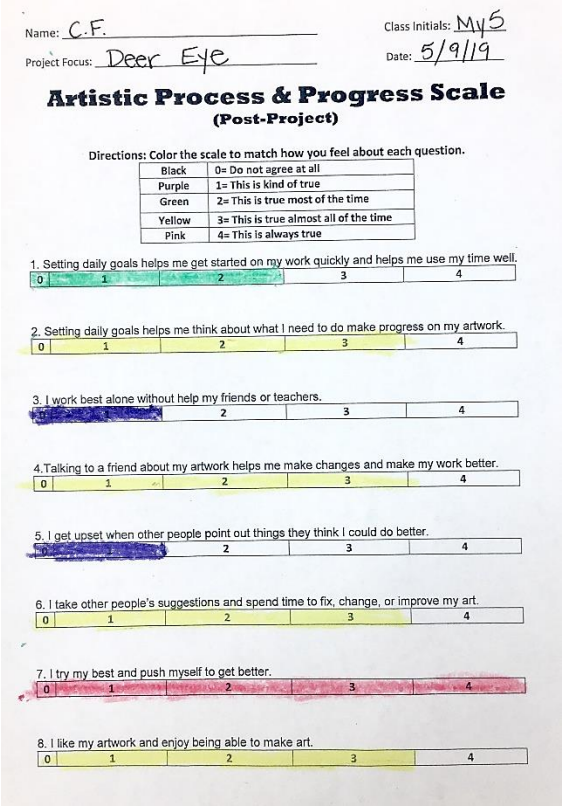
5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E3c: T.R.. Post-Project: Artistic Process & Progress Scale



Name: C.F.
Class Initials: My5
Project Focus: Deer Eye
Date: 5/9/19

Artistic Process & Progress Scale
(Post-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

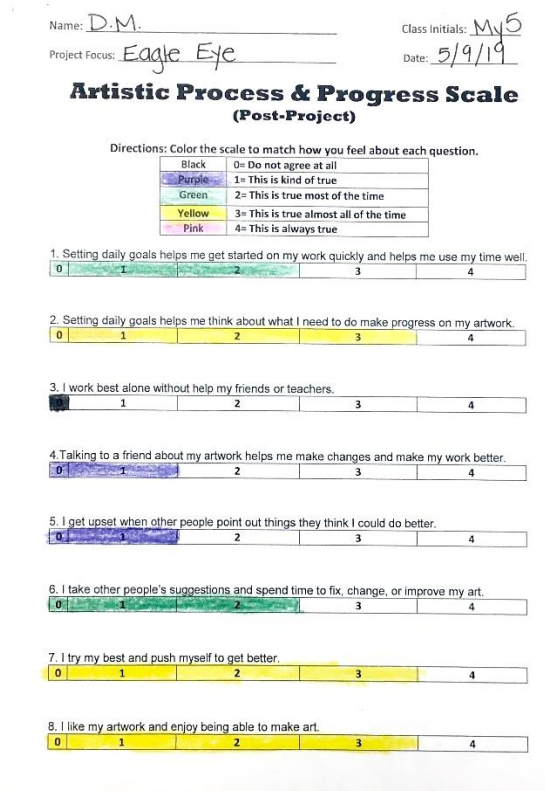
5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E3f: C.F. Post-Project: Artistic Process & Progress Scale



Name: D.M.
Class Initials: My5
Project Focus: Eagle Eye
Date: 5/9/19

Artistic Process & Progress Scale
(Post-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

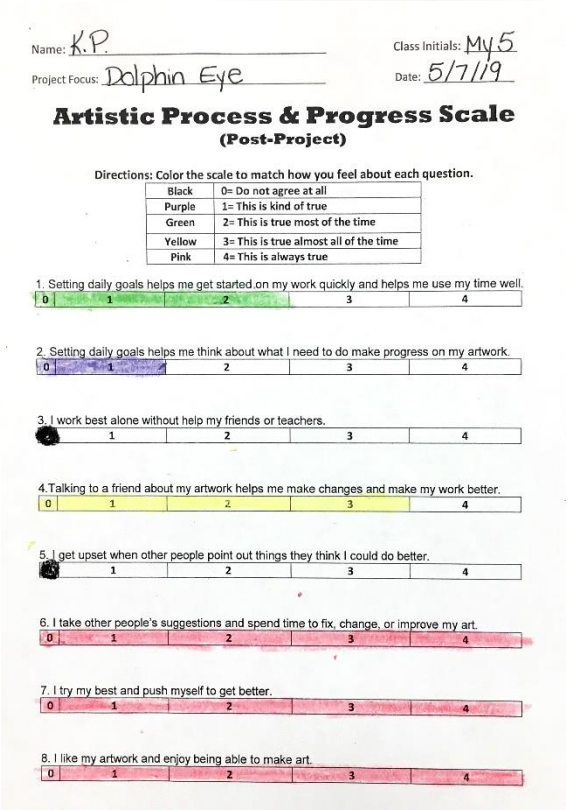
5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E3e: D.M. Post-Project: Artistic Process & Progress Scale



Name: K.P.
Class Initials: My5
Project Focus: Dolphin Eye
Date: 5/7/19

Artistic Process & Progress Scale
(Post-Project)

Directions: Color the scale to match how you feel about each question.

Black	0= Do not agree at all
Purple	1= This is kind of true
Green	2= This is true most of the time
Yellow	3= This is true almost all of the time
Pink	4= This is always true

1. Setting daily goals helps me get started on my work quickly and helps me use my time well.
0 | 1 | 2 | 3 | 4

2. Setting daily goals helps me think about what I need to do make progress on my artwork.
0 | 1 | 2 | 3 | 4

3. I work best alone without help my friends or teachers.
0 | 1 | 2 | 3 | 4

4.Talking to a friend about my artwork helps me make changes and make my work better.
0 | 1 | 2 | 3 | 4

5. I get upset when other people point out things they think I could do better.
0 | 1 | 2 | 3 | 4

6. I take other people's suggestions and spend time to fix, change, or improve my art.
0 | 1 | 2 | 3 | 4

7. I try my best and push myself to get better.
0 | 1 | 2 | 3 | 4

8. I like my artwork and enjoy being able to make art.
0 | 1 | 2 | 3 | 4

Figure E3f: K.P. Post-Project: Artistic Process & Progress Scale

APPENDIX F: Verbal Interview Data Collection

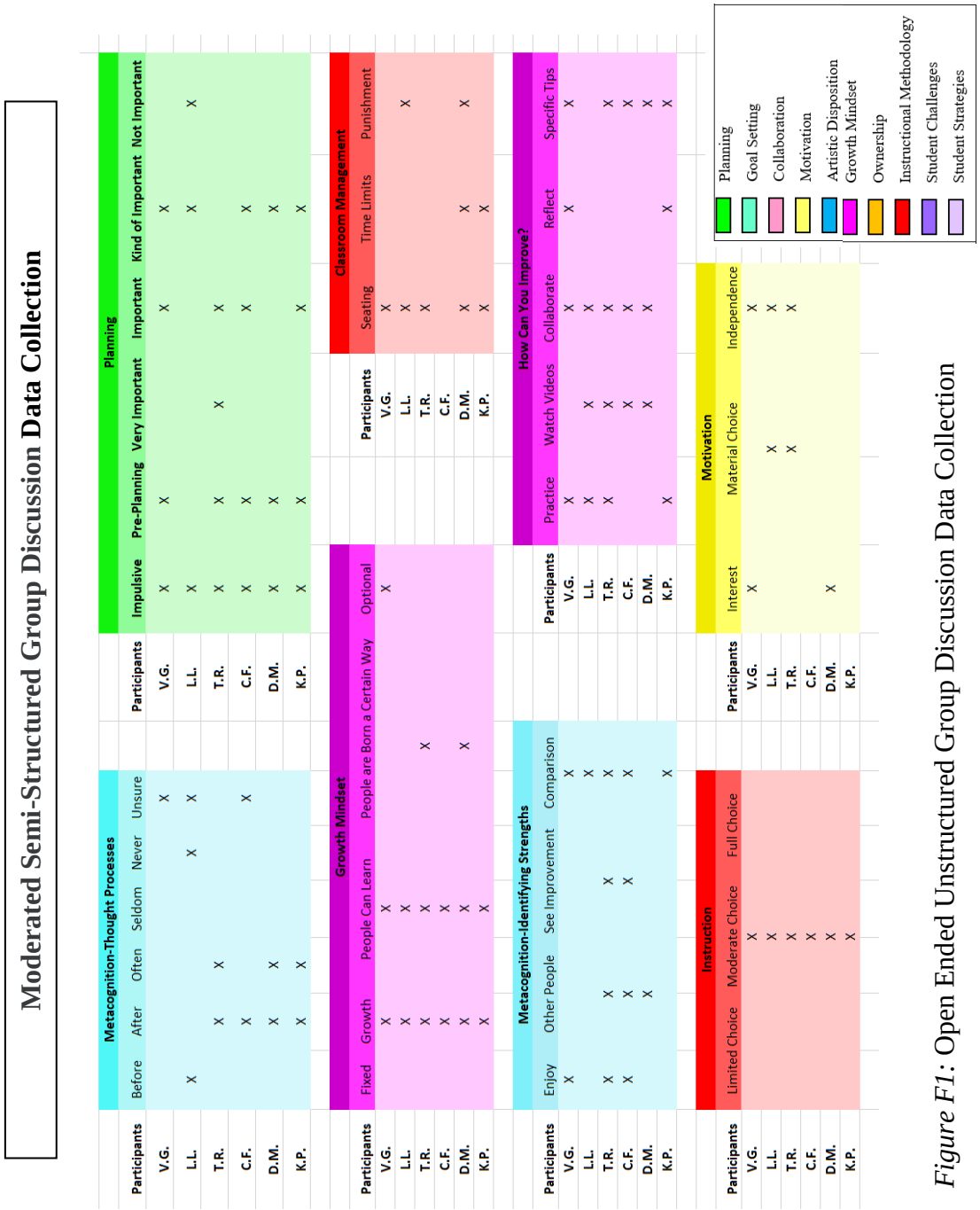


Figure F1: Open Ended Unstructured Group Discussion Data Collection

Semi-Structured Individual Interview

Interview Protocol Form

Open Ended Data Collection: **Teacher Role vs. Student Role- How the art making process effects student opinions about their effort and ability?**

Date: April 16, 2019

Time: 10:25 AM

Location: Peter Muschal Elementary School Art Room

Interviewer: Kate Sakowski

Interviewee: V.G.

Release form signed? _X_

Protocol

The questions / dialogue will be conducted in an identical fashion in order to demonstrate experimental control. All students in the study will be asked individually the same series of questions regarding their feelings about their art, their ability, and their process. The structure of the questions is designed to engage students in active conversation to encourage deep, meaningful, and personal responses to their art production and self-reflection on their effort and ability. The process scaffolds questions to maintain an active and responsive student-teacher dialogue. Positive reinforcement will be provided after each response. Positive reinforcement is defined as the researcher repeating the student response enthusiastically or asking the student to consider or expand on their answer further. Students will also be allowed to ask the researcher questions should they choose to do so.

The steps for questions / dialogue will be as follows:

1) The conditions will be as follows:
    a. Each student will meet with the researcher in a one-on-one ratio;
    b. All sessions will be for the same fixed interval of time;
    c. Any known antecedents to the baseline sessions will be reported in results;
    d. The setting will be the art room at Peter Muschal Elementary School
    e. The student will be seated at the demonstration table across from the researcher
    f. Additional school staff members such as a paraprofessional may be present but be asked to remain silent;
    g. Experimental control will be demonstrated through the use of a digital voice recorder using a fixed length event recording system to capture each participant's full response to each question presented;
    h. Transcripts of each session will be created in a word processing program;
    i. Each transcript will be identified with the student pseudonym, date, and print set;
2) The researcher will greet the student and begin with the topic question scripted below.
3) The student will be prompted with a question and the verbal response will be recorded.
4) If no verbal response is provided after ten seconds, the question will be repeated. If no response is given after another 10 seconds, the next question in the sequence will be asked.
5) Each student will be asked the same series questions in the same order to ensure consistency.

Scripted Introduction

I am going to ask you 16 questions about how you think and feel about your artwork, learning, understanding, and process. I will ask you one question at a time and would like you to answer as honestly as you can. I will be audio recording this conversation so try to speak loudly and clearly. This will help me remember your answers after you leave so I don't leave anything out. None of your classmates, other teachers, or parents will read your responses. All of your answers will be confidential.

Spark

Question (Q): How are you doing today?

(V.G.): Okay.

Researcher Response (RR): *We are going to discuss how you feel during art class and what you think could help you better come up with ideas, set goals for yourself, stay on task, and complete projects that are well thought out and meaningful to you.*

(Q): Are you ready to begin?

(V.G.): I guess so.

(RR): *I want you to think carefully about how you feel when you make your artwork and how you think your learning could be supported better if you could change or alter anything about the way you are making art. The purpose of these questions is to help me build an art room where students like yourself feel like they can create, learn, and succeed. As a student, your opinion is very important in helping me help you and other students when they are in my class. There is no wrong answer to any of these questions since we all learn and work differently and nothing you say will change the way your artwork is graded or my opinion of you as a student.*

(Q): Do you think you can answer some questions to help me become a better art teacher?

(V.G.): Yes.

(Q): Do you have any questions before we start?

(V.G.): No.

Teacher/Student Role:

(RR): *This question is about the type of artwork you like to create.*

(Q): Would you rather make artwork that you come up with on your own or do you prefer when the teacher tell you step by step what needs to be done to complete a project? Why?

(V.G.): Uhhhhh, I kind of like doing it on my own because when I do it on my own I can sort of think up my own ways cause sometimes I don't like the way they teach me.

(RR): *You bring up some really good points about why you feel that way. I can see why you think it may be (easier, more enjoyable, better) when you are able to create your artwork in that way.*

(Q): Do you think there is anything about the (the other method of creating artwork) that is beneficial for you when you are making your work? Why?

(V.G.): Ummmm, yeah it helps me sort of construct it in a way, like the basic structure, so that I know what to do. I like to come up with my own ideas but step by step helps me when I am actually making it step by step instructions can be helpful.

(RR): *Your ideas are very helpful. It is important for me to understand how I as a teacher can help my students by giving more or less instructions at different times of the lesson.*

Effort and Motivation:

(Q): When you start a project, what is something that you think helps you come up with an idea?

(V.G.): Ummmm, usually like my life. Like life experiences.

(Q): Is it easy or hard for you to come up with ideas?

(V.G.): It depends because it's easy if it's like….well, sometimes it comes easy but sometimes it doesn't. Sometimes I feel inspired but sometimes I have to think about it more.

(Q): What is something that you think makes it difficult to begin a new project? What is something that could help you overcome this roadblock? What strategies could help you get started?

(V.G.): Sometimes I have trouble thinking up an idea so when I start doing the ideas I do though, it just sometimes comes out bad and I think I need to do something different. It just doesn't come out the way I want it to… so I sort of just start over. Sometimes it could be a similar idea but different.

(Q): What strategies could help you get started when you are having difficulty? If you tried something and it didn't work and you want to try it again, how do you go about doing that?

(V.G.): Ummm, sometimes I just change specific details and sometimes I'll change it entirely.

(Q): When it comes to goal setting, do you feel more confident working when you decide what you think you can complete in a class period or do you prefer when the teacher tells you how much work is expected to be completed by the end of each class period?

(V.G.): I like my own goals because then I feel like I am not under pressure. I don't like working under timers.

(Q): Do you think you always try your hardest on your artwork? What makes you want to try to do your best or improve?

(V.G.): No. Sometimes I just do stuff because it's what were doing. But if something really really inspires me or if it is for an important person or something it makes me want to work harder a bit. I like to be able to choose things that inspire me or have a reason to make stuff. Like with the orange I didn't really care about the orange but I wanted to make it look real, so I guess that was my inspiration for that.

(Q): What is something you would change about your time in art class that you think could help you progress through your projects more smoothly with less distractions or wasted time?

(V.G.): I don't know. Like maybe if I knew how much time I had left or maybe how long the whole class was so I can decide for 5 mins. I should do this and then for another 5 mins. I should do this.

Recap

(RR): *Wow, you have a lot of insight into how you learn in art class and what kinds of things might be able to help you become a better artist. I just have a few more questions to ask you before we are finished. Remember, your answers are to help me teach future students and the best way you can help me is to be honest. Nothing you say is going to hurt my feelings. Even teachers need to listen to learn, it's the only way to keep growing our brains and become better teachers.*

Self-Reflection

(Q): Are you proud of the work you create in art class?

(V.G.): Yes.

(Q): Do you think it is more important for you to like your artwork or for me to like your artwork? Why?

(V.G.): For me because I am the one who sort of created it, so I know what it means, and I feel like I sort of understand it more than other people.

(RR): *When I am making artwork it sometimes helps me to take a picture of it and look at it later or ask other people what they think about it before I decide what to do next.*

(Q): How do you know when you are finished with a work of art that you make?

(V.G.): Ummm, I just know when I am done when it looks like just like an artwork. Well, sometimes I feel like all I need to do is go back because I one time created a piece of artwork in 3rd grade and then I looked at it in 4th grade and I realized that I should go back and add more things. You just have to wait and look at it again later.

(Q): How does it make you feel when teachers or other students give you suggestions that they think could improve your work?

(V.G.): Uh, it makes me feel good because ummm…. It's noticeable and I like it when people tell me what I need to work on because I always want my artwork to look better.

(Q): Has your opinion of your ability as an artist changed at all since we started this study? If so, how? *(shown their initial Artistic Survey)*

(V.G.): Ummm, not really, well, I think I am getting a bit better at painting.

Closure

(RR): *Thank you so much for taking time to answer these questions so honestly and spending time with me today to help me learn how to better teach you and other art students.*

(Q): Is there anything else you would like to add or say about your experience in art class? Is there anything you'd like to ask me before you go?

(V.G.): No.

Figure F2: V.G. Semi-Structured Individual Interview Transcription

4

Semi-Structured Individual Interview

Interview Protocol Form

Open Ended Data Collection: **Teacher Role vs. Student Role**- **How the art making process effects student opinions about their effort and ability?**

Date: April 16, 2019

Time: 9:08 AM

Location: Peter Muschal Elementary School Art Room

Interviewer: Kate Sakowski

Interviewee: L.L.

Release form signed? _X_

Protocol

The questions / dialogue will be conducted in an identical fashion in order to demonstrate experimental control. All students in the study will be asked individually the same series of questions regarding their feelings about their art, their ability, and their process. The structure of the questions is designed to engage students in active conversation to encourage deep, meaningful, and personal responses to their art production and self-reflection on their effort and ability. The process scaffolds questions to maintain an active and responsive student-teacher dialogue. Positive reinforcement will be provided after each response. Positive reinforcement is defined as the researcher repeating the student response enthusiastically or asking the student to consider or expand on their answer further. Students will also be allowed to ask the researcher questions should they choose to do so.

The steps for questions / dialogue will be as follows:

1) The conditions will be as follows:
    a. Each student will meet with the researcher in a one-on-one ratio;
    b. All sessions will be for the same fixed interval of time;
    c. Any known antecedents to the baseline sessions will be reported in results;
    d. The setting will be the art room at Peter Muschal Elementary School
    e. The student will be seated at the demonstration table across from the researcher
    f. Additional school staff members such as a paraprofessional may be present but be asked to remain silent;
    g. Experimental control will be demonstrated through the use of a digital voice recorder using a fixed length event recording system to capture each participant's full response to each question presented;
    h. Transcripts of each session will be created in a word processing program;
    i. Each transcript will be identified with the student pseudonym, date, and print set;
2) The researcher will greet the student and begin with the topic question scripted below.
3) The student will be prompted with a question and the verbal response will be recorded.
4) If no verbal response is provided after ten seconds, the question will be repeated. If no response is given after another 10 seconds, the next question in the sequence will be asked.
5) Each student will be asked the same series questions in the same order to ensure consistency.

Scripted Introduction

I am going to ask you 16 questions about how you think and feel about your artwork, learning, understanding, and process. I will ask you one question at a time and would like you to answer as honestly as you can. I will be audio recording this conversation so try to speak loudly and clearly. This will help me remember your answers after you leave so I don't leave anything out. None of your classmates, other teachers, or parents will read your responses. All of your answers will be confidential.

Spark

Question (Q): How are you doing today?

(L.L): Good.

Researcher Response (RR): *We are going to discuss how you feel during art class and what you think could help you better come up with ideas, set goals for yourself, stay on task, and complete projects that are well thought out and meaningful to you.*

(Q): Are you ready to begin?

(L.L):Yeah.

(RR): *I want you to think carefully about how you feel when you make your artwork and how you think your learning could be supported better if you could change or alter anything about the way you are making art. The purpose of these questions is to help me build an art room where students like yourself feel like they can create, learn, and succeed. As a student, your opinion is very important in helping me help you and other students when they are in my class. There is no wrong answer to any of these questions since we all learn and work differently and nothing you say will change the way your artwork is graded or my opinion of you as a student.*

(Q): Do you think you can answer some questions to help me become a better art teacher?

(L.L.):Yeah.

(Q): Do you have any questions before we start?

(L.L.): No.

Teacher/Student Role:

(RR): *This question is about the type of artwork you like to create.*

(Q): Would you rather make artwork that you come up with on your own or do you prefer when the teacher tell you step by step what needs to be done to complete a project? Why?

(L.L.): Step by step because some people will fool around, and they won't actually do the work and it gets distracting for other people. But, I guess for me, personally, I like step by step because then I know if I am doing it correctly or not. I don't want to do *that* wrong and then have to go back and do *this* again or restart the whole project.

(RR): *You bring up some really good points about why you feel that way. I can see why you think it may be (easier, more enjoyable, better) when you are able to create your artwork in that way.*

(Q): Do you think there is anything about the (the other method of creating artwork) that is beneficial for you when you are making your work? Why?

(L.L.): I like freedom more too because other people can't really compare each other, like "I have this and you don't" because they could be doing completely different subjects and there's no real way to interact and compare because it's different. You can also kind of like let your mind does whatever it wants and if your stressed you can let your mind go and do your own thing and let your stress out. I guess I'm kind of in the middle.

(RR): *Your ideas are very helpful. It is important for me to understand how I as a teacher can help my students by giving more or less instructions at different times of the lesson.*

Effort and Motivation:

(Q): When you start a project, what is something that you think helps you come up with an idea?

(L.L.) : My mind is just my inspiration.

(Q): Is it easy or hard for you to come up with ideas?

(L.L.): It's usually easy to come up with ideas, and what I like to do is get a piece of paper and like list all the things in my head so I don't forget them and then pick my favorite idea.

(Q): What is something that you think makes it difficult to begin a new project? What is something that could help you overcome this roadblock? What strategies could help you get started?

(L.L.): If people got a little more quiet. I kind of like silence.

(Q): What strategies could help you get started when you are having difficulty? If you couldn't have silence, what else could you do to help you get started?

(L.L.): If I don't have silence, I guess ear buds or music so if people try to talk to you, you can't really hear them and you can mind your own business in your own little world. And music can also help inspire you for certain ideas.

(Q): When it comes to goal setting, do you feel more confident working when you decide what you think you can complete in a class period or do you prefer when the teacher tells you how much work is expected to be completed by the end of each class period?

(L.L.): Umm, kind of in the middle because some people do work at their own paces, but then sometimes it can boost someone and make them work a little harder to meet the teachers expectations and maybe there will be less talking.

(Q): Do you think you always try your hardest on your artwork? What makes you want to try to do your best or improve?

(L.L.): Yeah. Thinking I can do better and work harder than what I have done already.

(Q): What is something you would change about your time in art class that you think could help you progress through your projects more smoothly with less distractions or wasted time?

(L.L.): Earbuds, like I said before. I think that would be good.

Figure F3: L.L. Semi-Structured Individual Interview Transcription

3

(RR): *Wow, you have a lot of insight into how you learn in art class and what kinds of things might be able to help you become a better artist. I just have a few more questions to ask you before we are finished. Remember, your answers are to help me teach future students and the best way you can help me is to be honest. Nothing you say is going to hurt my feelings. Even teachers need to listen to learn, it's the only way to keep growing our brains and become better teachers.*

Self-Reflection

(Q): Are you proud of the work you create in art class?

(L.L.): Somewhat, like I feel like I can work harder but sometimes I feel like I don't have a lot of time. Because sometimes we have extended art time but I don't always get to go because I'm in Mrs. Bryant's class, not Mrs. Meyer's class like everyone else.

(Q): Do you think it is more important for you to like your artwork or for me to like your artwork? Why?

(L.L.): Me. Because it's my artwork and I should be proud of what I did. I like to ask your opinion but more cause like I want to know what to change to help myself, not really just so you say you like it or I did a good job.

(RR): *When I am making artwork it sometimes helps me to take a picture of it and look at it later or ask other people what they think about it before I decide what to do next.*

(Q): How do you know when you are finished with a work of art that you make?

(L.L.): I like to look at pictures and then kind of do it, so taking the picture that I am basing my artwork off of and saying, "this is different than mine, I need to fix this." I also don't know when I am really done.

(Q): How does it make you feel when teachers or other students give you suggestions that they think could improve your work?

(L.L.): I don't really mind. I check what they say but some things I ignore because I either already have that or I don't like their suggestion.

(Q): Has your opinion of your ability as an artist changed at all since we started this study? If so, how? *(shown their initial Artistic Survey)*

(L.L.): No, this all looks pretty much the same. I think I am still pretty good at art but my mom and teachers definitely always compliment me. And like, yeah, I still like it to be quiet for me to focus so *that* hasn't changed.

Closure

(RR): *Thank you so much for taking time to answer these questions so honestly and spending time with me today to help me learn how to better teach you and other art students.*

(Q): Is there anything else you would like to add or say about your experience in art class? Is there anything you'd like to ask me before you go?

(L.L.): Nope.

Semi-Structured Individual Interview

Interview Protocol Form

Open Ended Data Collection: **Teacher Role vs. Student Role- How the art making process effects student opinions about their effort and ability?**

Date: April 17, 2019

Time: 10:00 AM

Location: Peter Muschal Elementary School Art Room

Interviewer: Kate Sakowski

Interviewee: T.R.

Release form signed? _X_

Protocol

The questions / dialogue will be conducted in an identical fashion in order to demonstrate experimental control. All students in the study will be asked individually the same series of questions regarding their feelings about their art, their ability, and their process. The structure of the questions is designed to engage students in active conversation to encourage deep, meaningful, and personal responses to their art production and self-reflection on their effort and ability. The process scaffolds questions to maintain an active and responsive student-teacher dialogue. Positive reinforcement will be provided after each response. Positive reinforcement is defined as the researcher repeating the student response enthusiastically or asking the student to consider or expand on their answer further. Students will also be allowed to ask the researcher questions should they choose to do so.

The steps for questions / dialogue will be as follows:

1) The conditions will be as follows:
    a. Each student will meet with the researcher in a one-on-one ratio;
    b. All sessions will be for the same fixed interval of time;
    c. Any known antecedents to the baseline sessions will be reported in results;
    d. The setting will be the art room at Peter Muschal Elementary School
    e. The student will be seated at the demonstration table across from the researcher
    f. Additional school staff members such as a paraprofessional may be present but be asked to remain silent;
    g. Experimental control will be demonstrated through the use of a digital voice recorder using a fixed length event recording system to capture each participant's full response to each question presented;
    h. Transcripts of each session will be created in a word processing program;
    i. Each transcript will be identified with the student pseudonym, date, and print set;
2) The researcher will greet the student and begin with the topic question scripted below.
3) The student will be prompted with a question and the verbal response will be recorded.
4) If no verbal response is provided after ten seconds, the question will be repeated. If no response is given after another 10 seconds, the next question in the sequence will be asked.
5) Each student will be asked the same series questions in the same order to ensure consistency.

Scripted Introduction

I am going to ask you 16 questions about how you think and feel about your artwork, learning, understanding, and process. I will ask you one question at a time and would like you to answer as honestly as you can. I will be audio recording this conversation so try to speak loudly and clearly. This will help me remember your answers after you leave so I don't leave anything out. None of your classmates, other teachers, or parents will read your responses. All of your answers will be confidential.

Spark

Question (Q): How are you doing today?

(T.R.): Good.

Researcher Response (RR): *We are going to discuss how you feel during art class and what you think could help you better come up with ideas, set goals for yourself, stay on task, and complete projects that are well thought out and meaningful to you.*

(Q): Are you ready to begin?

(T.R.): Yes.

(RR): *I want you to think carefully about how you feel when you make your artwork and how you think your learning could be supported better if you could change or alter anything about the way you are making art. The purpose of these questions is to help me build an art room where students like yourself feel like they can create, learn, and succeed. As a student, your opinion is very important in helping me help you and other students when they are in my class. There is no wrong answer to any of these questions since we all learn and work differently and nothing you say will change the way your artwork is graded or my opinion of you as a student.*

(Q): Do you think you can answer some questions to help me become a better art teacher?

(T.R.): Sure.

(Q): Do you have any questions before we start?

(T.R.): Nope.

Teacher/Student Role:

(RR): *This question is about the type of artwork you like to create.*

(Q): Would you rather make artwork that you come up with on your own or do you prefer when the teacher tell you step by step what needs to be done to complete a project? Why?

(T.R.): I more like to start off on a proof draft and like do my own because sometimes when I go step by step I feel like I am really ahead of everybody or I'm really behind everybody so I work at different paces when I work with different materials, so when I do it on my own I can stay on track with everybody because I can still work and finish my artwork probably by the time everybody else is. I don't like to feel rushed.

(RR): *You bring up some really good points about why you feel that way. I can see why you think it may be (easier, more enjoyable, better) when you are able to create your artwork in that way.*

(Q): Do you think there is anything about the (the other method of creating artwork) that is beneficial for you when you are making your work? Why?

(T.R.): I think step by step is good because sometimes, well, compared to like when I was in the younger grades I could actually like know what I was doing but I think when I didn't know something I could understand the steps. But when you don't have the step when you're in kindergarten or something, like, it's probably going to be harder for you because sometimes you might not know what you're doing.

(RR): *Your ideas are very helpful. It is important for me to understand how I as a teacher can help my students by giving more or less instructions at different times of the lesson.*

Effort and Motivation:

(Q): When you start a project, what is something that you think helps you come up with an idea?

(T.R.): Uh, something that helps me come up with an idea is first like try out different materials to see the colors and different textures of it because sometimes different materials have different textures. Like at my house I use felt, and I tried to make a stuffed animal before and it didn't come out good (laughs) but um I've tried many things with different materials so, when like I start off with a new material and then I try to draw just like a random picture, I would draw a line and feel the texture of it. Like see if it would come off on my fingers. And, just to see how permanent it would be. Like experiment first.

(Q): Is it easy or hard for you to come up with ideas?

(T.R.): Sometimes it's easy but sometimes it's hard, like when I'm stressed out I can't come up with ideas. But after I relax and stuff that's probably how I get more ideas. Maybe also like the noise level. Sometimes like with our class, when I am like trying to come up with an idea, like from over there especially, I hear like a lot of noise compared to more over there which is less noise and then at my table where I sit with the painters we barely talk so it's like different noise levels coming at me from different directions and I can't concentrate.

(Q): What is something that you think makes it difficult to begin a new project? What is something that could help you overcome this roadblock? What strategies could help you get started?

(T.R.): Oh, so, sometimes I just, you can look up just artwork stuff and I can see something and then say oooh maybe I want to do something similar to that and so I would just start, like sketch out real fast, and then try sketching it out with different materials and then that would give me an idea of something I could do similar to it. Like say if it was like Pokémon… and maybe I could take that idea and the idea of a cat and try to combine it and sketch out the face of it together. Like find images on the internet or YouTube.

(Q): What strategies could help you get started when you are having difficulty? Since we can't always control our environment, what is something you do to help you concentrate and come up with ideas?

(T.R.): So, what I do it like fidget a lot with this thing I bring in my book bag and it calms me down and helps me focus more than with without it because it takes like my mind off that and helps me focus on what I am actually doing.

(Q): When it comes to goal setting, do you feel more confident working when you decide what you think you can complete in a class period or do you prefer when the teacher tells you how much work is expected to be completed by the end of each class period?

(T.R.): I think like when I choose my goals I can decide it sets like a higher standard for me. So like, I should like…well my artwork right now its s huge thing so I try to do one section at a time and, like one of my goals would be like the left eye, that was one of my goals for the week and it helps me to set goals for just that one area and then move on to the next area next week.

(Q): Do you think you always try your hardest on your artwork? What makes you want to try to do your best or improve?

(T.R.): Umm, I think the majority of the time I do except maybe when we had our first project this year about our self-portraits, I don't think I tried my hardest on that one, I think it could have come out a little bit better but I felt a little rushed because I missed art because I was sick and I didn't feel like I did my nest work. But I usually want to do my best work, like usually after I make a first copy and I look at it and I see what I need to better on it and if I don't like something and I can do better I just re-do it all, but I keep the first one with me to remind me what I can do better and what I can keep the same. I like to compare it.

(Q): What is something you would change about your time in art class that you think could help you progress through your projects more smoothly with less distractions or wasted time?

(T.R.): Umm, I think probably setting the goals helps me do that the best because it tells me like here's what I need to do and helps me think about what I need to do and makes me feel like I can have no distractions.

Recap

(RR): *Wow, you have a lot of insight into how you learn in art class and what kinds of things might be able to help you become a better artist. I just have a few more questions to ask you before we are finished. Remember, your answers are to help me teach future students and the best way you can help me is to be honest. Nothing you say is going to hurt my feelings. Even teachers need to listen to learn, it's the only way to keep growing our brains and become better teachers.*

Self-Reflection

(Q): Are you proud of the work you create in art class?

(T.R.): Yes. I am proud of it because I feel like I did this, so I feel like it may not be the best but I am proud of it because I can work off of it and I can make better versions. So, my first one may not be good to my standards but I can re-fix it or add another shade or something.

(Q): Do you think it is more important for you to like your artwork or for me to like your artwork? Why?

(T.R.): I think it's more important for me to like my artwork because I created it and other people may not like it but I feel like I like it because I created it, so you should be proud of it because you made something. Like no one else made it for you, you actually created it on

your own. So, like you should be proud of what you create.

(RR): *When I am making artwork it sometimes helps me to take a picture of it and look at it later or ask other people what they think about it before I decide what to do next.*

(Q): How do you know when you are finished with a work of art that you make?

(T.R.): Something that helps me know when I am finished is at least like when I have everything that's like on the picture that I am referencing from, when I have everything that's on there, it may not be the exact same thing, but at least I try to make it very close to it.

(Q): How does it make you feel when teachers or other students give you suggestions that they think could improve your work?

(T.R.): So, when I see I have a majority of the work, but if I missed something I may look at it and say, "hey, I don't really care about this one thing, it's not that important," as long as I have the main things it may not be as important.

(Q): Has your opinion of your ability as an artist changed at all since we started this study? If so, how*? (shown their initial Artistic Survey)*

(T.R.): Ummm, a little bit because I feel like I have gotten much stronger with my art. I feel like I've gotten better because at home I even have art stuff surrounding my desk and I try things at home, like the eyes some days, faces, necks, ears, hair, and I try them at home. I look at books and the computer and I do drawing challenges with my friend and then have someone else judge it.

Closure

(RR): *Thank you so much for taking time to answer these questions so honestly and spending time with me today to help me learn how to better teach you and other art students.*

(Q): Is there anything else you would like to add or say about your experience in art class? Is there anything you'd like to ask me before you go?

(T.R.): Maybe like, with the seating arrangements, if like people are always talking and it doesn't work out maybe like rearrange and switch again the next week, so maybe like even though we just switched seats and I like sitting with the people who are using paint with me, for concentration it could help if like you moved them apart again. Like refine it pretty much.

Figure F4: T.R. Semi-Structured Individual Interview Transcription 5

Semi-Structured Individual Interview

Interview Protocol Form

Open Ended Data Collection: **Teacher Role vs. Student Role- How the art making process effects student opinions about their effort and ability?**

Date: April 16, 2019

Time: 10:09 AM

Location: Peter Muschal Elementary School Art Room

Interviewer: Kate Sakowski

Interviewee: C.F.

Release form signed? _X_

Protocol

The questions / dialogue will be conducted in an identical fashion in order to demonstrate experimental control. All students in the study will be asked individually the same series of questions regarding their feelings about their art, their ability, and their process. The structure of the questions is designed to engage students in active conversation to encourage deep, meaningful, and personal responses to their art production and self-reflection on their effort and ability. The process scaffolds questions to maintain an active and responsive student-teacher dialogue. Positive reinforcement will be provided after each response. Positive reinforcement is defined as the researcher repeating the student response enthusiastically or asking the student to consider or expand on their answer further. Students will also be allowed to ask the researcher questions should they choose to do so.

The steps for questions / dialogue will be as follows:

1) The conditions will be as follows:
    a. Each student will meet with the researcher in a one-on-one ratio;
    b. All sessions will be for the same fixed interval of time;
    c. Any known antecedents to the baseline sessions will be reported in results;
    d. The setting will be the art room at Peter Muschal Elementary School
    e. The student will be seated at the demonstration table across from the researcher
    f. Additional school staff members such as a paraprofessional may be present but be asked to remain silent;
    g. Experimental control will be demonstrated through the use of a digital voice recorder using a fixed length event recording system to capture each participant's full response to each question presented;
    h. Transcripts of each session will be created in a word processing program;
    i. Each transcript will be identified with the student pseudonym, date, and print set;
2) The researcher will greet the student and begin with the topic question scripted below.
3) The student will be prompted with a question and the verbal response will be recorded.
4) If no verbal response is provided after ten seconds, the question will be repeated. If no response is given after another 10 seconds, the next question in the sequence will be asked.
5) Each student will be asked the same series questions in the same order to ensure consistency.

Scripted Introduction

I am going to ask you 16 questions about how you think and feel about your artwork, learning, understanding, and process. I will ask you one question at a time and would like you to answer as honestly as you can. I will be audio recording this conversation so try to speak loudly and clearly. This will help me remember your answers after you leave so I don't leave anything out. None of your classmates, other teachers, or parents will read your responses. All of your answers will be confidential.

Spark

Question (Q): How are you doing today?

(C.F.): Okay.

Researcher Response (RR): *We are going to discuss how you feel during art class and what you think could help you better come up with ideas, set goals for yourself, stay on task, and complete projects that are well thought out and meaningful to you.*

(Q): Are you ready to begin?

(C.F.): Yes.

(RR): *I want you to think carefully about how you feel when you make your artwork and how you think your learning could be supported better if you could change or alter anything about the way you are making art. The purpose of these questions is to help me build an art room where students like yourself feel like they can create, learn, and succeed. As a student, your opinion is very important in helping me help you and other students when they are in my class. There is no wrong answer to any of these questions since we all learn and work differently and nothing you say will change the way your artwork is graded or my opinion of you as a student.*

(Q): Do you think you can answer some questions to help me become a better art teacher?

(C.F.): Sure.

(Q): Do you have any questions before we start?

(C.F.): No.

Teacher/Student Role:

(RR): *This question is about the type of artwork you like to create.*

(Q): Would you rather make artwork that you come up with on your own or do you prefer when the teacher tell you step by step what needs to be done to complete a project? Why?

(C.F.): I like them both, but I feel like I like it better when we can like do it on our own because if you make a mistake you can always fix it instead of having to do one certain thing. Like if you make a mistake it could be harder to fix it if there was a right way.

(RR): *You bring up some really good points about why you feel that way. I can see why you think it may be (easier, more enjoyable, better) when you are able to create your artwork in that way.*

(Q): Do you think there is anything about the (the other method of creating artwork) that is beneficial for you when you are making your work? Why?

(C.F.): For step by step if someone else is doing the same thing you don't feel like they are really that much better than you.

(RR): *Your ideas are very helpful. It is important for me to understand how I as a teacher can help my students by giving more or less instructions at different times of the lesson.*

Effort and Motivation:

(Q): When you start a project, what is something that you think helps you come up with an idea?

(C.F.): Umm, probably like looking around the room and trying to see stuff that I could try to recreate.

(Q): Is it easy or hard for you to come up with ideas?

(C.F.): Like some days it's easy and some days it's really hard. If I am in a room that has a lot of stuff that I can draw I can easily come up with an idea, but if it's a plain room and really boring it is probably harder to come up with an idea.

(Q): What is something that you think makes it difficult to begin a new project? What is something that could help you overcome this roadblock? What strategies could help you get started?

(C.F.): Probably figuring out how to start or making up an idea I guess.

(Q): What strategies could help you get started when you are having difficulty? If you have to figure out what idea you want to use next and come up with an idea what could help you with that?

(C.F.): Maybe like thinking of stuff that you and like trying to change it and make it more creative and drawing it.

(Q): When it comes to goal setting, do you feel more confident working when you decide what you think you can complete in a class period or do you prefer when the teacher tells you how much work is expected to be completed by the end of each class period?

(C.F.): Probably like when I decide my goal because when someone else tells me what I have to do I kind of feel rushed and like I want to get it done in a short amount of time, but I can't do it well.

(Q): Do you think you always try your hardest on your artwork? What makes you want to try to do your best or improve?

(C.F.):Yeah, because I like kind of being better than people I guess. And, I don't know… I like just working hard and then seeing the outcome.

(Q): What is something you would change about your time in art class that you think could help you progress through your projects more smoothly with less distractions or wasted time?

(C.F.): Umm, probably like if I could control people I would probably make them a bit quieter because sometimes it gets loud. But since I can't control people… I don't know. Probably if someone near me likes to talk a lot and keeps interrupting me while I'm working, maybe I

could put up a blocker or folder to help me concentrate.

Recap

(RR): *Wow, you have a lot of insight into how you learn in art class and what kinds of things might be able to help you become a better artist. I just have a few more questions to ask you before we are finished. Remember, your answers are to help me teach future students and the best way you can help me is to be honest. Nothing you say is going to hurt my feelings. Even teachers need to listen to learn, it's the only way to keep growing our brains and become better teachers.*

Self-Reflection

(Q): Are you proud of the work you create in art class?

(C.F.): Yeah. Because I know I worked hard on it and I spent a lot of time working on it. And, even if it doesn't look that good I still know that I worked hard and it kind of feels good.

(Q): Do you think it is more important for you to like your artwork or for me to like your artwork? Why?

(C.F.): Umm probably for you because I don't really care if my art is good because art is just fun for me. I don't know why I care what you think either though because I'm the one who made it.

(RR): *When I am making artwork it sometimes helps me to take a picture of it and look at it later or ask other people what they think about it before I decide what to do next.*

(Q): How do you know when you are finished with a work of art that you make?

(C.F.): Like I probably like look at what I am trying to draw and see if it kind of matches it and looks similar. And also, if there's spot that aren't really colored in and I think I could add more to them I'd probably go back and try to add some more.

(Q): How does it make you feel when teachers or other students give you suggestions that they think could improve your work?

(C.F.): Umm, well, I would probably follow their suggestions because I like to make my stuff good.

(Q): Has your opinion of your ability as an artist changed at all since we started this study? If so, how? *(shown their initial Artistic Survey)*

(C.F.): Oh, um well, since I answered that I only thought I was okay at art in the beginning I guess it's changed. I feel like I'm now pretty good because I've been doing art for the whole year and I feel like I've improved a lot. And, I guess also I wouldn't answer that art makes me feel stressed or rushed anymore. I guess. But also, like I said here, I still like having a reference to look at, that hasn't changed, and I guess I still think other people think I'm better than I do… they sometimes give me compliments when I don't even think it is that good.

Closure

(RR): *Thank you so much for taking time to answer these questions so honestly and spending time with me today to help me learn how to better teach you and other art students.*

(Q): Is there anything else you would like to add or say about your experience in art class? Is there anything you'd like to ask me before you go?

(C.F.): Umm, not really.

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Figure F5: C.F. Semi-Structured Individual Interview Transcription

Semi-Structured Individual Interview

Interview Protocol Form

Open Ended Data Collection: **Teacher Role vs. Student Role- How the art making process effects student opinions about their effort and ability?**

Date: April 16, 2019

Time: 9:40 AM

Location: Peter Muschal Elementary School Art Room

Interviewer: Kate Sakowski

Interviewee: D.M.

Release form signed? _X_

Protocol

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Spark

Question (Q): How are you doing today?

(D.M.): Good, I kind of thought it was Wednesday and its only Tuesday.

Researcher Response (RR): *We are going to discuss how you feel during art class and what you think could help you better come up with ideas, set goals for yourself, stay on task, and complete projects that are well thought out and meaningful to you.*

(Q): Are you ready to begin?

(D.M.): Sure.

(RR): *I want you to think carefully about how you feel when you make your artwork and how you think your learning could be supported better if you could change or alter anything about the way you are making art. The purpose of these questions is to help me build an art room where students like yourself feel like they can create, learn, and succeed. As a student, your opinion is very important in helping me help you and other students when they are in my class. There is no wrong answer to any of these questions since we all learn and work differently and nothing you say will change the way your artwork is graded or my opinion of you as a student.*

(Q): Do you think you can answer some questions to help me become a better art teacher?

(D.M.): Yeah.

(Q): Do you have any questions before we start?

(D.M.): No.

Teacher/Student Role:

(RR): *This question is about the type of artwork you like to create.*

(Q): Would you rather make artwork that you come up with on your own or do you prefer when the teacher tell you step by step what needs to be done to complete a project? Why?

(D.M.): Well, I kind of like, it depends because when you tell us what to do it's helpful and we can just kind of like do it easily and like kind of maybe….well, I don't know. I feel like my reasoning is kind of backwards because I feel like we can have more fun when it's step by step because we just like do the art and we know what we're doing, but then also, if we don't do step by step, if you like the thing that we're doing it would be easier, but then some people that don't like know what they're doing its kind of harder. You always help us with the materials so that's not a problem but sometimes I think it's harder to actually

create it, like the idea of it.

(RR): *You bring up some really good points about why you feel that way. I can see why you think it may be (easier, more enjoyable, better) when you are able to create your artwork in that way.*

(Q): Do you think there is anything about the (the other method of creating artwork) that is beneficial for you when you are making your work? Why?

(D.M.): Ummm, I feel like when it's open, and we're just doing whatever, we're still able to do the same thing. Like you make it so everyone can do something different and we're using different materials but it's still like the same thing. But, if it were just like, do whatever, like more open, I mean I would kind of like it. I like step by step but I also like just doing whatever. For some things step by step is better but for some things it's just easier to do it on your own. If it's step by step I don't have to struggle with it, because you tell us how to do those things, so it's kind of easier.

(RR): *Your ideas are very helpful. It is important for me to understand how I as a teacher can help my students by giving more or less instructions at different times of the lesson.*

Effort and Motivation:

(Q): When you start a project, what is something that you think helps you come up with an idea?

(D.M.): I guess kind of by material. Like if I pick a material that is good with blending I might try to pick something to make that has a lot of colors. Like pick my materials and then come up with an idea. Unless I already have an idea, then I would pick a material that would look good.

(Q): Is it easy or hard for you to come up with ideas?

(D.M.): I feel like it's kind of hard for me to come up with ideas. But I kind of feel like if we're using a picture, I try to base it off of that, but as we go I kind of change it to make it better or more what I was thinking. Coming up with ideas randomly is like, I don't know, I'm not good at thinking of ideas.

(Q): What is something that you think makes it difficult to begin a new project? What is something that could help you overcome this roadblock? What strategies could help you get started?

(D.M.): Maybe, probably just like drawing, planning out what I'm gonna do because sometimes if I don't know what I'm doing, and I just have a blank piece of paper I kind of do whatever and I don't have a plan. So, it would be like hard, I don't know. It's easier to come up with something if you already have something that you are good at or that you already enjoy from past art, but then, if you want to start something new it's just like, I don't know where to begin. Like step 1 is the hardest part, then I can kind of go from there,

(Q): What strategies could help you get started when you are having difficulty? If step one if your hardest part, what could you do to get over step 1?

(D.M.): If it's just like anything, I kind of just look around the room, like the rainbows over there look kind of cool so maybe I'd do something with a bunch of color. It's like if I see something that day that I thought looked cool I'll maybe just do that.

(Q): When it comes to goal setting, do you feel more confident working when you decide what you think you can complete in a class period or do you prefer when the teacher tells you how much work is expected to be completed by the end of each class period?

(D.M.): Well, kind of like both, because if I do just a completely random goal I feel like I won't get that far kind of, but if you're like, "you should have like the sketch done," or something, I can be like, "I want to have the sketch done and then maybe something else," I can like base it off of that kind of but what I am working on too.

(Q): Do you think you always try your hardest on your artwork? What makes you want to try to do your best or improve?

(D.M.): I mean, not all the time, because sometimes it's just like I don't really want to do the project. Like when we were just like sketching the pears I was just kind of like doling it quick so I could get to like doing the materials, so I don't always try my hardest because sometimes I don't really want to like do that thing. But when I am interested in a topic, I will try harder and like put more effort into it.

(Q): What is something you would change about your time in art class that you think could help you progress through your projects more smoothly with less distractions or wasted time?

(D.M.): Ummm, maybe, I don't really know. I feel like everything I am doing is part of making the art project I am trying to make, I feel like it's okay, I don't know how it could be more helpful, it's already like good.

Recap

(RR): *Wow, you have a lot of insight into how you learn in art class and what kinds of things might be able to help you become a better artist. I just have a few more questions to ask you before we are finished. Remember, your answers are to help me teach future students and the best way you can help me is to be honest. Nothing you say is going to hurt my feelings. Even teachers need to listen to learn, it's the only way to keep growing our brains and become better teachers.*

Self-Reflection

(Q): Are you proud of the work you create in art class?

(D.M.): I'm just trying to think. Most times I am kind of like, that kind of looks bad I guess. That's why I like doing projects with multiple parts. Because like with the fruit, we did the oil pastel and the paint and the chalk pastel and I was like proud of the chalk pastel but the others I like wasn't. Cause when we did the portraits and then I looked at other people's portraits I was kind of like, mmm, but like if I had like two I could have more choices.

(Q): Do you think it is more important for you to like your artwork or for me to like your artwork? Why?

(D.M.): Kind of like for me to like my artwork because I made it so I kind of like don't just want to make it, hand it in, leave, make it, hand it in. I kind of just want to feel proud of it after. Like even in class, when you finish something, even if you don't like it it's like, well I finally finished something and you're like proud of it no matter what because you finished.

(RR): *When I am making artwork it sometimes helps me to take a picture of it and look at it later or ask other people what they think about it before I decide what to do next.*

(Q): How do you know when you are finished with a work of art that you make?

(D.M.): Well, I feel like I just know sometimes. Most times I just add too much, and if I keep adding more sometimes it just looks bad and then I have to go over it again because it looks bad. But then other times I just know if it is done.

(Q): How does it make you feel when teachers or other students give you suggestions that they think could improve your work?

(D.M.): Well sometimes I am a little like, I don't want to say like mad, because I am never like angry at them, but sometimes I am a little upset because like if I'm proud of something and then someone says, "oh you could have done that, or added that," I am a little upset but then most times I kind of know I could have improved on that but then when someone says it I'm like "yeah, I know." But, like if you say it I know it's to help me, and I guess it's the same with someone next to me, but most times no one next to me is working on same thing I am. When you say it, I know it's going to make it better. But then, when someone else says it I can either like tell because I am not doing the best on something so I am like, "yeah I kinda could do that," but then other times if I'm already working on one thing and I just want to get it finished and be done and someone give me suggestions it is kind of like too much and could ruin it. I trust you more to help me, I trust what they are saying but sometimes I feel like it can be just too much. It depends. With you it always makes it better.

(Q): Has your opinion of your ability as an artist changed at all since we started this study? If so, how*? (shown their initial Artistic Survey)*

(D.M.): I mean, I think I am like good as an artist, but I don't think I'm like amazing. Like I guess I would be half way between good and pretty good instead of just okay. Some things I do I think are pretty good but when I make art I feel like I do more kind of like my own style than trying to make it look realistic or more like kind of I don't know. I also like clay and stuff and pop ups.

Closure

(RR): *Thank you so much for taking time to answer these questions so honestly and spending time with me today to help me learn how to better teach you and other art students.*

(Q): Is there anything else you would like to add or say about your experience in art class? Is there anything you'd like to ask me before you go?

(D.M.): Kind of like 3-dimensional stuff. I feel like more like fantasy drawing. When you're trying to do something that is real it can get a little bit boring because you're trying to make it look like something but with fantasy there is like there is nothing wrong with what you do.

Figure F6: D.M. Semi-Structured Individual Interview Transcription 5

Semi-Structured Individual Interview

Interview Protocol Form

Open Ended Data Collection: **Teacher Role vs. Student Role- How the art making process effects student opinions about their effort and ability?**

Date: April 16, 2019

Time: 9:55 AM

Location: Peter Muschal Elementary School Art Room

Interviewer: Kate Sakowski

Interviewee: K.P.

Release form signed? _X_

Protocol

The questions / dialogue will be conducted in an identical fashion in order to demonstrate experimental control. All students in the study will be asked individually the same series of questions regarding their feelings about their art, their ability, and their process. The structure of the questions is designed to engage students in active conversation to encourage deep, meaningful, and personal responses to their art production and self-reflection on their effort and ability. The process scaffolds questions to maintain an active and responsive student-teacher dialogue. Positive reinforcement will be provided after each response. Positive reinforcement is defined as the researcher repeating the student response enthusiastically or asking the student to consider or expand on their answer further. Students will also be allowed to ask the researcher questions should they choose to do so.

The steps for questions / dialogue will be as follows:

1) The conditions will be as follows:
    a. Each student will meet with the researcher in a one-on-one ratio;
    b. All sessions will be for the same fixed interval of time;
    c. Any known antecedents to the baseline sessions will be reported in results;
    d. The setting will be the art room at Peter Muschal Elementary School
    e. The student will be seated at the demonstration table across from the researcher
    f. Additional school staff members such as a paraprofessional may be present but be asked to remain silent;
    g. Experimental control will be demonstrated through the use of a digital voice recorder using a fixed length event recording system to capture each participant's full response to each question presented;
    h. Transcripts of each session will be created in a word processing program;
    i. Each transcript will be identified with the student pseudonym, date, and print set;
2) The researcher will greet the student and begin with the topic question scripted below.
3) The student will be prompted with a question and the verbal response will be recorded.
4) If no verbal response is provided after ten seconds, the question will be repeated. If no response is given after another 10 seconds, the next question in the sequence will be asked.
5) Each student will be asked the same series questions in the same order to ensure consistency.

Scripted Introduction

I am going to ask you 16 questions about how you think and feel about your artwork, learning, understanding, and process. I will ask you one question at a time and would like you to answer as honestly as you can. I will be audio recording this conversation so try to speak loudly and clearly. This will help me remember your answers after you leave so I don't leave anything out. None of your classmates, other teachers, or parents will read your responses. All of your answers will be confidential.

Spark

Question (Q): How are you doing today?

(K.P.): Good.

Researcher Response (RR): *We are going to discuss how you feel during art class and what you think could help you better come up with ideas, set goals for yourself, stay on task, and complete projects that are well thought out and meaningful to you.*

(Q): Are you ready to begin?

(K.P.): Yeah.

(RR): *I want you to think carefully about how you feel when you make your artwork and how you think your learning could be supported better if you could change or alter anything about the way you are making art. The purpose of these questions is to help me build an art room where students like yourself feel like they can create, learn, and succeed. As a student, your opinion is very important in helping me help you and other students when they are in my class. There is no wrong answer to any of these questions since we all learn and work differently and nothing you say will change the way your artwork is graded or my opinion of you as a student.*

(Q): Do you think you can answer some questions to help me become a better art teacher?

(K.P.): Yeah.

(Q): Do you have any questions before we start?

(K.P.): No.

Teacher/Student Role:

(RR): *This question is about the type of artwork you like to create.*

(Q): Would you rather make artwork that you come up with on your own or do you prefer when the teacher tell you step by step what needs to be done to complete a project? Why?

(K.P.): A little bit of both, like sometimes I could do it on my own or like a little bit step by step because like it helps me get better and helps me concentrate on one thing and what I am doing. I get my work done quickly and after I get done I can move on to something else or keep going back and fixing things but I know what to do and I know when I'm done.

(RR): *You bring up some really good points about why you feel that way. I can see why you think it may be (easier, more enjoyable, better) when you are able to create your artwork in that way.*

(Q): Do you think there is anything about the (the other method of creating artwork) that is beneficial for you when you are making your work? Why?

(K.P.): Yeah, a little bit, drawing hearts or if I draw like a rainbow I start blending and stuff and then when I am blending it makes me think of another idea and like inspires me to do something else.

(RR): *Your ideas are very helpful. It is important for me to understand how I as a teacher can help my students by giving more or less instructions at different times of the lesson.*

Effort and Motivation:

(Q): When you start a project, what is something that you think helps you come up with an idea?

(K.P.): Ummm, blending with oil pastels, cause when I start blending and using a technique I come up other ideas I could blend with.

(Q): Is it easy or hard for you to come up with ideas?

(K.P.): Easy.

(Q): What is something that you think makes it difficult to begin a new project? What is something that could help you overcome this roadblock? What strategies could help you get started?

(K.P.): Moving my mind off of what we are working on and onto something else.

(Q): What strategies could help you get started when you are having difficulty? What could help you get into a new mindset and come up with a new idea?

(K.P.): I don't really know, I just have an idea that pops up in my head and I try it.

(Q): When it comes to goal setting, do you feel more confident working when you decide what you think you can complete in a class period or do you prefer when the teacher tells you how much work is expected to be completed by the end of each class period?

(K.P.): Umm, when you tell us what has to be done. I like to know what has to be completed because it makes me have to work faster your artwork might not get better just by concentrating more, sometimes you have to just get it done that day.

(Q): Do you think you always try your hardest on your artwork? What makes you want to try to do your best or improve?

(K.P.): Yeah. Because I want it to turn out really good and like show my parents that I tried my best.

(Q): What is something you would change about your time in art class that you think could help you progress through your projects more smoothly with less distractions or wasted time?

(K.P.): If we had like more time in art.

Recap

(RR): *Wow, you have a lot of insight into how you learn in art class and what kinds of things might be able to help you become a better artist. I just have a few more questions to ask you before we are finished. Remember, your answers are to help me teach future students and the best way you can help me is to be honest. Nothing you say is going to hurt my feelings. Even teachers need to listen to learn, it's the only way to keep growing our brains and become better teachers.*

Self-Reflection

(Q): Are you proud of the work you create in art class?

(K.P.): Yeah.

(Q): Do you think it is more important for you to like your artwork or for me to like your artwork? Why?

(K.P.): For me to like my artwork, because like if I concentrate on my own work and I think it's good I'll keep it good and try harder.

(RR): *When I am making artwork it sometimes helps me to take a picture of it and look at it later or ask other people what they think about it before I decide what to do next.*

(Q): How do you know when you are finished with a work of art that you make?

(K.P.): Like I take a picture and I put them side by side like what you do, and then I look in certain areas and if I'm like missing something I'll be like "okay I have to add this here real quick."

(Q): How does it make you feel when teachers or other students give you suggestions that they think could improve your work?

(K.P.): Ummm, I would feel fine, I would just be like, "oh, I have to work on this area real quick and then I can finish it."

(Q): Has your opinion of your ability as an artist changed at all since we started this study? If so, how? *(shown their initial Artistic Survey)*

(K.P.): Umm a little bit. I would change my wording. I still think I am pretty good but it's because I work on art everyday still but now I work more on my techniques more. Like instead of just making stuff I am trying to make specific things.

Closure

(RR): *Thank you so much for taking time to answer these questions so honestly and spending time with me today to help me learn how to better teach you and other art students.*

(Q): Is there anything else you would like to add or say about your experience in art class? Is there anything you'd like to ask me before you go?

(K.P.): Umm, no.

Figure F7: K.P. Semi-Structured Individual Interview Transcription 4

	Planning		Growth Mindset
	Goal Setting		Ownership
	Collaboration		Instructional Methodology
	Motivation		Student Challenges
	Artistic Disposition		Student Strategies

Figure F8: Data Color-Code Key

Individual Interview Thematic Chart

Theme	Participant Response
Planning	**(V.G.):** It depends because it's easy if it's like….well, sometimes it comes easy but sometimes it doesn't. Sometimes I feel inspired but sometimes I have to think about it more. - **(L.L.):** It's usually easy to come up with ideas, and what I like to do is get a piece of paper and like list all the things in my head so I don't forget them and then pick my favorite idea. - **(T.R.):** Oh, so, sometimes I just, you can look up just artwork stuff and I can see something and then say oooh maybe I want to do something similar to that and so I would just start, like sketch out real fast, and then try sketching it out with different materials and then that would give me an idea of something I could do similar to it. Like say if it was like Pokémon… and maybe I could take that idea and the idea of a cat and try to combine it and sketch out the face of it together. Like find images on the internet or YouTube. - **(C.F.):** Like some days it's easy and some days it's really hard. If I am in a room that has a lot of stuff that I can draw I can easily come up with an idea, but if it's a plain room and really boring it is probably harder to come up with an idea. - **(D.M.):** Maybe, probably just like drawing, planning out what I'm gonna do because sometimes if I don't know what I'm doing, and I just have a blank piece of paper I kind of do whatever and I don't have a plan. So, it would be like hard, I don't know. It's easier to come up with something if you already have something that you are good at or that you already enjoy from past art, but then, if you want to start something new it's just like, I don't know where to begin. Like step 1 is the hardest part, then I can kind of go from there.
Goal Setting	**(V.G.):** I like my own goals because then I feel like I am not under pressure. I don't like working under timers. - **(L.L.):** Umm, kind of in the middle because some people do work at their own paces, but then sometimes it can boost someone and make them work a

	little harder to meet the teacher's expectations and maybe there will be less talking. - **(T.R.):** I think like when I choose my goals I can decide it sets like a higher standard for me. So like, I should like…well my artwork right now its s huge thing so I try to do one section at a time and, like one of my goals would be like the left eye, that was one of my goals for the week and it helps me to set goals for just that one area and then move on to the next area next week. **(T.R.):** Umm, I think probably setting the goals helps me do that the best because it tells me like here's what I need to do and helps me think about what I need to do and makes me feel like I can have no distractions. - **(C.F.):** Probably like when I decide my goal because when someone else tells me what I have to do I kind of feel rushed and like I want to get it done in a short amount of time, but I can't do it well. - **(D.M.):** Well, kind of like both, because if I do just a completely random goal I feel like I won't get that far kind of, but if you're like, "you should have like the sketch done," or something, I can be like, "I want to have the sketch done and then maybe something else," I can like base it off of that kind of but what I am working on too. - **(K.P.):** Umm, when you tell us what has to be done. I like to know what has to be completed because it makes me have to work faster your artwork might not get better just by concentrating more, sometimes you have to just get it done that day.
Collaboration	**(L.L.):** I don't really mind. I check what they say but some things I ignore because I either already have that or I don't like their suggestion. - **(C.F.):** Umm, well, I would probably follow their suggestions because I like to make my stuff good. - **(D.M.):** Well sometimes I am a little like, I don't want to say like mad, because I am never like angry at them, but sometimes I am a little upset because like if I'm proud of something and then someone says, "oh you could have done that, or added that," I am a little upset but then most times I kind of know I could have improved on that but then when someone says it I'm like "yeah, I know." But, like if you say it I know it's to help me, and I guess it's the same with someone next to me, but most times no one next to me is working on same thing I am. When you say it, I know it's going to make it better. But then, when someone else says it I can either like tell because I am not doing the best on something so I am like, "yeah I kinda could do that," but then other times if I'm already working on one thing and I just want to get it finished and be done and someone give me suggestions it is kind of like too much and could ruin it. I trust you more to help me, I trust

	what they are saying but sometimes I feel like it can be just too much. It depends. With you it always makes it better.
Motivation	**(V.G.):** Ummmm, usually like my life. Like life experiences. **(V.G.):** No. Sometimes I just do stuff because it's what we're doing. But if something really really inspires me or if it is for an important person or something it makes me want to work harder a bit. I like to be able to choose things that inspire me or have a reason to make stuff. Like with the orange I didn't really care about the orange but I wanted to make it look real, so I guess that was my inspiration for that. - **(L.L.):** My mind is just my inspiration. - **(C.F.):** Umm, probably like looking around the room and trying to see stuff that I could try to recreate. - **(C.F.):**Yeah, because I like kind of being better than people I guess. And, I don't know… I like just working hard and then seeing the outcome. - **(D.M.):** I mean, not all the time, because sometimes it's just like I don't really want to do the project. Like when we were just like sketching the pears I was just kind of like doling it quick so I could get to like doing the materials, so I don't always try my hardest because sometimes I don't really want to like do that thing. But when I am interested in a topic, I will try harder and like put more effort into it. **(D.M.):** Kind of like 3-dimensional stuff. I feel like more like fantasy drawing. When you're trying to do something that is real it can get a little bit boring because you're trying to make it look like something but with fantasy there is like there is nothing wrong with what you do.
Artistic Disposition	**(V.G.):** Yes. (Proud) **(V.G.):** Ummm, not really, well, I think I am getting a bit better at painting. - **(L.L.):** This all looks pretty much the same. I think I am still pretty good at art but my mom and teachers definitely always compliment me. And like, yeah, I still like it to be quiet for me to focus so *that* hasn't changed. - **(T.R.):** Yes. I am proud of it because I feel like I did this, so I feel like it may not be the best but I am proud of it because I can work off of it and I can make better versions. So, my first one may not be good to my standards but I can re-fix it or add another shade or something. - **(C.F.):** Yeah. Because I know I worked hard on it and I spent a lot of time working on it. And, even if it doesn't look that good I still know that I worked hard and it kind of feels good. - **(D.M.):** I'm just trying to think. Most times I am kind of like, that kind of looks bad I guess. That's why I like doing projects with multiple parts. Because like with the fruit, we did the oil pastel and the paint and the chalk pastel and I was like proud of the chalk pastel but the others I like wasn't.

	Cause when we did the portraits and then I looked at other people's portraits I was kind of like, mmm, but like if I had like two I could have more choices. **(D.M.):** I mean, I think I am like good as an artist, but I don't think I'm like amazing. Like I guess I would be half way between good and pretty good instead of just okay. Some things I do I think are pretty good but when I make art I feel like I do more kind of like my own style than trying to make it look realistic or more like kind of I don't know. I also like clay and stuff and pop ups. - **(K.P.):** Yeah. Because I want it to turn out really good and like show my parents that I tried my best. **(K.P.):** Yeah. (Proud) **(K.P.):** Umm a little bit. I would change my wording. I still think I am pretty good but it's because I work on art everyday still but now I work more on my techniques more. Like instead of just making stuff I am trying to make specific things.
Growth Mindset	**(V.G.):** Uh, it makes me feel good because ummm…. It's noticeable and I like it when people tell me what I need to work on because I always want my artwork to look better. - **(L.L.):** Yeah. Thinking I can do better and work harder than what I have done already. - **(T.R.):** Umm, I think the majority of the time I do except maybe when we had our first project this year about our self-portraits, I don't think I tried my hardest on that one, I think it could have come out a little bit better but I felt a little rushed because I missed art because I was sick and I didn't feel like I did my nest work. But I usually want to do my best work, like usually after I make a first copy and I look at it and I see what I need to better on it and if I don't like something and I can do better I just re-do it all, but I keep the first one with me to remind me what I can do better and what I can keep the same. I like to compare it. **(T.R.):** Ummm, a little bit because I feel like I have gotten much stronger with my art. I feel like I've gotten better because at home I even have art stuff surrounding my desk and I try things at home, like the eyes some days, faces, necks, ears, hair, and I try them at home. I look at books and the computer and I do drawing challenges with my friend and then have someone else judge it. - **(C.F.):** Oh, um well, since I answered that I only thought I was okay at art in the beginning I guess it's changed. I feel like I'm now pretty good because I've been doing art for the whole year and I feel like I've improved a lot. And, I guess also I wouldn't answer that art makes me feel stressed or rushed anymore. I guess. But also, like I said here, I still like having a reference to look at, that hasn't changed, and I guess I still think other people think I'm better than I do… they sometimes give me compliments when I don't even think it is that good.

	- **(K.P.):** Ummm, I would feel fine, I would just be like, "oh, I have to work on this area real quick and then I can finish it."
Ownership	**(V.G.):** For me because I am the one who sort of created it, so I know what it means, and I feel like I sort of understand it more than other people. - **(L.L.):** Me. Because it's my artwork and I should be proud of what I did. I like to ask your opinion but more cause like I want to know what to change to help myself, not really just so you say you like it or I did a good job. - **(T.R.):** I think it's more important for me to like my artwork because I created it and other people may not like it but I feel like I like it because I created it, so you should be proud of it because you made something. Like no one else made it for you, you actually created it on your own. So, like you should be proud of what you create. **(C.F.):** Umm probably for you because I don't really care if my art is good because art is just fun for me. I don't know why I care what you think either though because I'm the one who made it. - **(D.M.):** Kind of like for me to like my artwork because I made it so I kind of like don't just want to make it, hand it in, leave, make it, hand it in. I kind of just want to feel proud of it after. Like even in class, when you finish something, even if you don't like it it's like, well I finally finished something and you're like proud of it no matter what because you finished. - **(K.P.):** For me to like my artwork, because like if I concentrate on my own work and I think it's good I'll keep it good and try harder.
Instructional Methodology	**(V.G.):** Uhhhhh, I kind of like doing it on my own because when I do it on my own I can sort of think up my own ways cause sometimes I don't like the way they teach me. **(V.G.):** Ummmm, yeah it helps me sort of construct it in a way, like the basic structure, so that I know what to do. I like to come up with my own ideas but step by step helps me when I am actually making it step by step instructions can be helpful. - **(L.L.):** Step by step because some people will fool around, and they won't actually do the work and it gets distracting for other people. But, I guess for me, personally, I like step by step because then I know if I am doing it correctly or not. I don't want to do *that* wrong and then have to go back and do *this* again or restart the whole project. **(L.L.):** I like freedom more too because other people can't really compare each other, like "I have this and you don't" because they could be doing completely different subjects and there's no real way to interact and compare because it's different. You can also kind of like let your mind does whatever it wants and if your stressed you can let your mind go and do your own thing and let your stress out. I guess I'm kind of in the middle. -

	(T.R.): I more like to start off on a proof draft and like do my own because sometimes when I go step by step I feel like I am really ahead of everybody or I'm really behind everybody so I work at different paces when I work with different materials, so when I do it on my own I can stay on track with everybody because I can still work and finish my artwork probably by the time everybody else is. I don't like to feel rushed. **(T.R.):** I think step by step is good because sometimes, well, compared to like when I was in the younger grades I could actually like know what I was doing but I think when I didn't know something I could understand the steps. But when you don't have the step when you're in kindergarten or something, like, it's probably going to be harder for you because sometimes you might not know what you're doing. - **(C.F.):** I like them both, but I feel like I like it better when we can like do it on our own because if you make a mistake you can always fix it instead of having to do one certain thing. Like if you make a mistake it could be harder to fix it if there was a right way. **(C.F.):** For step by step if someone else is doing the same thing you don't feel like they are really that much better than you. - **(D.M.):** Well, I kind of like, it depends because when you tell us what to do it's helpful and we can just kind of like do it easily and like kind of maybe….well, I don't know. I feel like my reasoning is kind of backwards because I feel like we can have more fun when it's step by step because we just like do the art and we know what we're doing, but then also, if we don't do step by step, if you like the thing that we're doing it would be easier, but then some people that don't like know what they're doing its kind of harder. You always help us with the materials so that's not a problem but sometimes I think it's harder to actually create it, like the idea of it. - **(K.P.):** A little bit of both, like sometimes I could do it on my own or like a little bit step by step because like it helps me get better and helps me concentrate on one thing and what I am doing. I get my work done quickly and after I get done I can move on to something else or keep going back and fixing things but I know what to do and I know when I'm done.
Student Challenges	**(V.G.):** Sometimes I have trouble thinking up an idea so when I start doing the ideas I do though, it just sometimes comes out bad and I think I need to do something different. It just doesn't come out the way I want it to… so I sort of just start over. Sometimes it could be a similar idea but different. - **(L.L.):** If people got a little more quiet. I kind of like silence. **(L.L.):** Somewhat, like I feel like I can work harder but sometimes I feel like I don't have a lot of time. Because sometimes we have extended art time but I don't always get to go because I'm in Mrs. Bryant's class, not Mrs. Meyer's class like everyone else. - **(T.R.):** Sometimes it's easy but sometimes it's hard, like when I'm stressed out I can't come up with ideas. But after I relax and stuff that's probably

	how I get more ideas. Maybe also like the noise level. Sometimes like with our class, when I am like trying to come up with an idea, like from over there especially, I hear like a lot of noise compared to more over there which is less noise and then at my table where I sit with the painters we barely talk so it's like different noise levels coming at me from different directions and I can't concentrate. - **(C.F.):** Probably figuring out how to start or making up an idea I guess. - **(D.M.):** I feel like it's kind of hard for me to come up with ideas. But I kind of feel like if we're using a picture, I try to base it off of that, but as we go I kind of change it to make it better or more what I was thinking. Coming up with ideas randomly is like, I don't know, I'm not good at thinking of ideas. - **(K.P.):** Moving my mind off of what we are working on and onto something else. **(K.P.):** If we had like more time in art.
Student Strategies	**(V.G.):** Ummm, sometimes I just change specific details and sometimes I'll change it entirely. **(V.G.):** I don't know. Like maybe if I knew how much time I had left or maybe how long the whole class was so I can decide for 5 mins. I should do this and then for another 5 mins. I should do this. **(V.G.):** Ummm, I just know when I am done when it looks like just like an artwork. Well, sometimes I feel like all I need to do is go back because I one time created a piece of artwork in 3rd grade and then I looked at it in 4th grade and I realized that I should go back and add more things. You just have to wait and look at it again later. - **(L.L.):** If I don't have silence, I guess ear buds or music so if people try to talk to you, you can't really hear them and you can mind your own business in your own little world. And music can also help inspire you for certain ideas. **(L.L.):** I like to look at pictures and then kind of do it, so taking the picture that I am basing my artwork off of and saying, "this is different than mine, I need to fix this." I also don't know when I am really done. - **(T.R.):** Uh, something that helps me come up with an idea is first like try out different materials to see the colors and different textures of it because sometimes different materials have different textures. Like at my house I use felt, and I tried to make a stuffed animal before and it didn't come out good (laughs) but um I've tried many things with different materials so, when like I start off with a new material and then I try to draw just like a random picture, I would draw a line and feel the texture of it. Like see if it would come off on my fingers. And, just to see how permanent it would be. Like experiment first. **(T.R.):** So, what I do it like fidget a lot with this thing I bring in my book bag and it calms me down and helps me focus more than with without it

	because it takes like my mind off that and helps me focus on what I am actually doing. **(T.R.):** Something that helps me know when I am finished is at least like when I have everything that's like on the picture that I am referencing from, when I have everything that's on there, it may not be the exact same thing, but at least I try to make it very close to it. - **(C.F.):** Maybe like thinking of stuff that you and like trying to change it and make it more creative and drawing it. **(C.F.):** Umm, probably like if I could control people I would probably make them a bit quieter because sometimes it gets loud. But since I can't control people… I don't know. Probably if someone near me likes to talk a lot and keeps interrupting me while I'm working, maybe I could put up a blocker or folder to help me concentrate. **(C.F.):** Like I probably like look at what I am trying to draw and see if it kind of matches it and looks similar. And also, if there's spot that aren't really colored in and I think I could add more to them I'd probably go back and try to add some more. - **(D.M.):** Ummm, I feel like when it's open, and we're just doing whatever, we're still able to do the same thing. Like you make it so everyone can do something different and we're using different materials but it's still like the same thing. But, if it were just like, do whatever, like more open, I mean I would kind of like it. I like step by step but I also like just doing whatever. For some things step by step is better but for some things it's just easier to do it on your own. If it's step by step I don't have to struggle with it, because you tell us how to do those things, so it's kind of easier. **(D.M.):** I guess kind of by material. Like if I pick a material that is good with blending I might try to pick something to make that has a lot of colors. Like pick my materials and then come up with an idea. Unless I already have an idea, then I would pick a material that would look good. **(D.M.):** If it's just like anything, I kind of just look around the room, like the rainbows over there look kind of cool so maybe I'd do something with a bunch of color. It's like if I see something that day that I thought looked cool I'll maybe just do that. - **(K.P.):** Ummm, blending with oil pastels, cause when I start blending and using a technique I come up other ideas I could blend with. - **(K.P.):** Like I take a picture and I put them side by side like what you do, and then I look in certain areas and if I'm like missing something I'll be like "okay I have to add this here real quick."

Figure F9: Thematic Coding of Participant Responses to Individual Interviews

APPENDIX G: Student Participant V.G. Project Artifacts

Figure G1a: V.G. Materials Exploration- Oil Pastel Orange

Figure G1b: V.G. Materials Exploration- Tempera Paint Orange

Figure G1c: V.G. Materials Exploration- Colored Pencil Orange

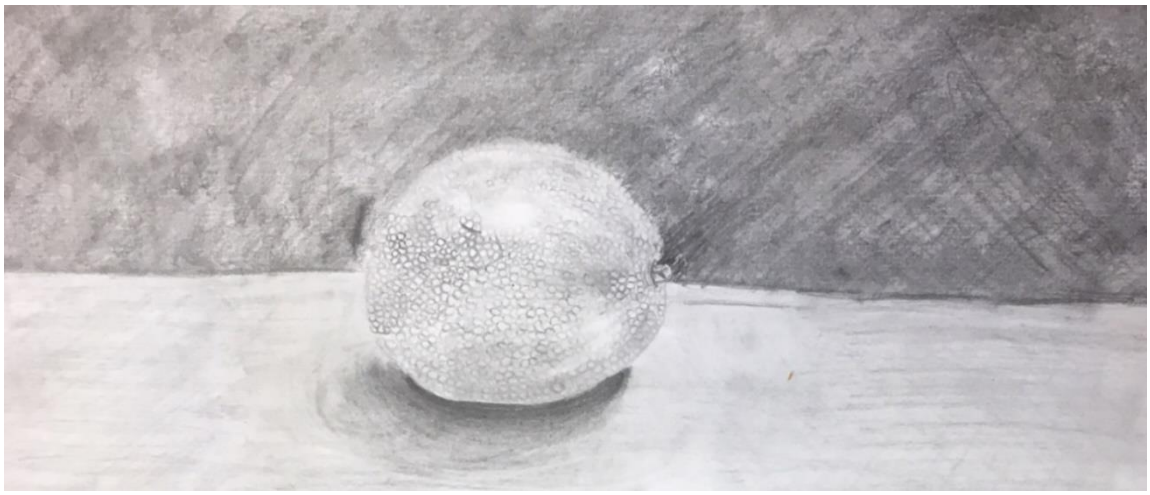
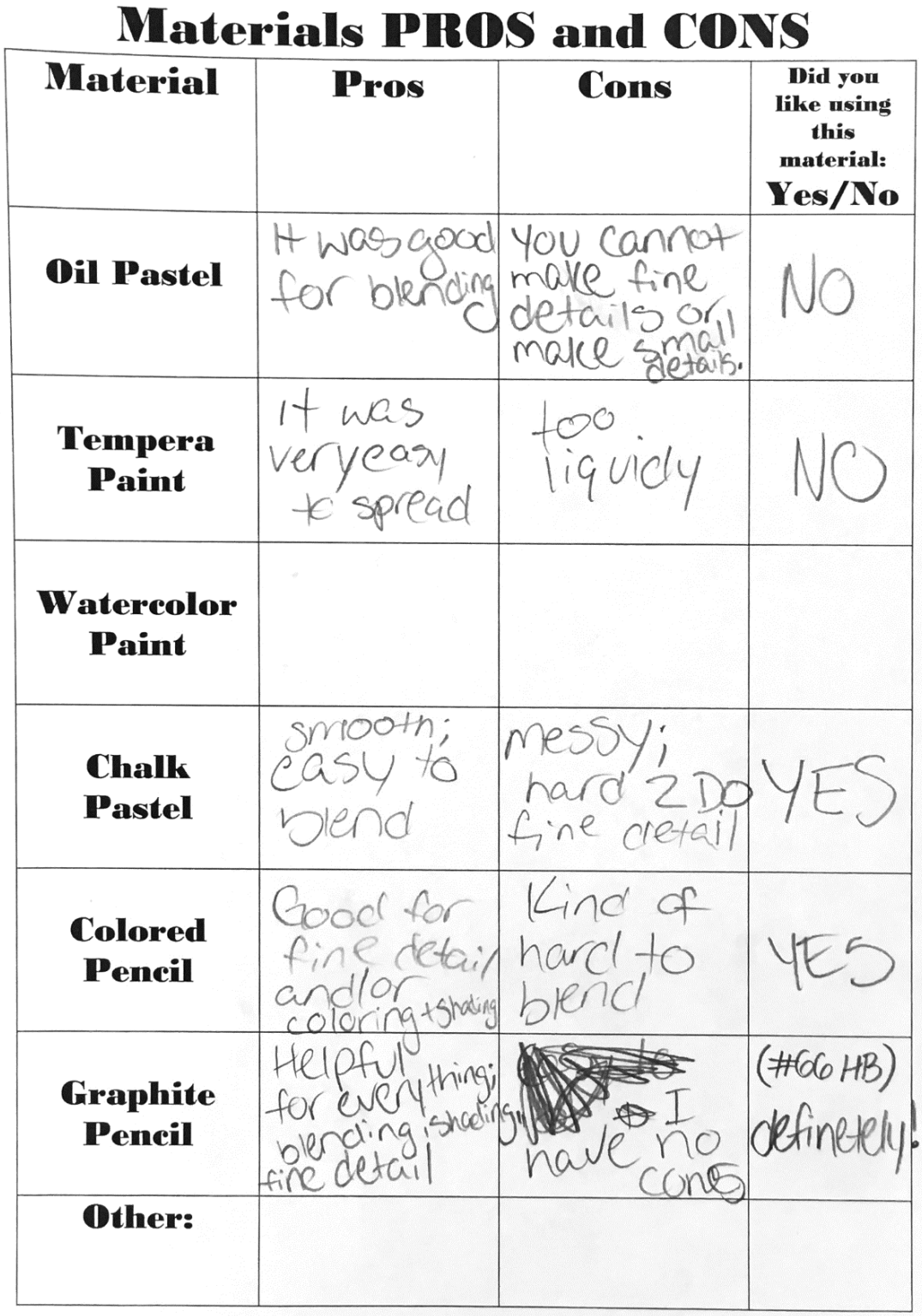


Figure G1d: V.G. Materials Exploration- Graphite Pencil Orange

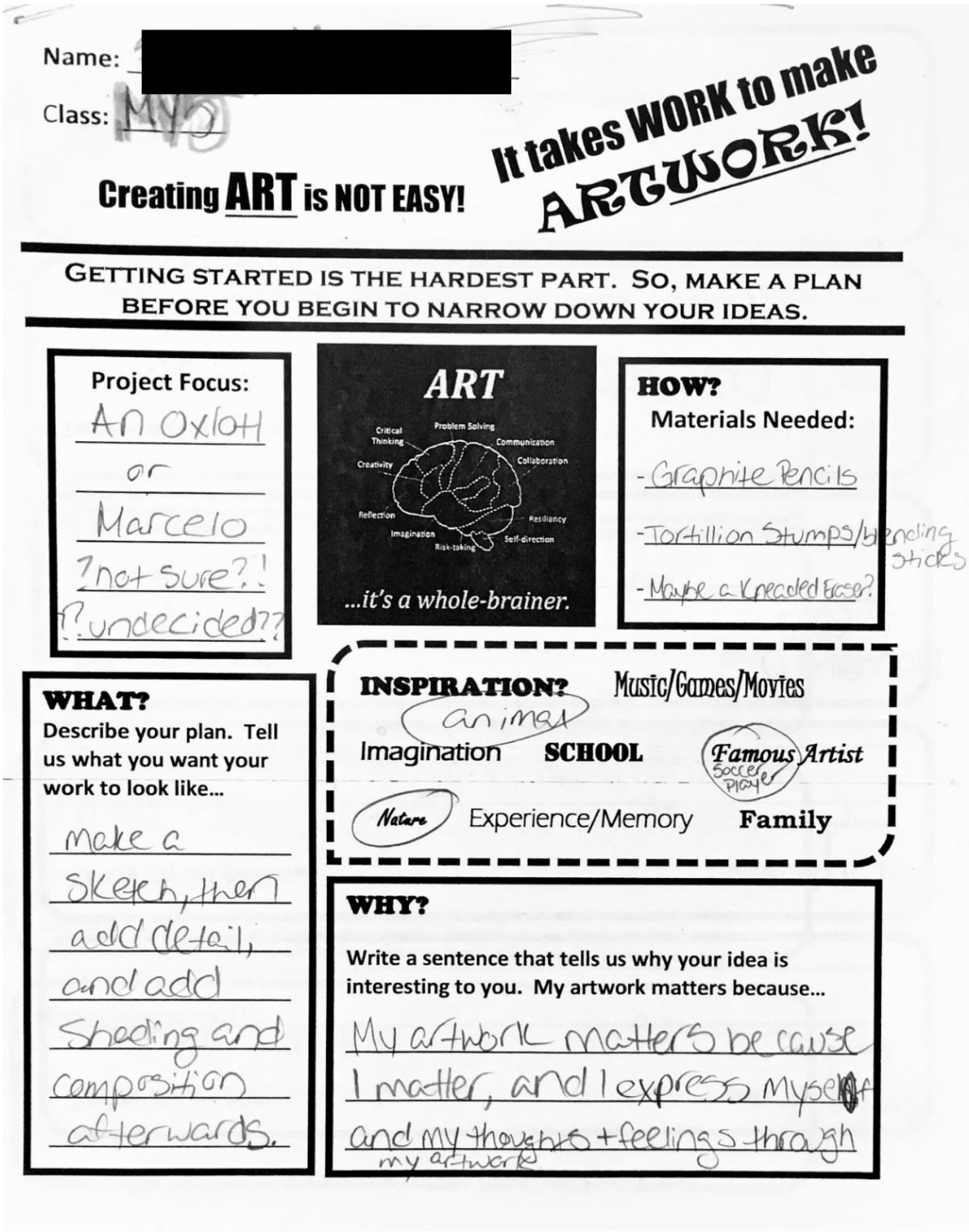
Figure G1e: V.G. Materials Exploration- Chalk Pastel Orange



Materials PROS and CONS

Material	Pros	Cons	Did you like using this material: Yes/No
Oil Pastel	It was good for blending	You cannot make fine details or make small details.	NO
Tempera Paint	It was very easy to spread	too liquidy	NO
Watercolor Paint			
Chalk Pastel	smooth; easy to blend	messy; hard 2 Do fine detail	YES
Colored Pencil	Good for fine detail and/or coloring + shading	Kind of hard to blend	YES
Graphite Pencil	Helpful for everything; blending, shading fine detail	I have no cons	(#66 HB) definetely!
Other:			

Figure G2: V.G. Materials Pros and Cons



Name: [redacted]

Class: MYS

Creating ART is NOT EASY!

It takes WORK to make ARTWORK!

GETTING STARTED IS THE HARDEST PART. SO, MAKE A PLAN BEFORE YOU BEGIN TO NARROW DOWN YOUR IDEAS.

Project Focus:

An Oxloth

or

Marcelo

?not sure?!

?undecided??

ART

Critical Thinking, Problem Solving, Communication, Collaboration, Creativity, Reflection, Resiliancy, Imagination, Self-direction, Risk-taking

...it's a whole-brainer.

HOW?

Materials Needed:

- Graphite Pencils
- Tortillion Stumps/blending sticks
- Maybe a Kneaded Eraser?

WHAT?

Describe your plan. Tell us what you want your work to look like...

make a sketch, then add detail, and add shading and composition afterwards.

INSPIRATION? Music/Games/Movies

animal

Imagination **SCHOOL** **Famous Artist** Soccer Player

Nature Experience/Memory **Family**

WHY?

Write a sentence that tells us why your idea is interesting to you. My artwork matters because...

My artwork matters because I matter, and I express myself and my thoughts + feelings through my artwork

Figure G3: V.G. Eye-dentity Project Plan

DAILY PROJECT GOALS

Today my art goal is.... Date: 04·04·2019

to finish structure

Today my art goal is.... Date: 04·11·2019

Get some of the darker shading done; add more composition.

Today my art goal is.... Date: 04·18·2019 (5B)

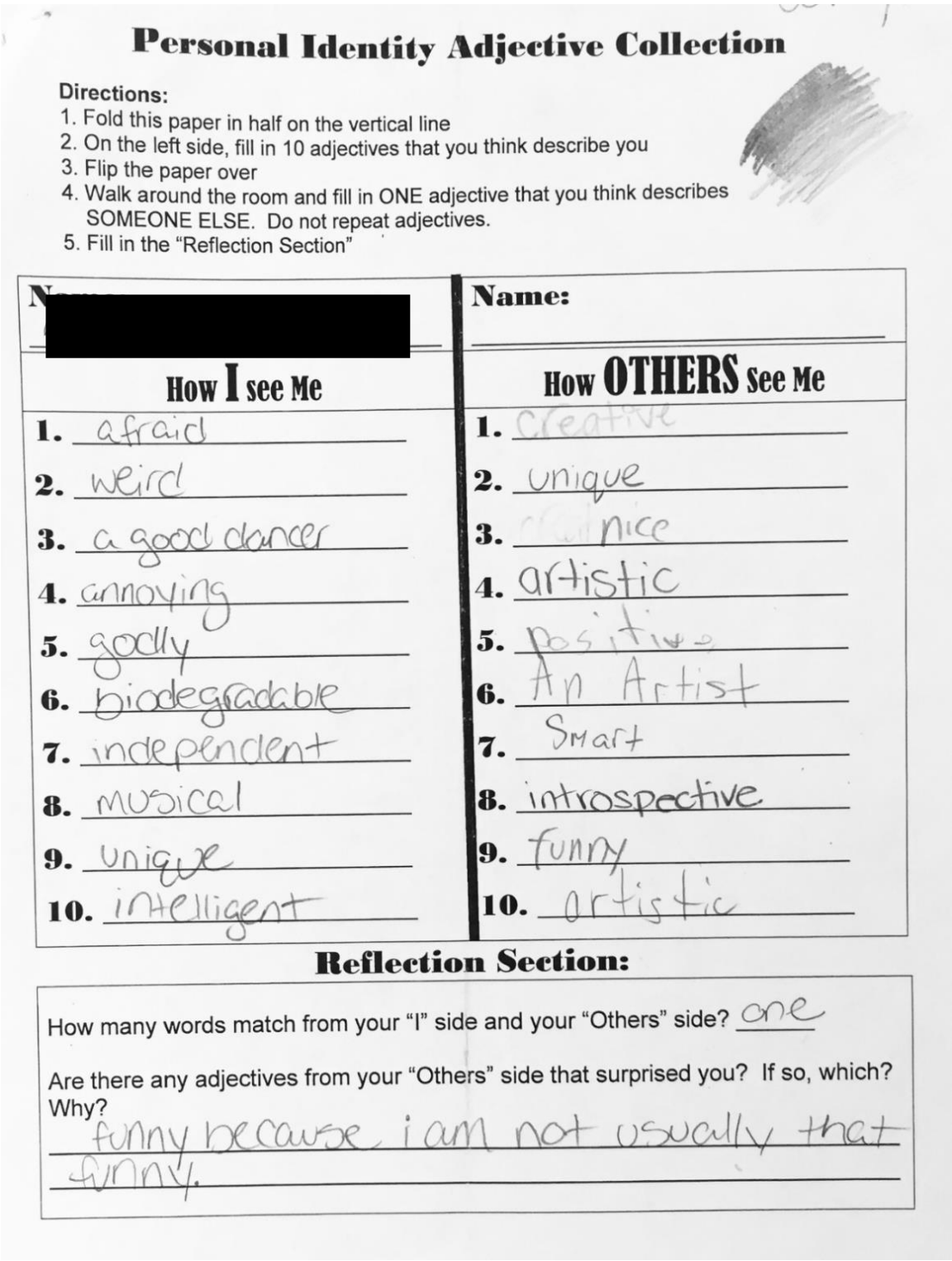
shading/eyebrow

Today my art goal is.... Date: 04·30·2019

eyebrow [Finish], darken some parts

Today my art goal is.... Date: _____

Figure G4: V.G. Eye-dentity Project Goals



Personal Identity Adjective Collection

Directions:
1. Fold this paper in half on the vertical line
2. On the left side, fill in 10 adjectives that you think describe you
3. Flip the paper over
4. Walk around the room and fill in ONE adjective that you think describes SOMEONE ELSE. Do not repeat adjectives.
5. Fill in the "Reflection Section"

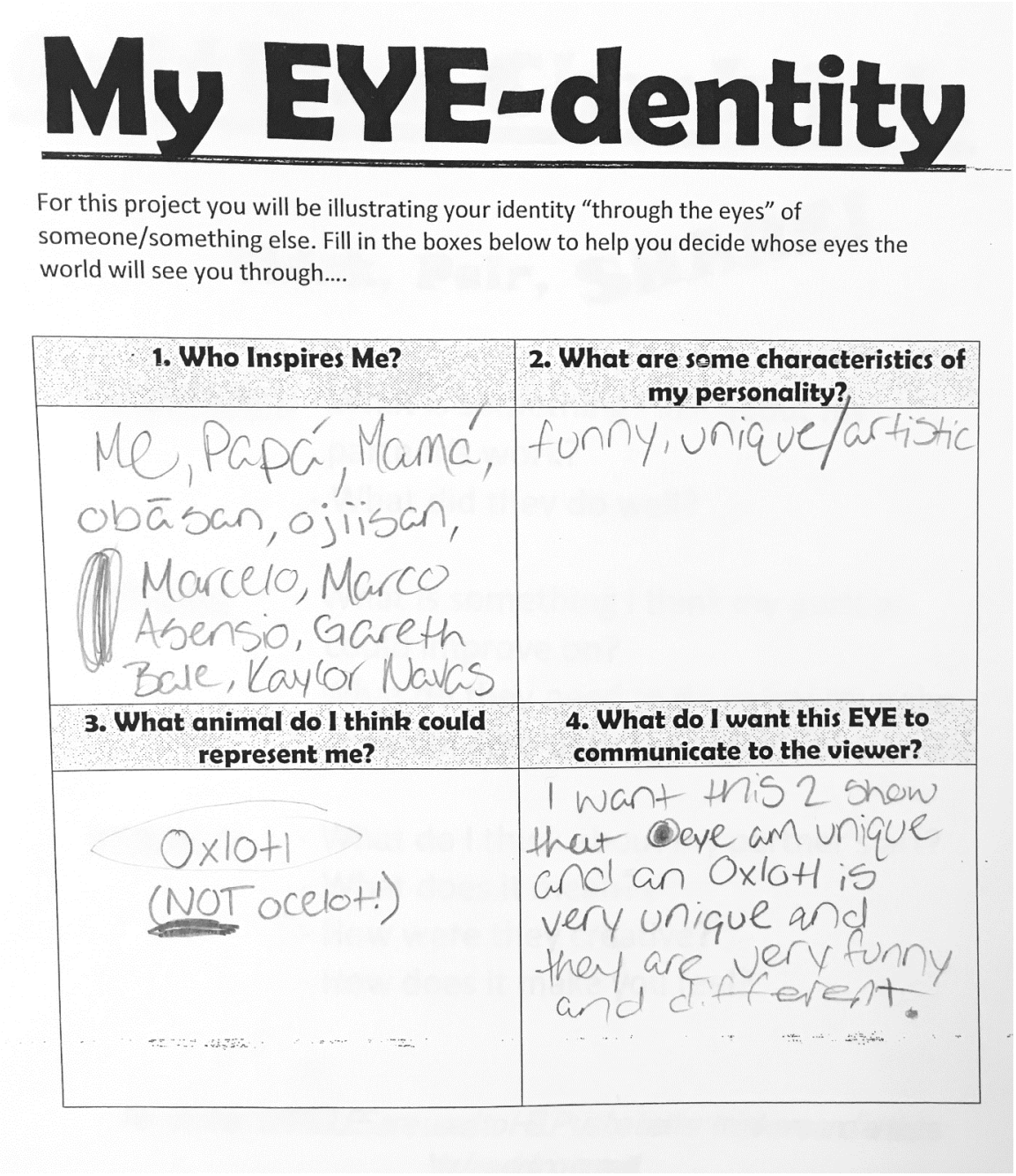
[redacted]	Name:
How I see Me	**How OTHERS See Me**
1. afraid	1. creative
2. weird	2. unique
3. a good dancer	3. nice
4. annoying	4. artistic
5. godly	5. positive
6. biodegradable	6. An Artist
7. independent	7. Smart
8. musical	8. introspective
9. unique	9. funny
10. intelligent	10. artistic

Reflection Section:

How many words match from your "I" side and your "Others" side? one

Are there any adjectives from your "Others" side that surprised you? If so, which? Why?
funny because i am not usually that funny.

Figure G5: V.G. Personal Identity Adjective Collection

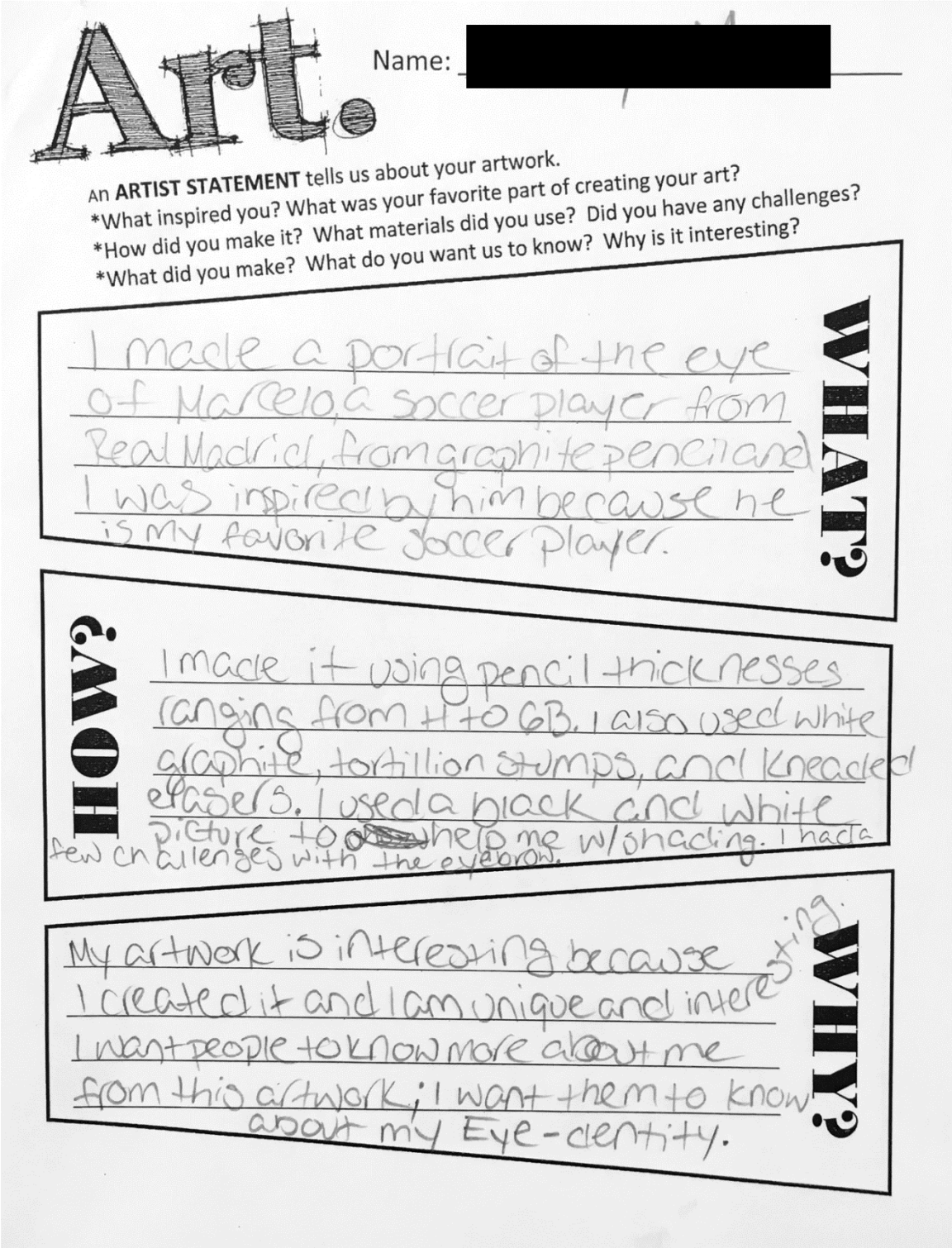


My EYE-dentity

For this project you will be illustrating your identity "through the eyes" of someone/something else. Fill in the boxes below to help you decide whose eyes the world will see you through....

1. Who Inspires Me?	2. What are some characteristics of my personality?
Me, Papá, Mamá, obāsan, ojiisan, Marcelo, Marco Asensio, Gareth Bale, Kaylor Navas	funny, unique/artistic
3. What animal do I think could represent me?	**4. What do I want this EYE to communicate to the viewer?**
Oxlotl (NOT ocelot!)	I want this 2 show that eye am unique and an Oxlotl is very unique and they are very funny and different.

Figure G6: V.G. My Eye-dentity Brainstorming Sheet



Art. Name: [redacted]

An **ARTIST STATEMENT** tells us about your artwork.
*What inspired you? What was your favorite part of creating your art?
*How did you make it? What materials did you use? Did you have any challenges?
*What did you make? What do you want us to know? Why is it interesting?

WHAT?

I made a portrait of the eye of Marcelo, a soccer player from Real Madrid, from graphite pencil and I was inspired by him because he is my favorite soccer player.

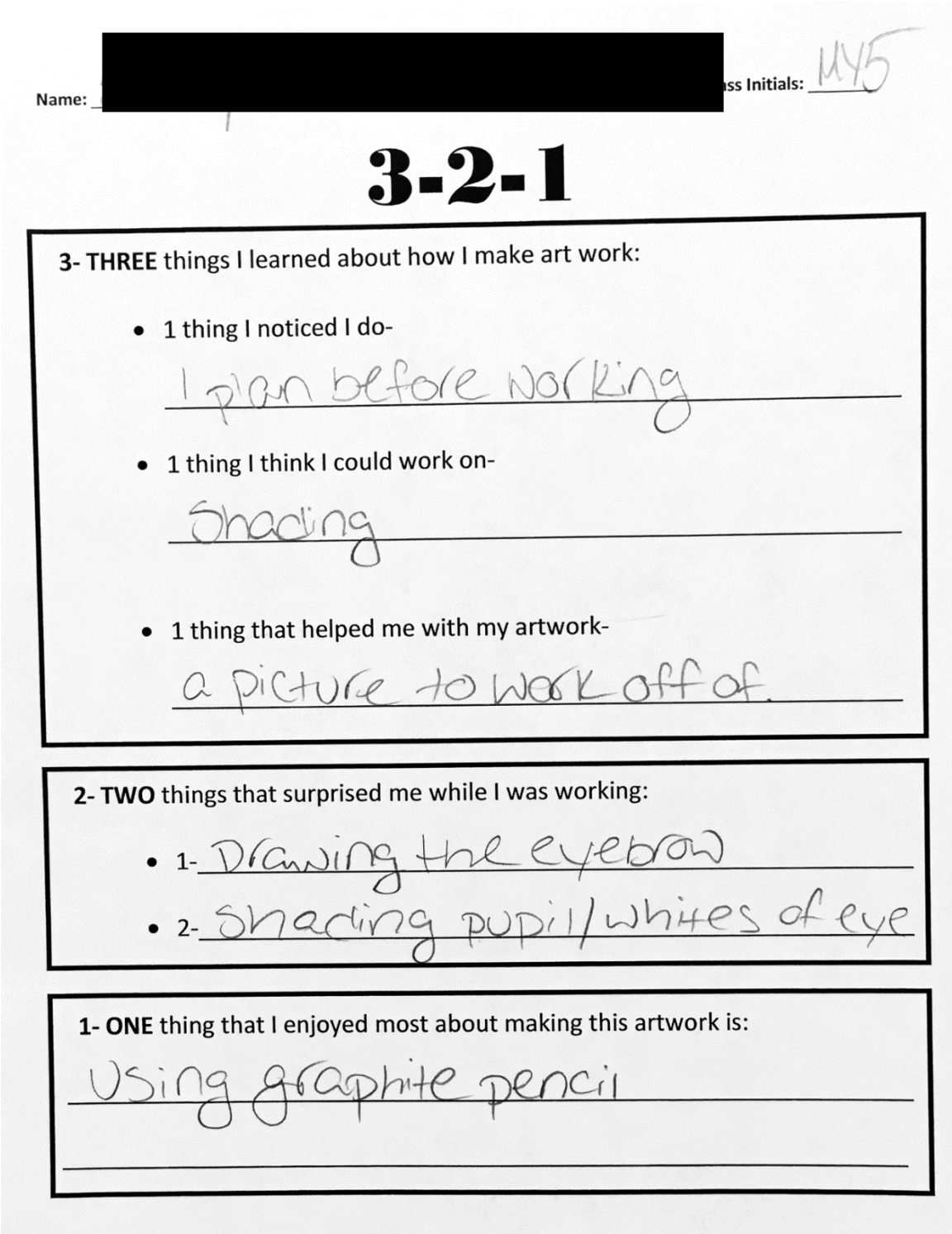
HOW?

I made it using pencil thicknesses ranging from H to 6B. I also used white graphite, tortillion stumps, and kneaded erasers. I used a black and white picture to help me w/ shading. I had a few challenges with the eyebrow.

WHY?

My artwork is interesting because I created it and I am unique and interesting. I want people to know more about me from this artwork; I want them to know about my Eye-dentity.

Figure G7: V.G. Eye-dentity Project Artist Statement



Name: [redacted] ss Initials: MY5

3-2-1

3- THREE things I learned about how I make art work:

- 1 thing I noticed I do-
  I plan before working
- 1 thing I think I could work on-
  Shading
- 1 thing that helped me with my artwork-
  a picture to work off of.

2- TWO things that surprised me while I was working:

- 1- Drawing the eyebrow
- 2- Shading pupil/whites of eye

1- ONE thing that I enjoyed most about making this artwork is:

Using graphite pencil

Figure G8: V.G. 3-2-1 Assessment

Figure G9a: V.G. Eye-dentity Project Process Beginning Stage

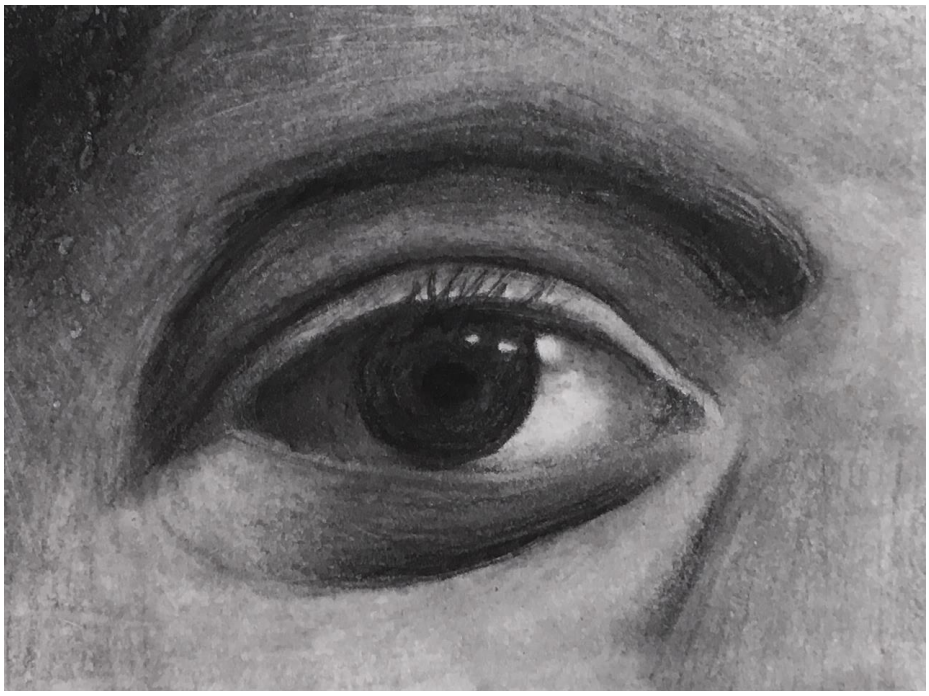


Figure G9b: V.G. Eye-dentity Project Process Middle Stage

Figure G9c: V.G. Eye-dentity Project Process Completed

Art Project Rubric

Student Name: V.G. **Class Initials: My5**

Criteria	Master/ Professional 4	Journeyman/ Semi-Pro 3	Apprentice/ Varsity 2	Novice/ Beginner 1	Score
CRAFTSMANSHIP & ART MAKING	➢ Student used materials with great care and proper technique. ➢ Artwork is created skillfully with attention to detail and composition.	➢ Student used materials well but lacked some technique. ➢ Artwork is created with attention to detail and composition but lacks finishing touches.	➢ Student attempted to use materials but struggled with technique. ➢ Artwork is created with little attention to detail or composition.	➢ Student used materials carelessly or inappropriately. ➢ Artwork is created with no attempt at details or composition.	4
WORK ETHIC & TIME MANAGEMENT	➢ Student completed project within the allotted timeframe. ➢ Student is self-motivated and self-starting	➢ Student completed project within the allotted timeframe. ➢ Student needed some reminders to begin work and stay on task.	➢ Project is incomplete but shows evidence of effort. ➢ Student needed frequent reminders to begin work and stay on task.	➢ Project is incomplete and shows little evidence of effort. ➢ Student needed constant reminders to begin work and stay on task.	4
ATTITUDE & RESPONSIBILITY	➢ Student is interested and engaged in class ➢ Student consistently cared for materials and workspace.	➢ Student worked respectfully and responsibly ➢ Student mostly cared for materials and workspace.	➢ Student attitude was inconsistent or indifferent. ➢ Student had difficulty caring for materials and workspace.	➢ Student was disruptive, negative, and showed a poor attitude. ➢ Student did not take care of materials or workspace.	4
REFLECTION & EDITING	➢ Student made outstanding effort to reflect on their work and make improvements.	➢ Student made some effort to reflect on their work and make improvements.	➢ Student made minimal effort to reflect on their work and make improvements.	➢ Student showed no attempt to reflect or make any changes or improvements	4
SHARING & COLLABORATION	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully with some clarification.	➢ Student struggles to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is unable to unwilling to communicate clearly and respectfully about their artwork.	4
				Total Score:	**20**

Figure G10: V.G. Eye-dentity Project Rubric

APPENDIX H: Student Participant L.L. Project Artifacts

Figure H1c: L.L. Materials Exploration- Colored Pencil Pear

Figure H1b: L.L. Materials Exploration- Tempera Paint Pear

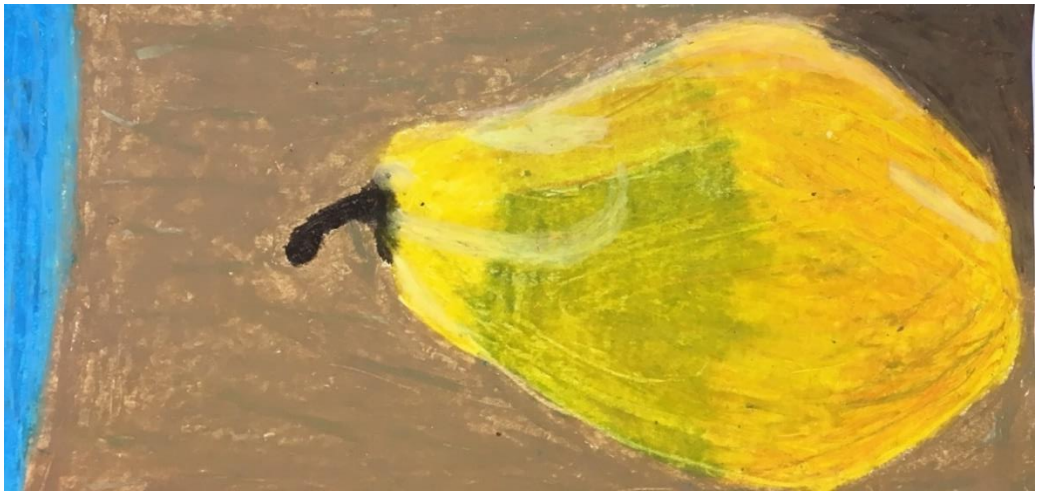
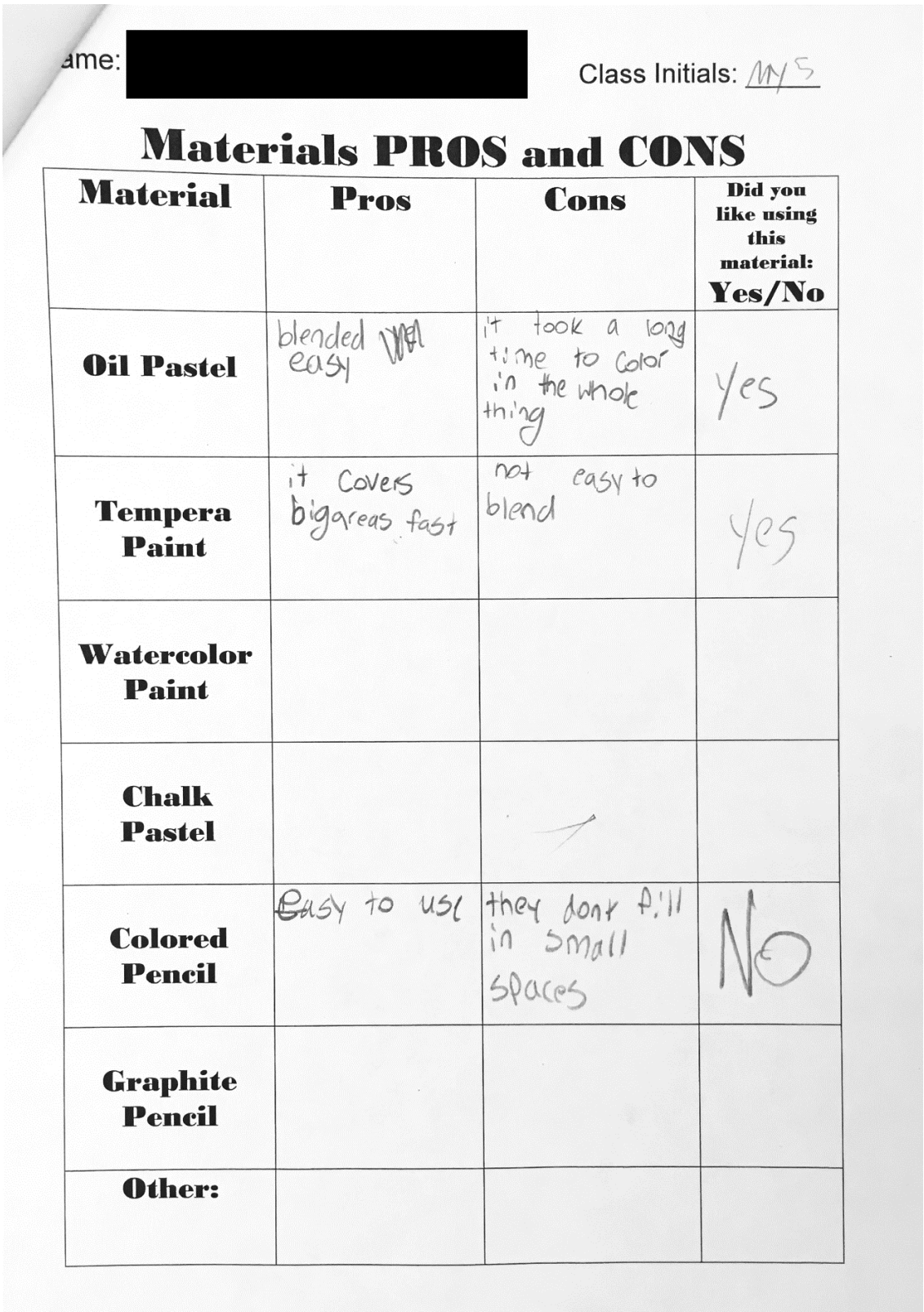


Figure H1a: L.L. Materials Exploration- Oil Pastel Pear

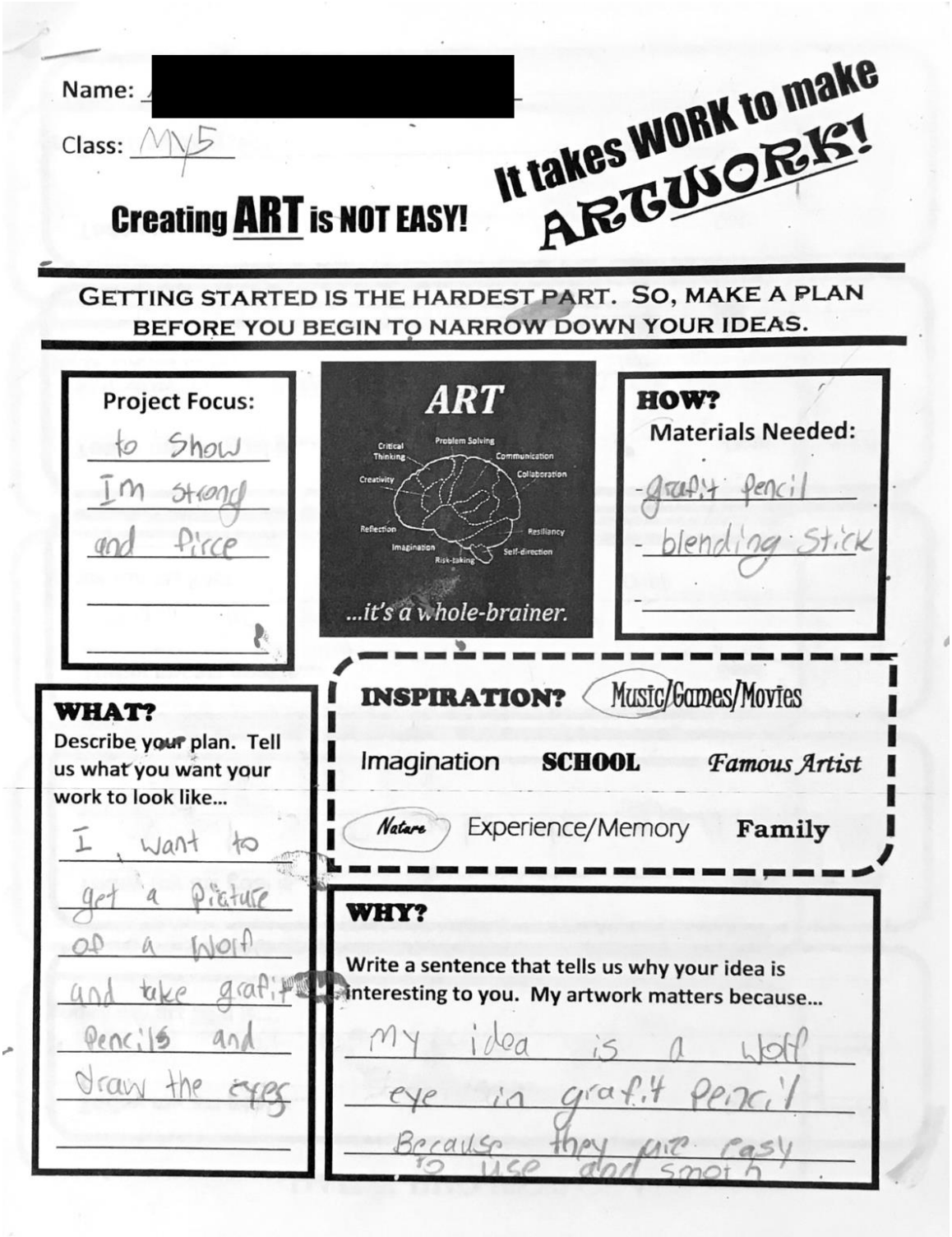


ame: [redacted] Class Initials: MS

Materials PROS and CONS

Material	Pros	Cons	Did you like using this material: Yes/No
Oil Pastel	blended easy	it took a long time to color in the whole thing	yes
Tempera Paint	it covers bigareas fast	not easy to blend	yes
Watercolor Paint			
Chalk Pastel			
Colored Pencil	Easy to use	they dont fill in small spaces	No
Graphite Pencil			
Other:			

Figure H2: L.L. Materials Pros and Cons



Name: [redacted]

Class: My5

Creating ART is NOT EASY!

It takes WORK to make ARTWORK!

GETTING STARTED IS THE HARDEST PART. SO, MAKE A PLAN BEFORE YOU BEGIN TO NARROW DOWN YOUR IDEAS.

Project Focus:
to Show Im strong and fircе

ART

...it's a whole-brainer.

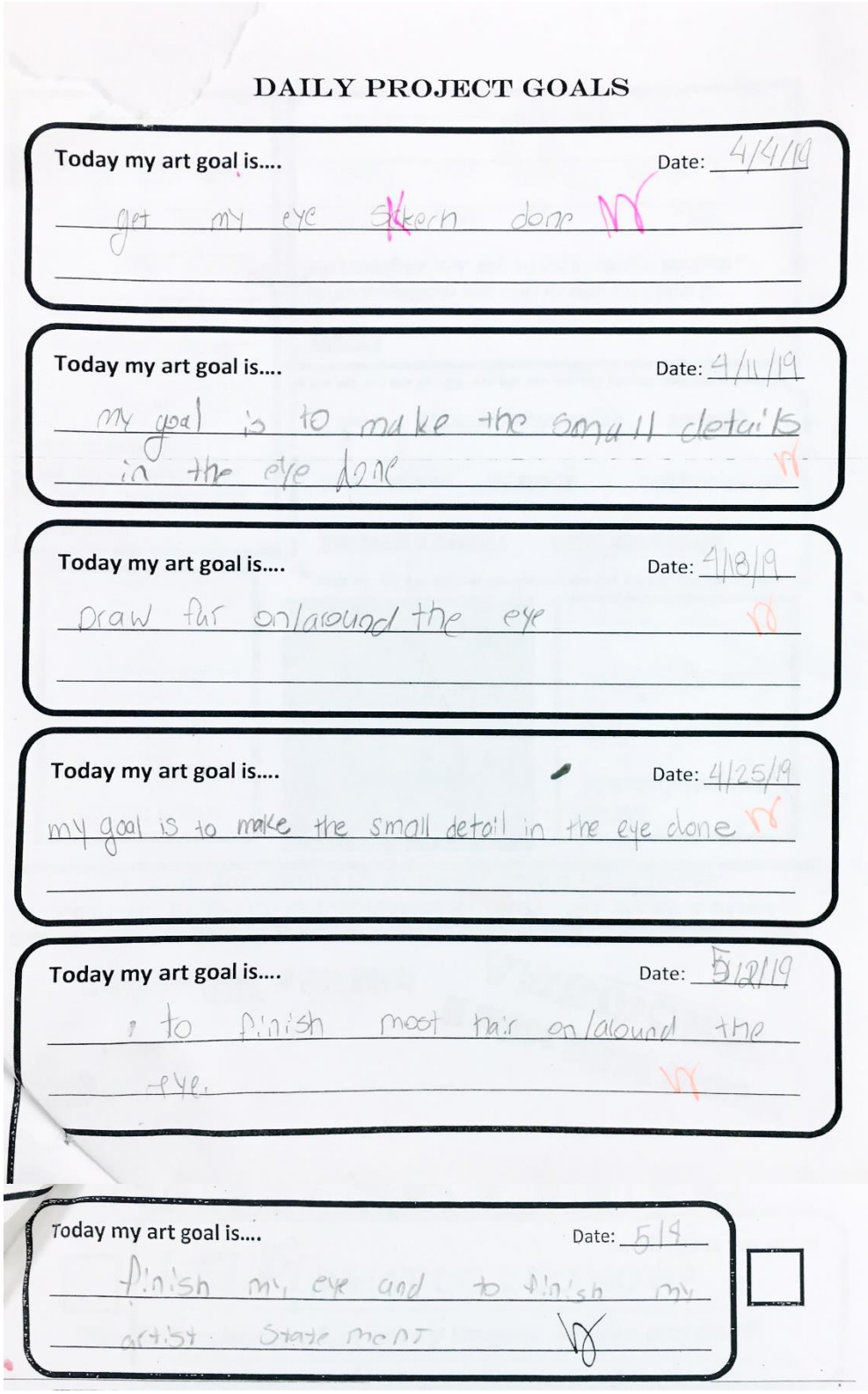
HOW?
Materials Needed:
- grafit pencil
- blending stick
-

WHAT?
Describe your plan. Tell us what you want your work to look like...
I want to get a picture of a wolf and take grafit pencils and draw the eyes

INSPIRATION? Music/Games/Movies
Imagination **SCHOOL** *Famous Artist*
Nature Experience/Memory **Family**

WHY?
Write a sentence that tells us why your idea is interesting to you. My artwork matters because...
my idea is a wolf eye in grafit pencil Because they are easy to use and smoth

Figure H3: L.L. Eye-dentity Project Plan



DAILY PROJECT GOALS

Today my art goal is.... Date: 4/4/19

get my eye Skern done

Today my art goal is.... Date: 4/11/19

my goal is to make the small details in the eye done

Today my art goal is.... Date: 4/18/19

draw fur on/around the eye

Today my art goal is.... Date: 4/25/19

my goal is to make the small detail in the eye done

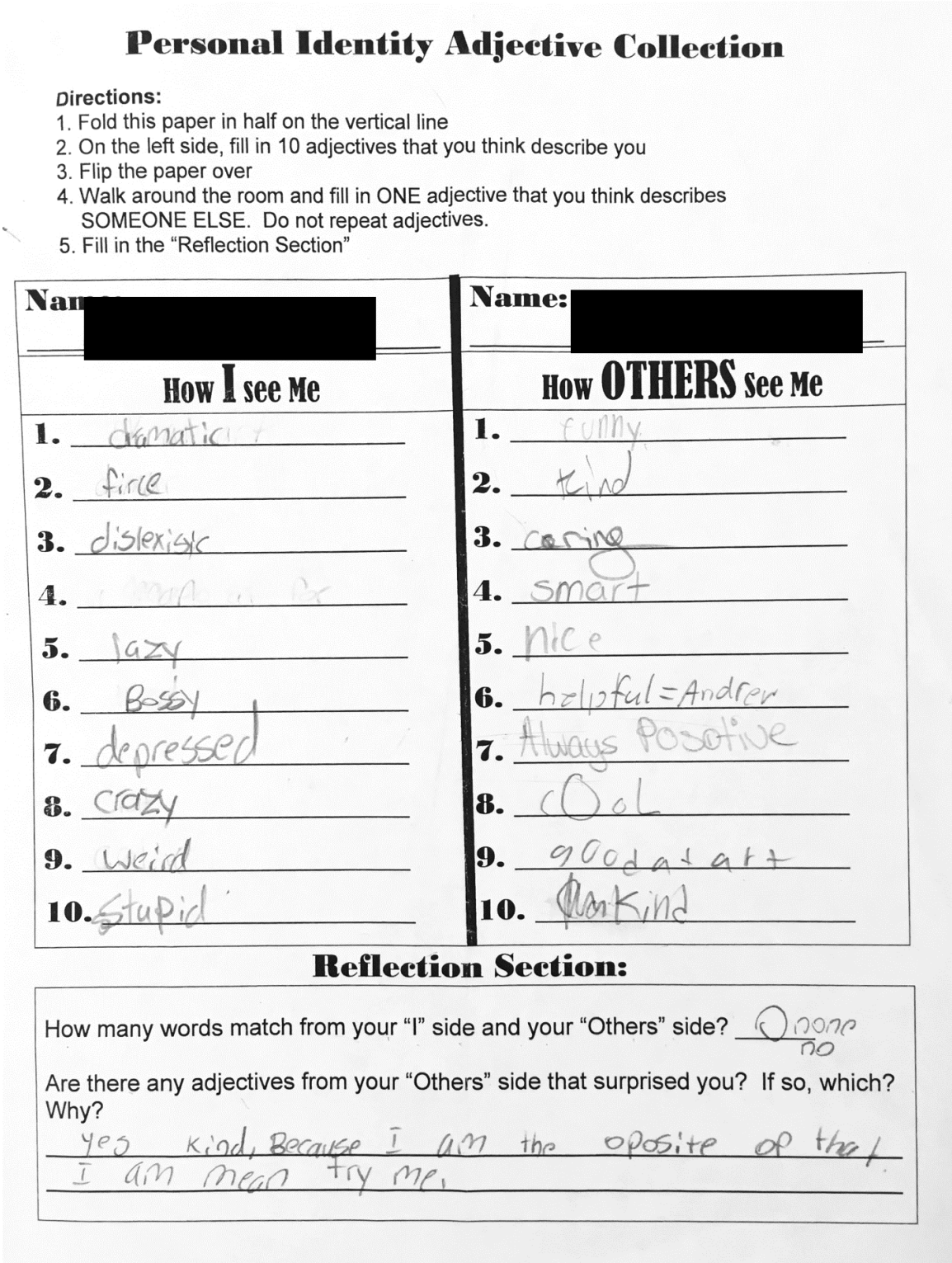
Today my art goal is.... Date: 5/2/19

to finish most hair on/around the eye.

Today my art goal is.... Date: 5/9

finish my eye and to finish my artist State ment

Figure H4: L.L. Eye-dentity Project Goals



Personal Identity Adjective Collection

Directions:
1. Fold this paper in half on the vertical line
2. On the left side, fill in 10 adjectives that you think describe you
3. Flip the paper over
4. Walk around the room and fill in ONE adjective that you think describes SOMEONE ELSE. Do not repeat adjectives.
5. Fill in the "Reflection Section"

Nam[redacted]	Name: [redacted]
How I see Me	**How OTHERS See Me**
1. dramatic	1. funny
2. fire	2. kind
3. dislexistic	3. caring
4. [illegible]	4. smart
5. lazy	5. nice
6. Bossy	6. helpful=Andrew
7. depressed	7. Always Posotive
8. crazy	8. cOoL
9. weird	9. goodatart
10. stupid	10. Mankind

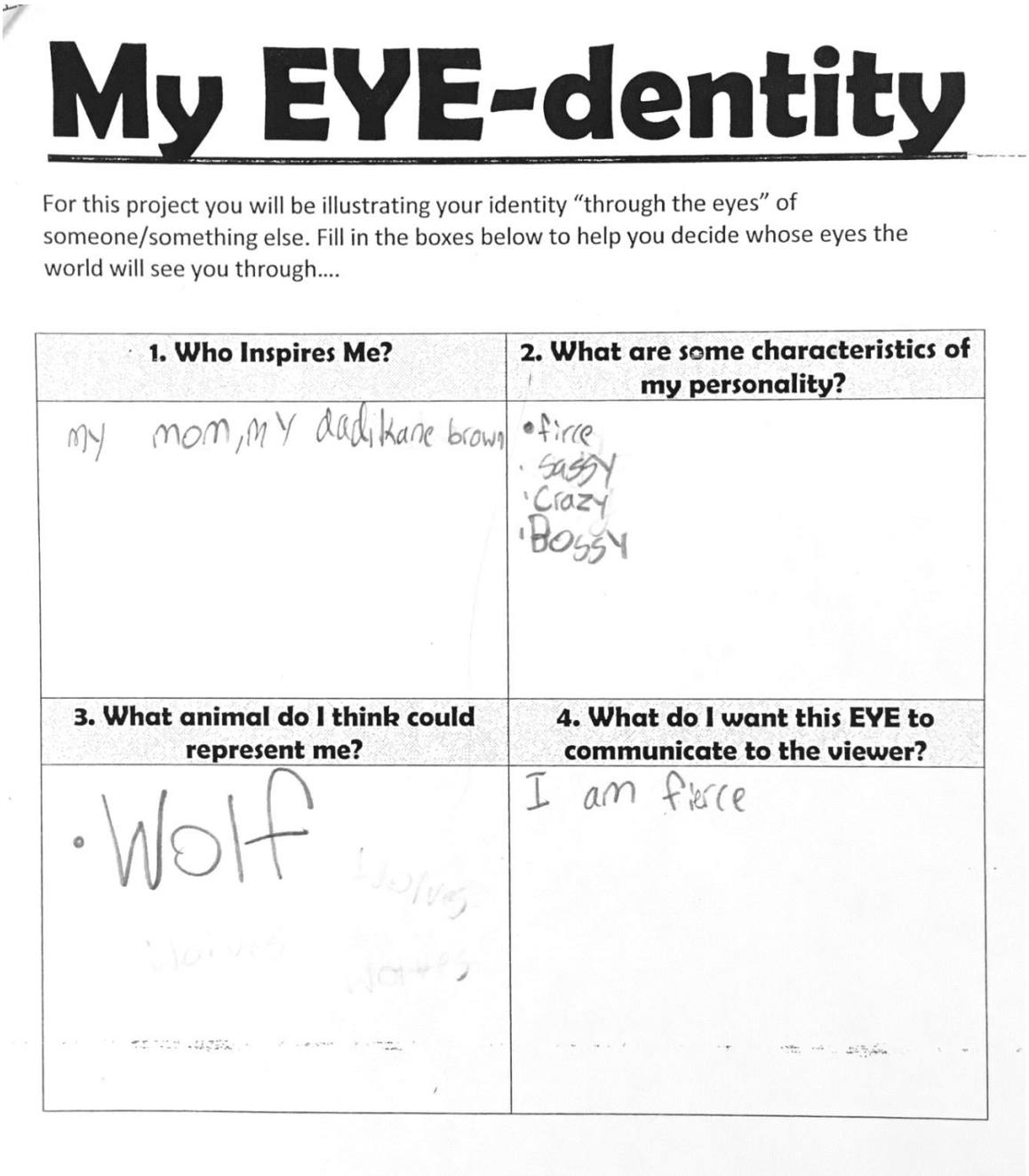
Reflection Section:

How many words match from your "I" side and your "Others" side? 0 none no

Are there any adjectives from your "Others" side that surprised you? If so, which? Why?

yes kind, Because I am the oposite of that I am mean try me.

Figure H5: L.L. Personal Identity Adjective Collection

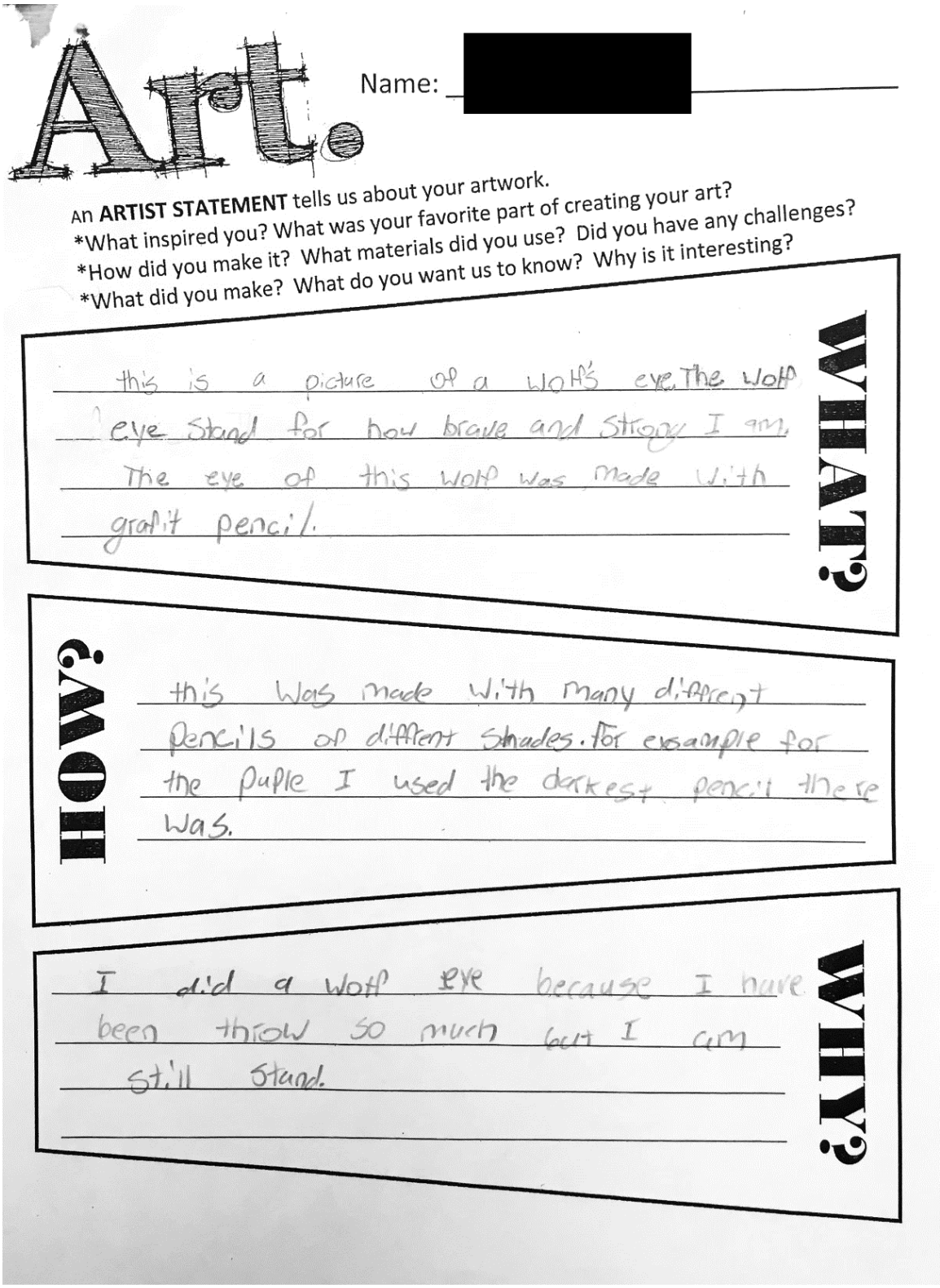


My EYE-dentity

For this project you will be illustrating your identity "through the eyes" of someone/something else. Fill in the boxes below to help you decide whose eyes the world will see you through....

1. Who Inspires Me?	2. What are some characteristics of my personality?
my mom, my dadikane brown	• firce · sassy · Crazy · Bossy
3. What animal do I think could represent me?	**4. What do I want this EYE to communicate to the viewer?**
• Wolf	I am fierce

Figure H6: L.L. My Eye-dentity Brainstorming Sheet



Art.

Name: [redacted]

An **ARTIST STATEMENT** tells us about your artwork.
*What inspired you? What was your favorite part of creating your art?
*How did you make it? What materials did you use? Did you have any challenges?
*What did you make? What do you want us to know? Why is it interesting?

WHAT?

this is a picture of a wolf's eye. The wolf eye stand for how brave and strogy I am. The eye of this wolf was made with gralit pencil.

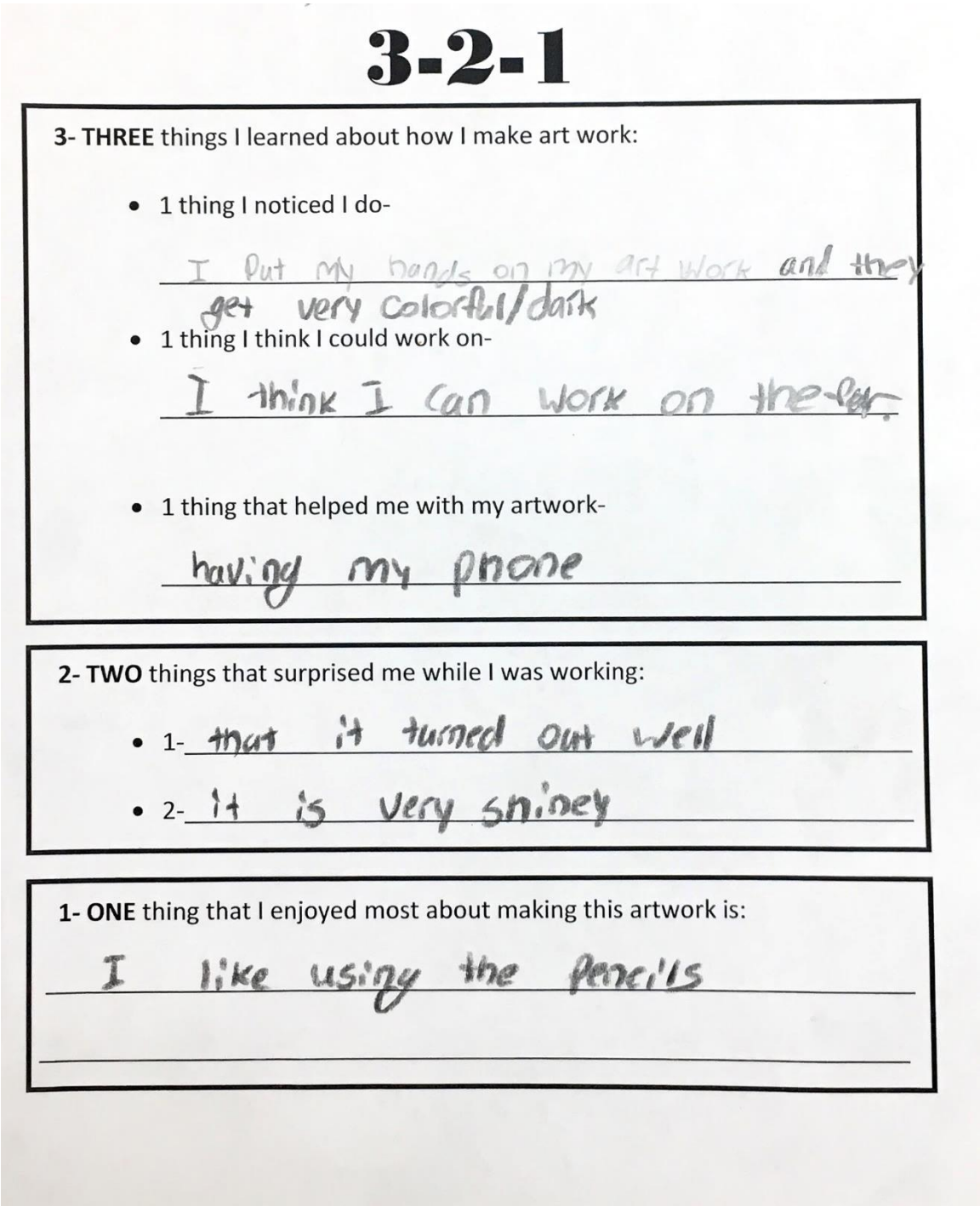
HOW?

this was made with many different pencils of diffrent shades. for exsample for the puple I used the darkest pencil there was.

WHY?

I did a wolf eye because I have been throw so much but I am still stand.

Figure H7: L.L. Eye-dentity Project Artist Statement



3-2-1

3- THREE things I learned about how I make art work:

- 1 thing I noticed I do-

  I put my hands on my art work and they get very colorful/dark

- 1 thing I think I could work on-

  I think I can work on the ear.

- 1 thing that helped me with my artwork-

  having my phone

2- TWO things that surprised me while I was working:

- 1- that it turned out well
- 2- it is very shiney

1- ONE thing that I enjoyed most about making this artwork is:

I like using the pencils

Figure H8: L.L. 3-2-1 Assessment

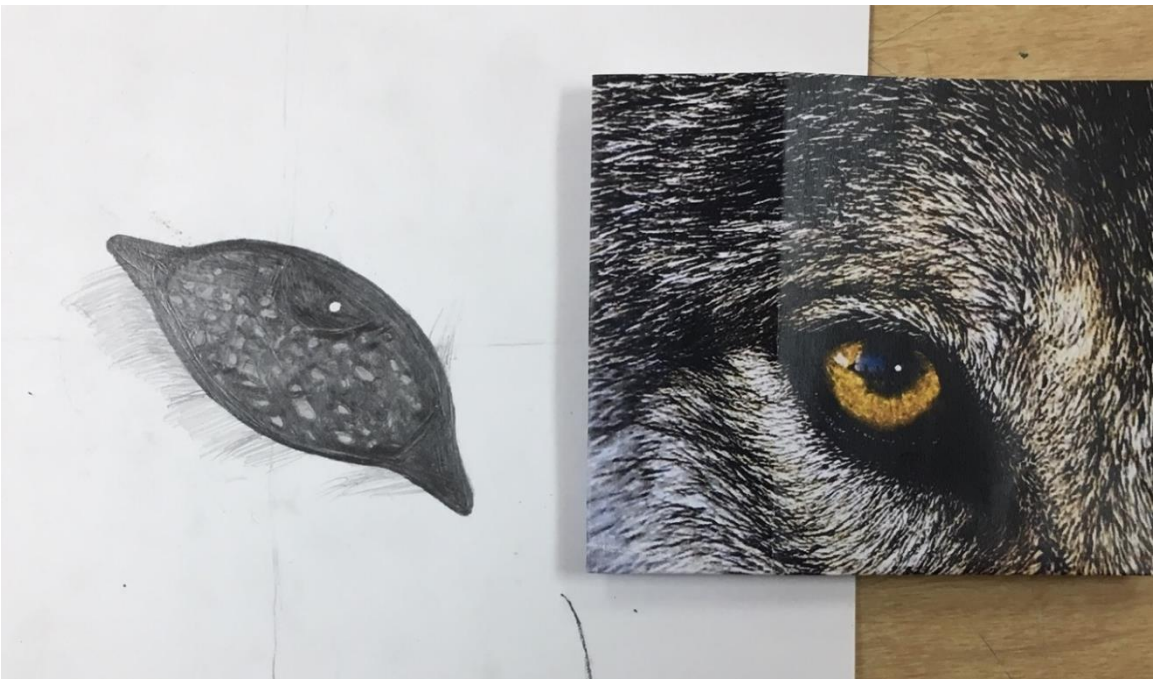


Figure H9a: L.L. Eye-dentity Project Process Beginning Stage

Figure H9b: L.L. Eye-dentity Project Process Middle Stage

Figure H9c: L.L. Eye-dentity Project Process Completed

Art Project Rubric

Student Name: L.L.. **Class Initials:** My5

Criteria	Master/ Professional 4	Journeyman/ Semi-Pro 3	Apprentice/ Varsity 2	Novice/ Beginner 1	Score
CRAFTSMANSHIP & ART MAKING	➢ Student used materials with great care and proper technique. ➢ Artwork is created skillfully with attention to detail and composition.	➢ Student used materials well but lacked some technique. ➢ Artwork is created with attention to detail and composition but lacks finishing touches.	➢ Student attempted to use materials but struggled with technique. ➢ Artwork is created with little attention to detail or composition.	➢ Student used materials carelessly or inappropriately. ➢ Artwork is created with no attempt at details or composition.	3
WORK ETHIC & TIME MANAGEMENT	➢ Student completed project within the allotted timeframe. ➢ Student is self-motivated and self-starting	➢ Student completed project within the allotted timeframe. ➢ Student needed some reminders to begin work and stay on task.	➢ Project is incomplete but shows evidence of effort. ➢ Student needed frequent reminders to begin work and stay on task.	➢ Project is incomplete and shows little evidence of effort. ➢ Student needed constant reminders to begin work and stay on task.	4
ATTITUDE & RESPONSIBILITY	➢ Student is interested and engaged in class ➢ Student consistently cared for materials and workspace.	➢ Student worked respectfully and responsibly ➢ Student mostly cared for materials and workspace.	➢ Student attitude was inconsistent or indifferent. ➢ Student had difficulty caring for materials and workspace.	➢ Student was disruptive, negative, and showed a poor attitude. ➢ Student did not take care of materials or workspace.	4
REFLECTION & EDITING	➢ Student made outstanding effort to reflect on their work and make improvements.	➢ Student made some effort to reflect on their work and make improvements.	➢ Student made minimal effort to reflect on their work and make improvements.	➢ Student showed no attempt to reflect or make any changes or improvements	4
SHARING & COLLABORATION	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully with some clarification.	➢ Student struggles to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is unable to unwilling to communicate clearly and respectfully about their artwork.	3
				Total Score:	18

Figure H10a: L.L. Eye-dentity Project Rubric

Art Project Rubric

Student Name: L.L. **Class Initials:** My5

	4	3	2	1
Criteria				
USED MATERIALS PROPERLY & COMPLETED WORK CAREFULLY				
GOT STARTED QUICKLY & USED TIME WISELY				
HAS A POSITIVE ATTITUDE & CLEANS UP RESPONSIBLY				
MAKES IMPROVEMENTS BEFORE HANDING IN WORK				
UNDERSTANDS CONCEPTS & SHARES IDEAS				
				Total Score: 18

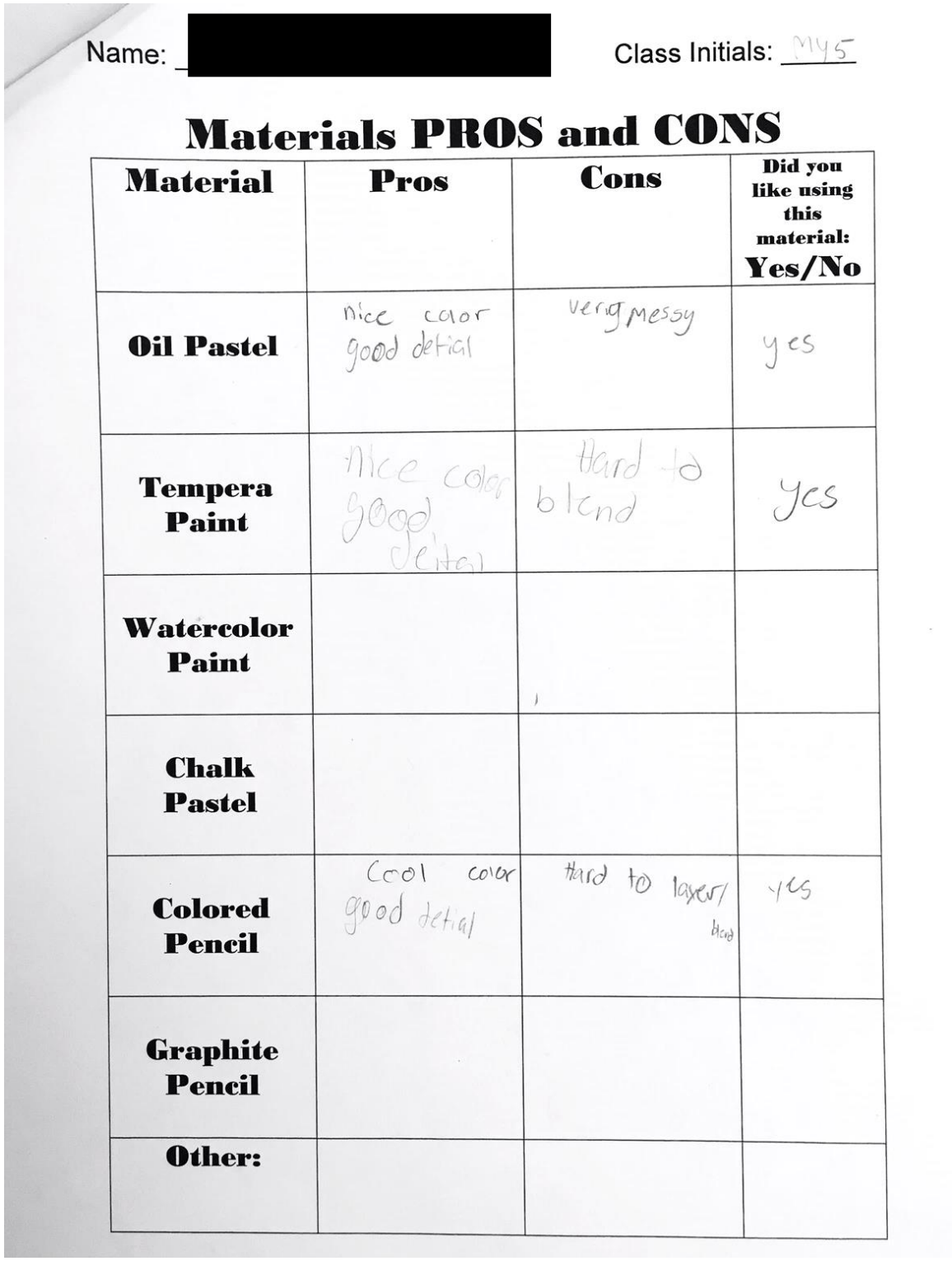
Figure H10b: L.L. Eye-dentity Project Rubric Modified

APPENDIX I: Student Participant T.R. Project Artifacts

Figure I1a: T.R. Materials Exploration- Oil Pastel Lemon

Figure I2b: T.R. Materials Exploration- Tempera Paint Lemon

Figure I2c: T.R. Materials Exploration- Colored Pencil Lemon

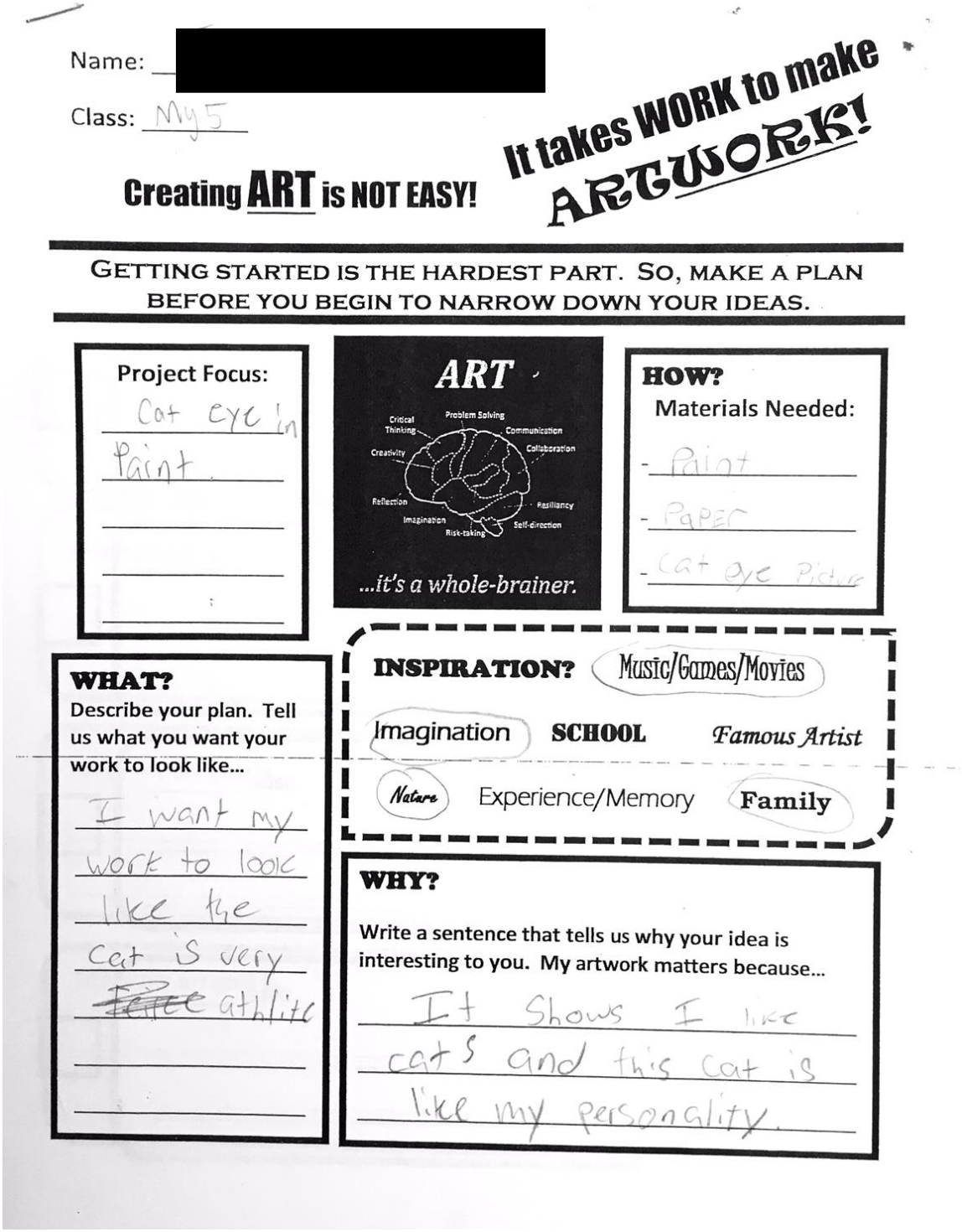


Name: [redacted] Class Initials: MY5

Materials PROS and CONS

Material	Pros	Cons	Did you like using this material: Yes/No
Oil Pastel	nice color good detial	very messy	yes
Tempera Paint	nice color good detial	hard to blend	yes
Watercolor Paint			
Chalk Pastel			
Colored Pencil	Cool color good detial	hard to layer/ blend	yes
Graphite Pencil			
Other:			

Figure I2: T.R. Materials Pros and Cons



Name: [redacted]

Class: My 5

Creating ART is NOT EASY!

It takes WORK to make ARTWORK!

GETTING STARTED IS THE HARDEST PART. SO, MAKE A PLAN BEFORE YOU BEGIN TO NARROW DOWN YOUR IDEAS.

Project Focus:
Cat eye in Paint.

ART
Critical Thinking
Problem Solving
Communication
Collaboration
Creativity
Reflection
Resiliancy
Imagination
Self-direction
Risk-taking
...it's a whole-brainer.

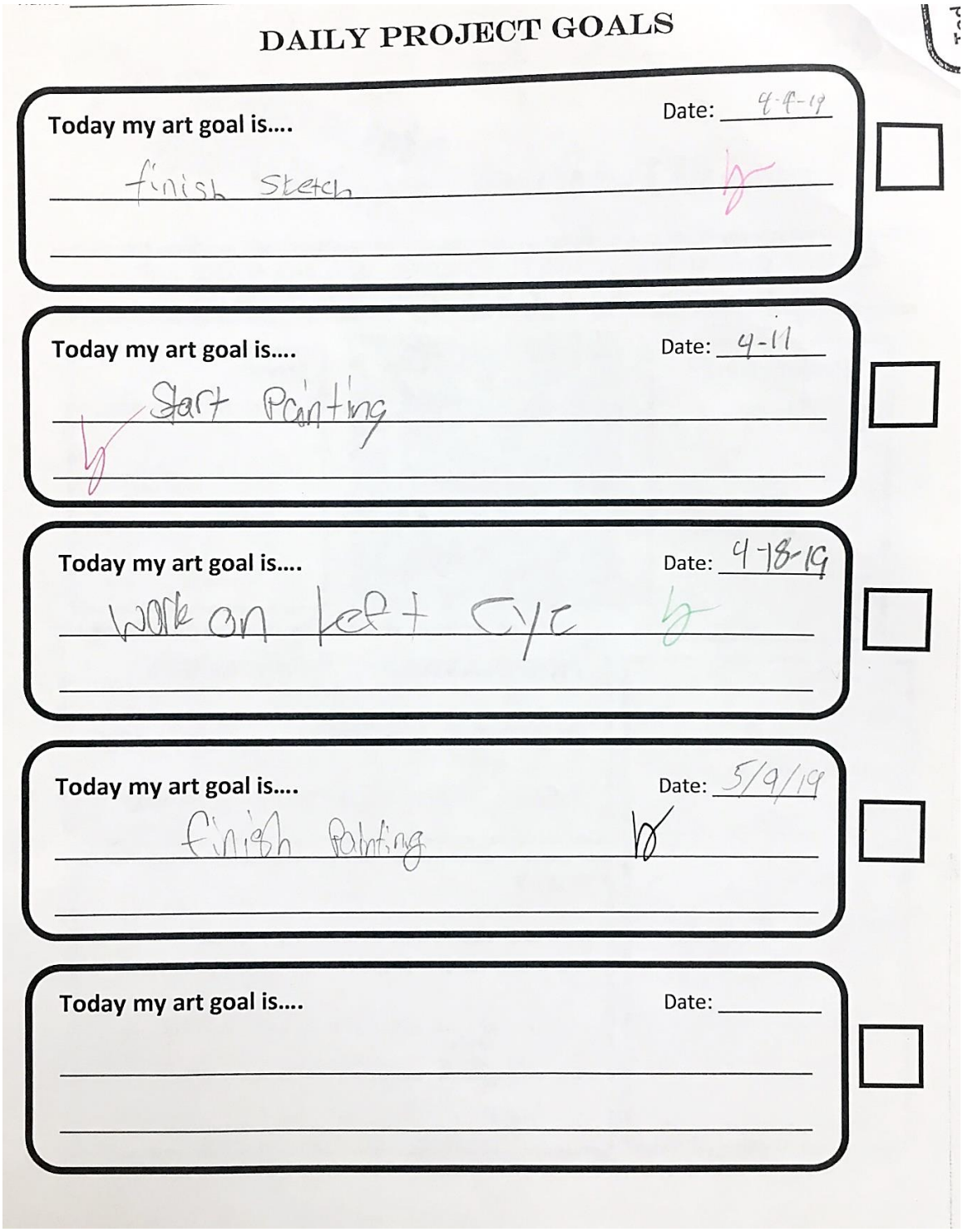
HOW?
Materials Needed:
- Paint
- Paper
- Cat eye Picture

WHAT?
Describe your plan. Tell us what you want your work to look like...
I want my work to look like the cat is very ~~Fence~~ athlite

INSPIRATION? Music/Games/Movies
Imagination SCHOOL Famous Artist
Nature Experience/Memory Family

WHY?
Write a sentence that tells us why your idea is interesting to you. My artwork matters because...
It Shows I like cats and this cat is like my personality.

Figure I3: T.R. Eye-dentity Project Plan



DAILY PROJECT GOALS

Today my art goal is.... Date: 4-4-19

finish sketch

Today my art goal is.... Date: 4-11

Start Painting

Today my art goal is.... Date: 4-18-19

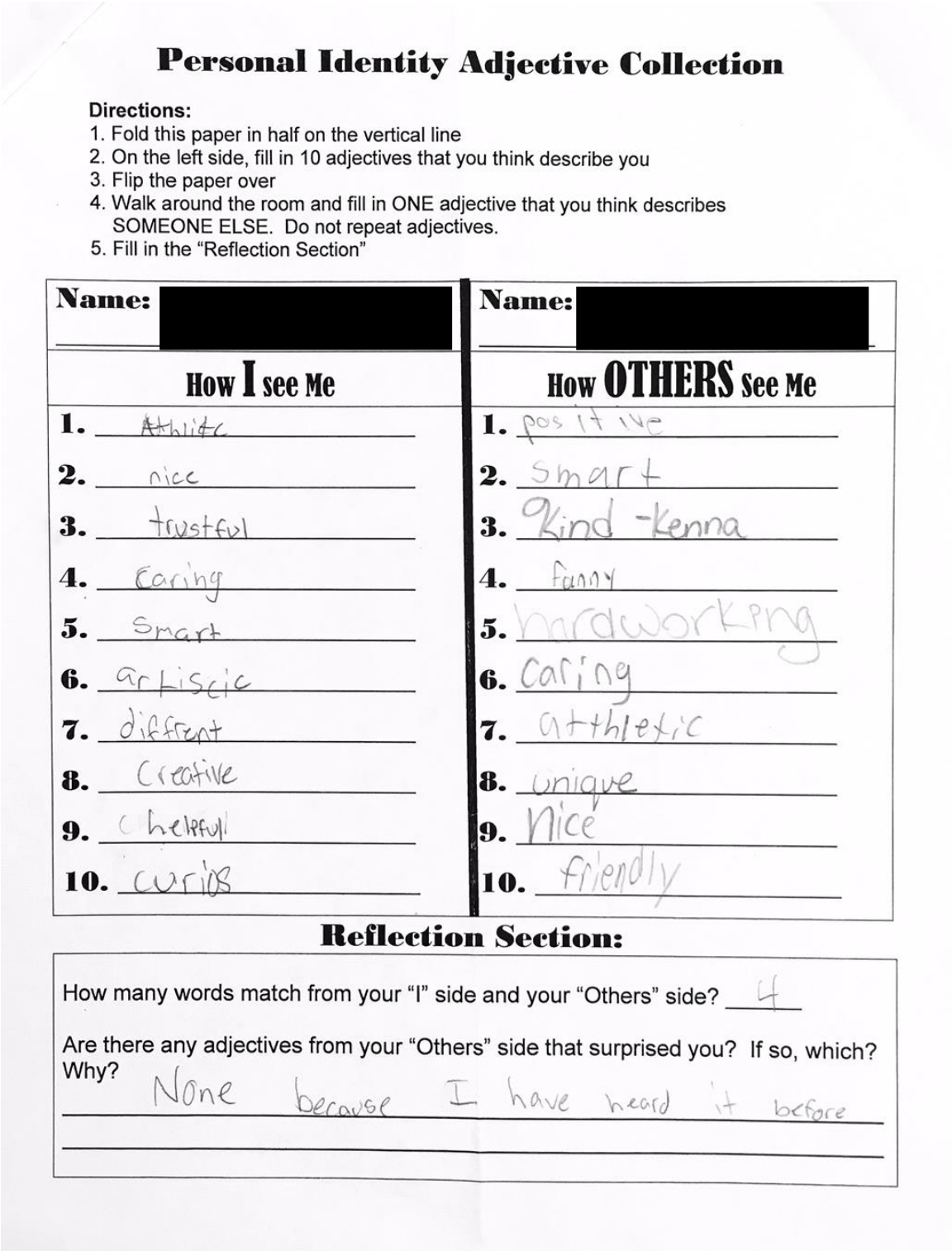
work on left eye

Today my art goal is.... Date: 5/9/19

finish Painting

Today my art goal is.... Date: _____

Figure I4: T.R. Eye-dentity Project Goals



Personal Identity Adjective Collection

Directions:
1. Fold this paper in half on the vertical line
2. On the left side, fill in 10 adjectives that you think describe you
3. Flip the paper over
4. Walk around the room and fill in ONE adjective that you think describes SOMEONE ELSE. Do not repeat adjectives.
5. Fill in the "Reflection Section"

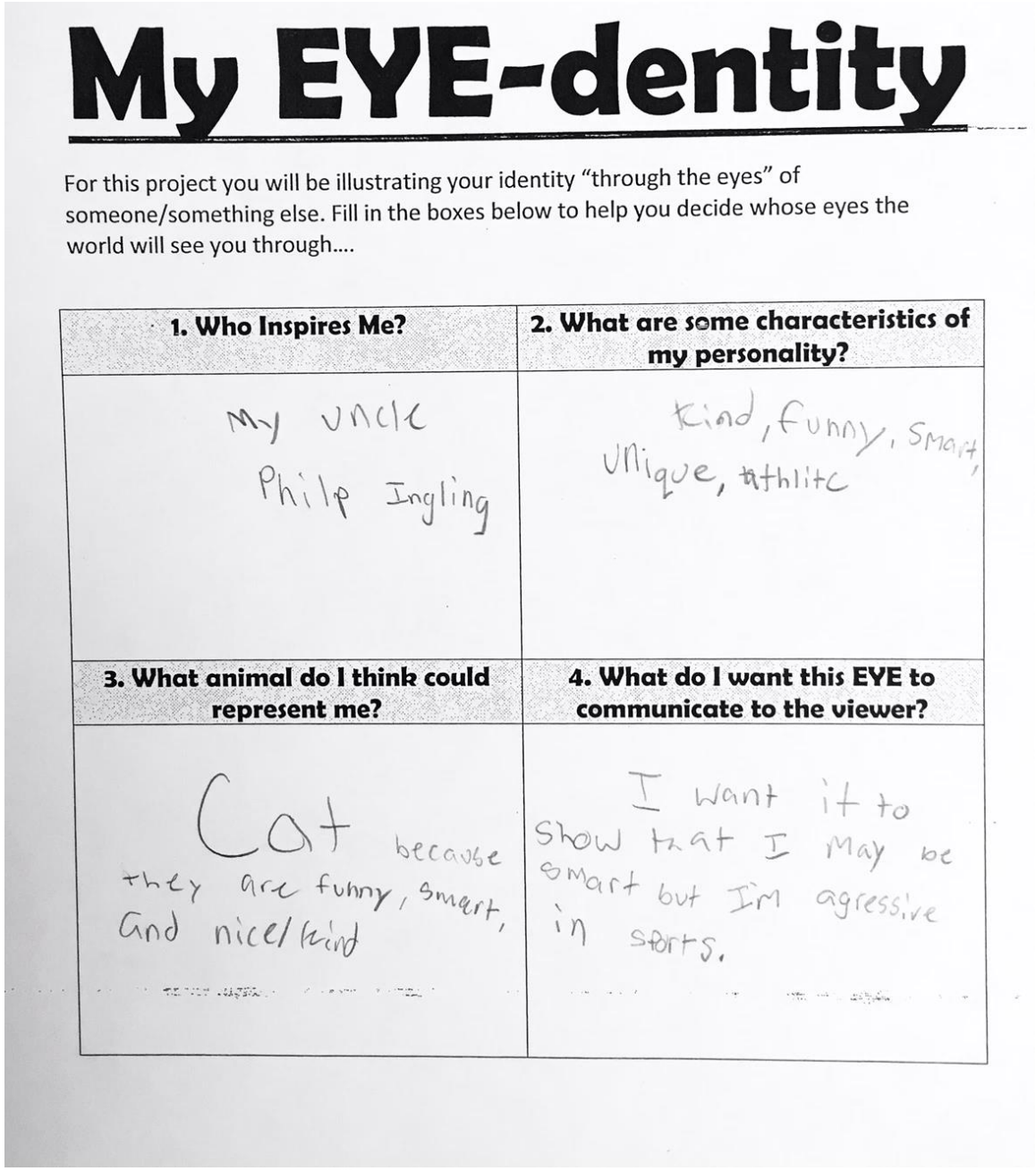
Name: [redacted]	Name: [redacted]
How I see Me	**How OTHERS See Me**
1. Athlitc	1. pos it ive
2. nice	2. smart
3. trustful	3. Kind -Kenna
4. Caring	4. funny
5. Smart	5. hardworking
6. artiscic	6. Caring
7. diffrent	7. atthletic
8. Creative	8. unique
9. helpfull	9. Nice
10. curios	10. friendly

Reflection Section:

How many words match from your "I" side and your "Others" side? 4

Are there any adjectives from your "Others" side that surprised you? If so, which? Why? None because I have heard it before

Figure I5: T.R. Personal Identity Adjective Collection

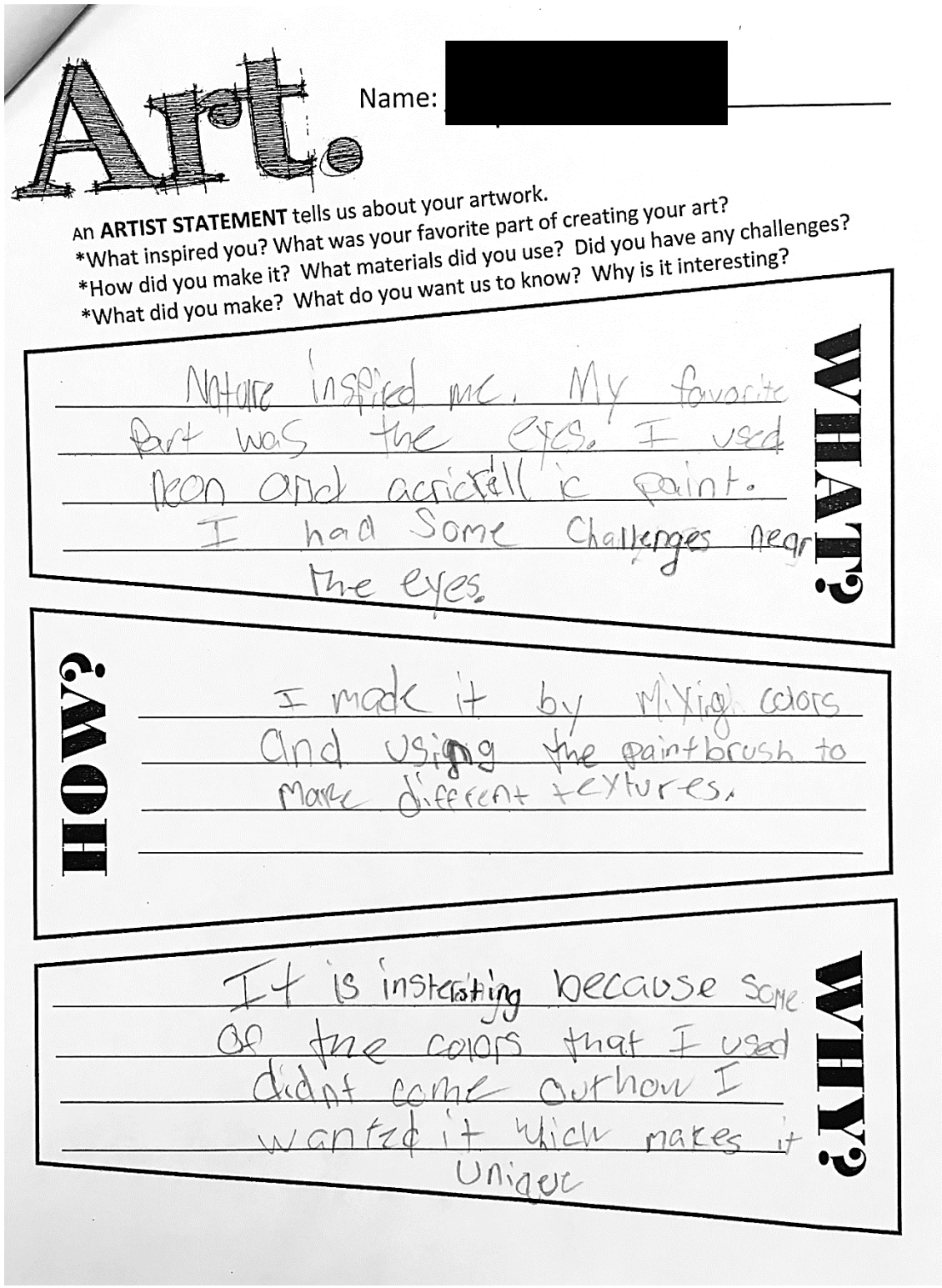


My EYE-dentity

For this project you will be illustrating your identity "through the eyes" of someone/something else. Fill in the boxes below to help you decide whose eyes the world will see you through....

1. Who Inspires Me?	2. What are some characteristics of my personality?
My uncle Philp Ingling	Kind, funny, smart, unique, athlitc
3. What animal do I think could represent me?	**4. What do I want this EYE to communicate to the viewer?**
Cat because they are funny, smart, and nice/kind	I want it to show that I may be smart but Im agressive in sports.

Figure I6: T.R. My Eye-dentity Brainstorming Sheet



Art.

Name: [redacted]

An **ARTIST STATEMENT** tells us about your artwork.
*What inspired you? What was your favorite part of creating your art?
*How did you make it? What materials did you use? Did you have any challenges?
*What did you make? What do you want us to know? Why is it interesting?

WHAT?

Nature inspired me. My favorite part was the eyes. I used neon and acrictell ic paint. I had some challenges near the eyes.

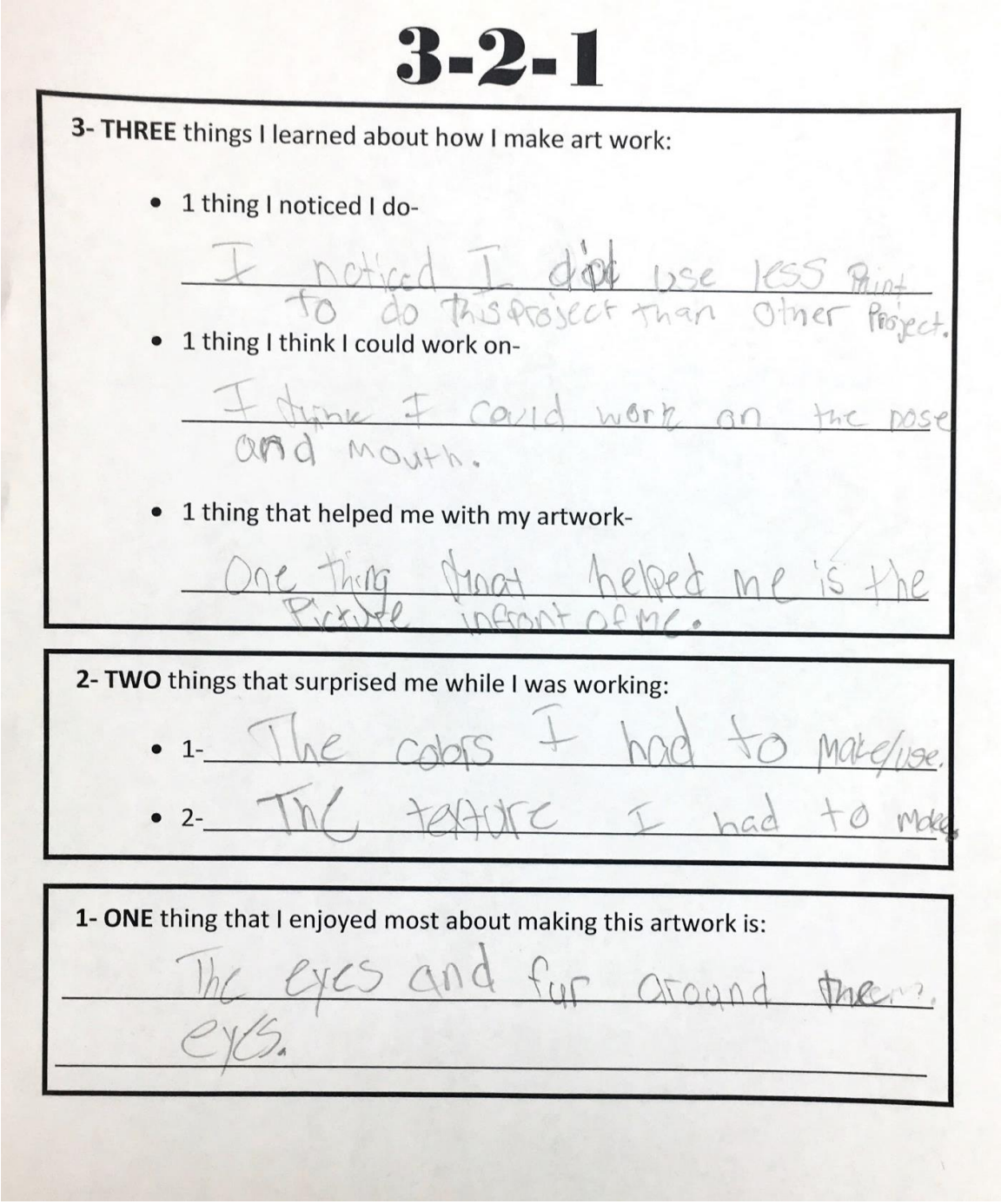
HOW?

I made it by mixing colors and using the paintbrush to make different texture.

WHY?

It is insteresting because some of the colors that I used didnt come out how I wanted it which makes it unique

Figure I7: T.R. Eye-dentity Project Artist Statement



3-2-1

3- THREE things I learned about how I make art work:

- 1 thing I noticed I do-

I noticed I did use less Paint to do this project than other Project.

- 1 thing I think I could work on-

I think I could work on the nose and mouth.

- 1 thing that helped me with my artwork-

One thing that helped me is the Picture infront of me.

2- TWO things that surprised me while I was working:

- 1- The colors I had to make/use.
- 2- The texture I had to make

1- ONE thing that I enjoyed most about making this artwork is:

The eyes and fur around the eyes.

Figure I8: T.R. 3-2-1 Assessment

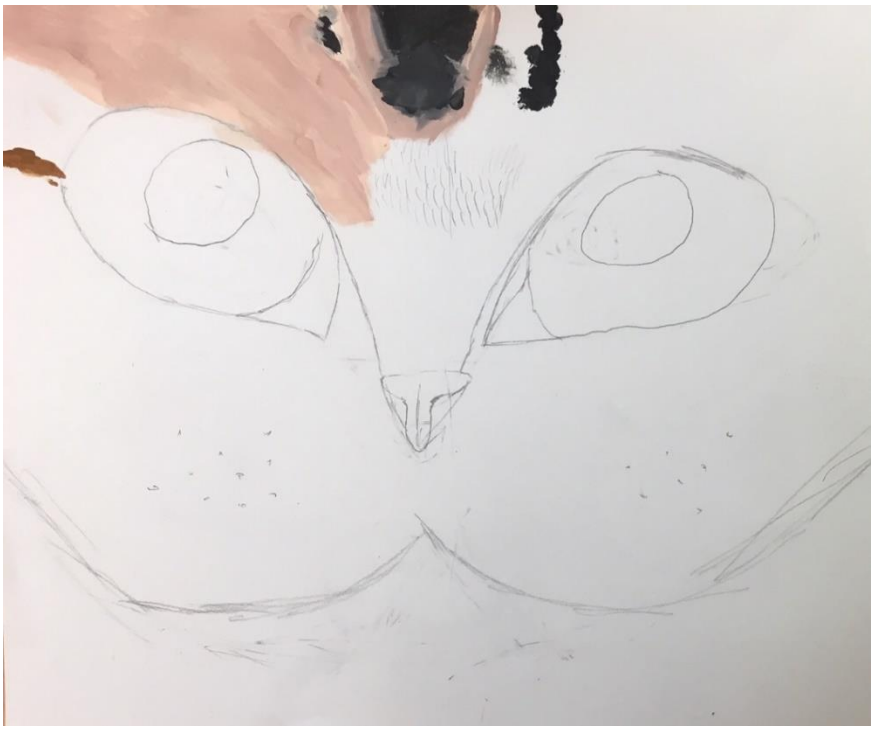


Figure I9a: T.R. Eye-dentity Project Process Beginning Stage

Figure I9b: T.R. Eye-dentity Project Process Middle Stage

Figure I9c: T.R. Eye-dentity Project Process Completed

Art Project Rubric

Student Name: T.R. **Class Initials:** My5

Criteria	Master/ Professional 4	Journeyman/ Semi-Pro 3	Apprentice/ Varsity 2	Novice/ Beginner 1	Score
CRAFTSMANSHIP & ART MAKING	➢ Student used materials with great care and proper technique. ➢ Artwork is created skillfully with attention to detail and composition.	➢ Student used materials well but lacked some technique. ➢ Artwork is created with attention to detail and composition but lacks finishing touches.	➢ Student attempted to use materials but struggled with technique. ➢ Artwork is created with little attention to detail or composition.	➢ Student used materials carelessly or inappropriately. ➢ Artwork is created with no attempt at details or composition.	2
WORK ETHIC & TIME MANAGEMENT	➢ Student completed project within the allotted timeframe. ➢ Student is self-motivated and self-starting	➢ Student completed project within the allotted timeframe. ➢ Student needed some reminders to begin work and stay on task.	➢ Project is incomplete but shows evidence of effort. ➢ Student needed frequent reminders to begin work and stay on task.	➢ Project is incomplete and shows little evidence of effort. ➢ Student needed constant reminders to begin work and stay on task.	4
ATTITUDE & RESPONSIBILITY	➢ Student is interested and engaged in class ➢ Student consistently cared for materials and workspace.	➢ Student worked respectfully and responsibly ➢ Student mostly cared for materials and workspace.	➢ Student attitude was inconsistent or indifferent. ➢ Student had difficulty caring for materials and workspace.	➢ Student was disruptive, negative, and showed a poor attitude. ➢ Student did not take care of materials or workspace.	4
REFLECTION & EDITING	➢ Student made outstanding effort to reflect on their work and make improvements.	➢ Student made some effort to reflect on their work and make improvements.	➢ Student made minimal effort to reflect on their work and make improvements.	➢ Student showed no attempt to reflect or make any changes or improvements	4
SHARING & COLLABORATION	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully with some clarification.	➢ Student struggles to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is unable to unwilling to communicate clearly and respectfully about their artwork.	3
				Total Score:	**17**

Figure I10: T.R. Eye-dentity Project Rubric

APPENDIX J: Student Participant C.F. Project Artifacts

Figure J1a: C.F. Materials Exploration- Oil Pastel Orange

Figure J1b: C.F. Materials Exploration- Tempera Paint Orange

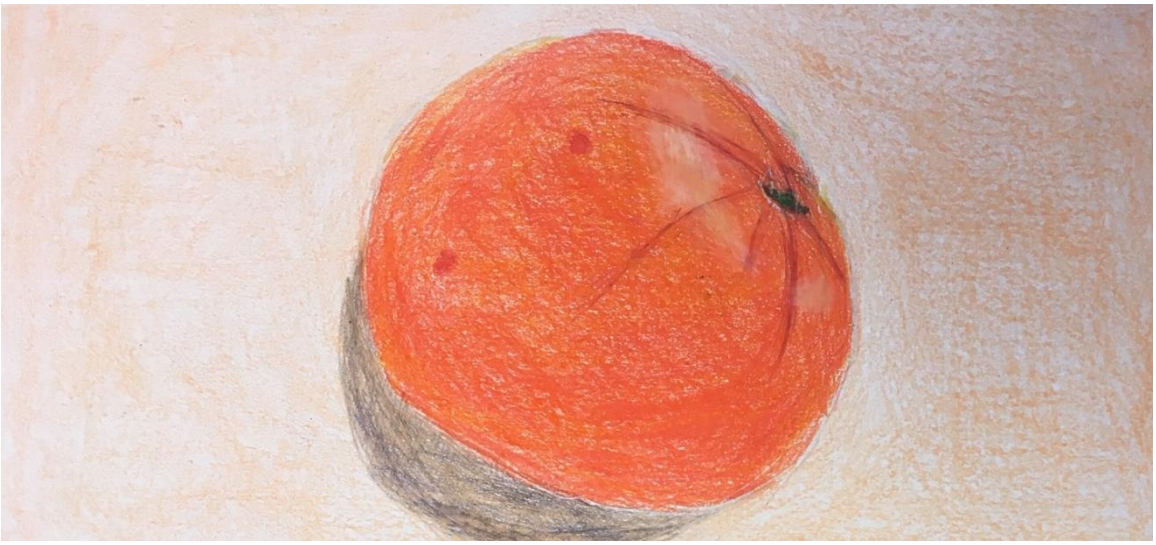


Figure J1c: C.F. Materials Exploration- Colored Pencil Orange

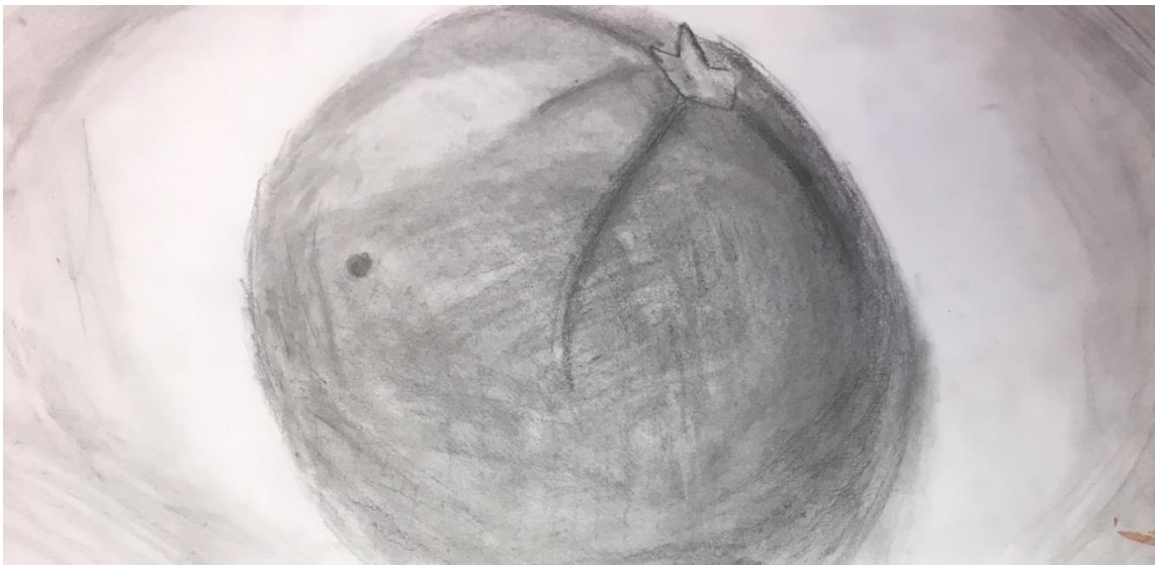
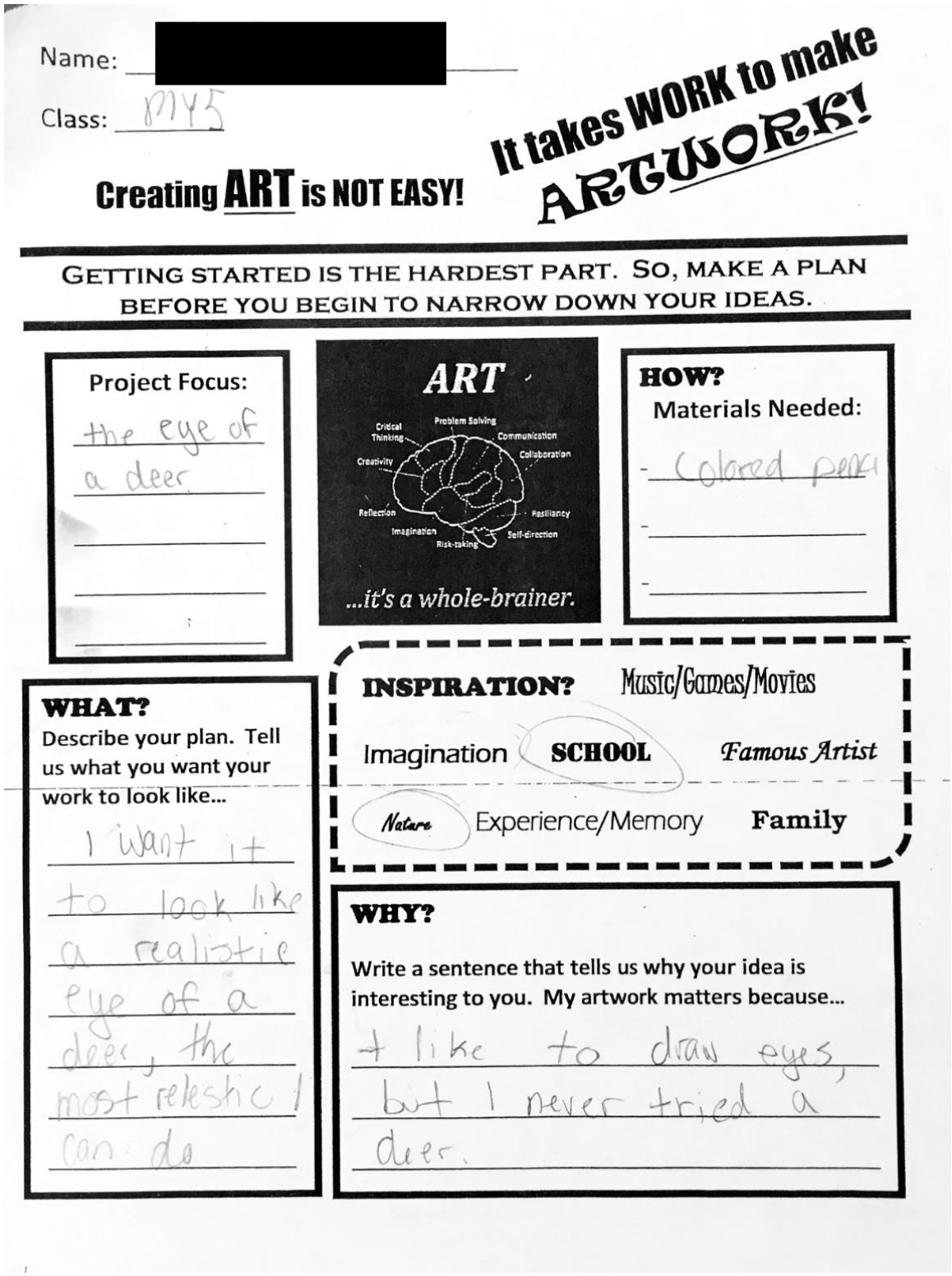


Figure J1d: C.F. Materials Exploration- Graphite Pencil Orange

Materials PROS and CONS

Material	Pros	Cons	Did you like using this material: Yes/No
Oil Pastel	Easy blending	messy- hard to clean of skin	Yes
Tempera Paint	smooth	messy	Yes
Watercolor Paint			
Chalk Pastel			
Colored Pencil	good variety	hard to blend	Yes
Graphite Pencil	smooth blending	1 color (3 shades)	No
Other:			

Figure J2: C.F. Materials Pros and Cons



Name: [redacted]

Class: M4S

Creating ART is NOT EASY!

It takes WORK to make ARTWORK!

GETTING STARTED IS THE HARDEST PART. SO, MAKE A PLAN BEFORE YOU BEGIN TO NARROW DOWN YOUR IDEAS.

Project Focus:

the eye of a deer

ART

Critical Thinking, Problem Solving, Communication, Collaboration, Creativity, Reflection, Resiliancy, Imagination, Self-direction, Risk-taking

...it's a whole-brainer.

HOW?

Materials Needed:

- Colored pencil
-
-

WHAT?

Describe your plan. Tell us what you want your work to look like...

I want it to look like a realistic eye of a deer, the most relestic I can do

INSPIRATION? Music/Games/Movies

Imagination **SCHOOL** *Famous Artist*

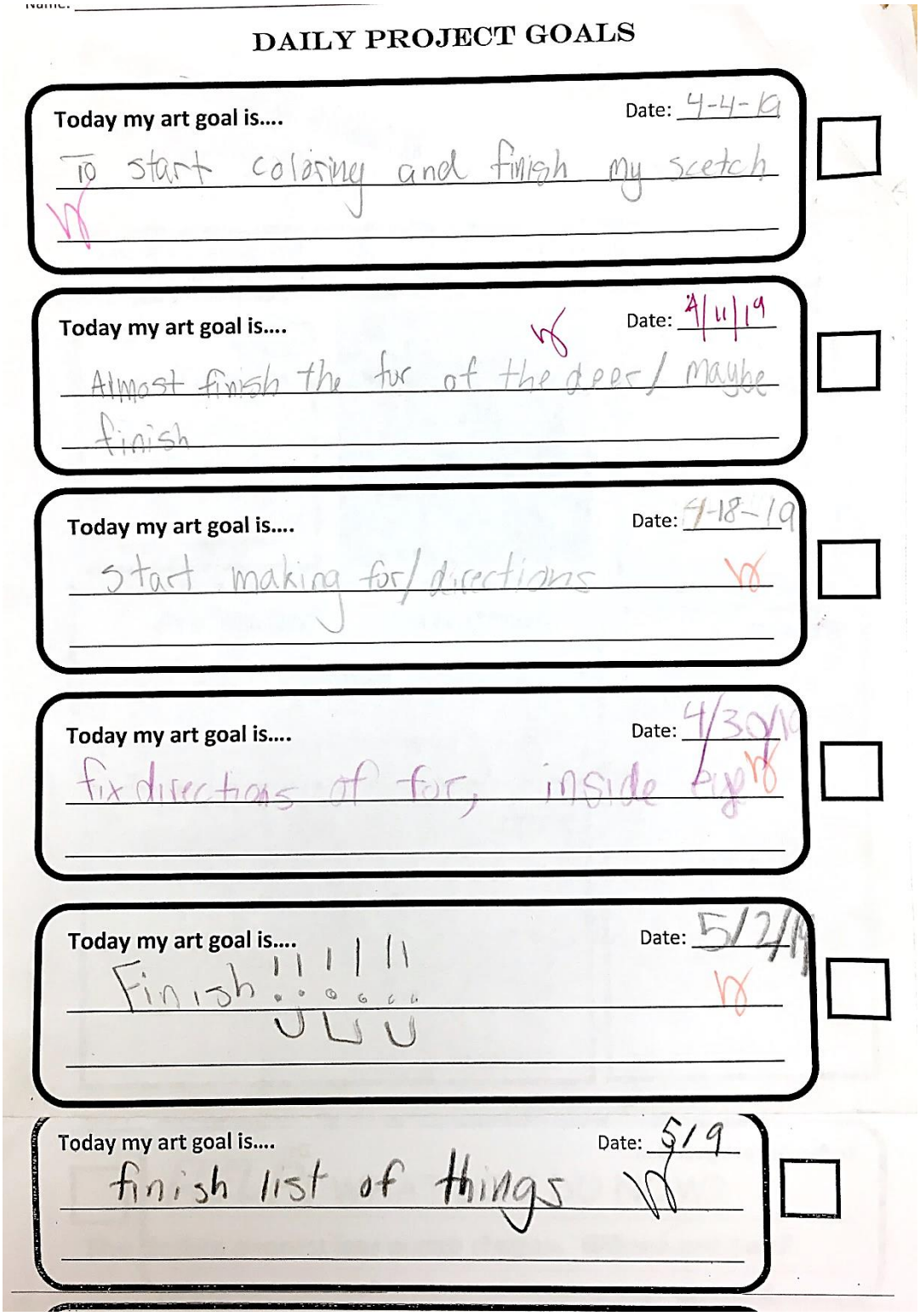
Nature Experience/Memory **Family**

WHY?

Write a sentence that tells us why your idea is interesting to you. My artwork matters because...

I like to draw eyes, but I never tried a deer.

Figure J3: C.F. Eye-dentity Project Plan



Name: _____

DAILY PROJECT GOALS

Today my art goal is.... Date: 4-4-19

To start coloring and finish my scetch

Today my art goal is.... Date: 4/11/19

Almost finish the fur of the deer / maybe finish

Today my art goal is.... Date: 4-18-19

start making fur / directions

Today my art goal is.... Date: 4/30/19

fix directions of fur, inside eye

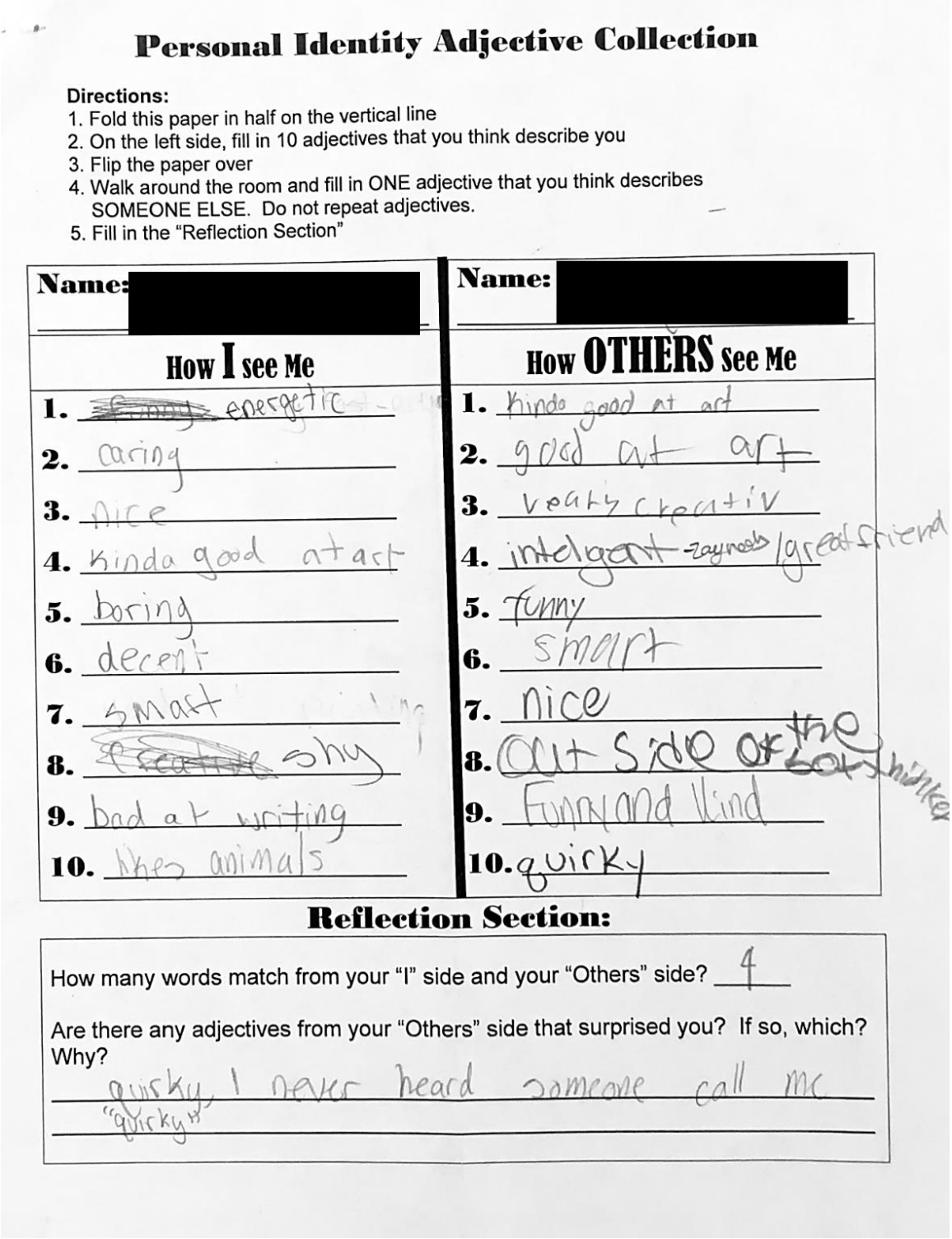
Today my art goal is.... Date: 5/2/19

Finish!!!!!

Today my art goal is.... Date: 5/9

finish list of things

Figure J4: C.F. Eye-dentity Project Goals



Personal Identity Adjective Collection

Directions:
1. Fold this paper in half on the vertical line
2. On the left side, fill in 10 adjectives that you think describe you
3. Flip the paper over
4. Walk around the room and fill in ONE adjective that you think describes SOMEONE ELSE. Do not repeat adjectives.
5. Fill in the "Reflection Section"

Name: [redacted]	Name: [redacted]
How I see Me	**How OTHERS See Me**
1. ~~funny~~ energetic	1. kinda good at art
2. caring	2. good at art
3. nice	3. veary creativ
4. kinda good at art	4. intelgent zaynoods/great friend
5. boring	5. funny
6. decent	6. smart
7. smart	7. nice
8. ~~creative~~ shy	8. out side of the box thinker
9. bad at writing	9. Funny and kind
10. likes animals	10. quirky

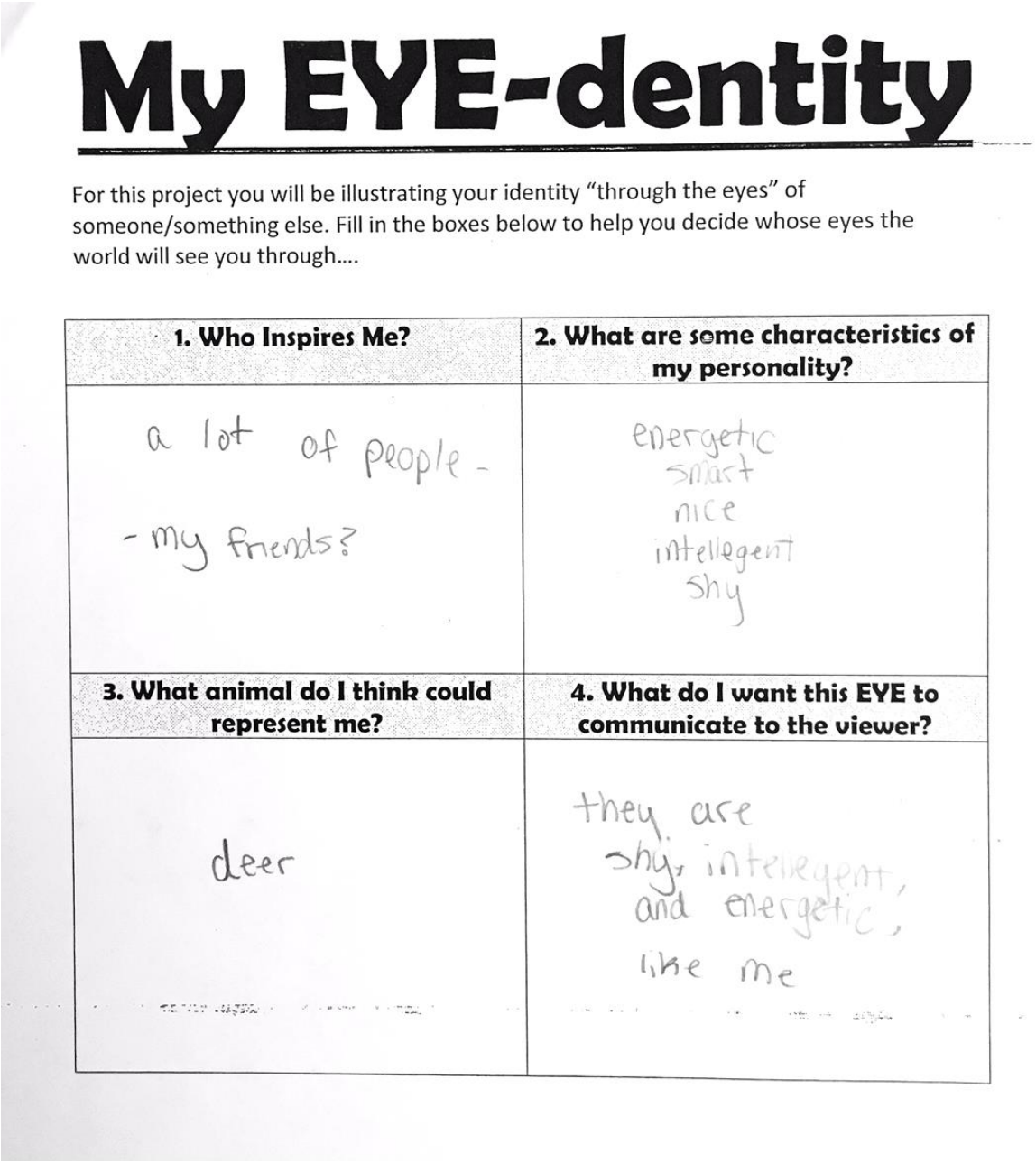
Reflection Section:

How many words match from your "I" side and your "Others" side? 4

Are there any adjectives from your "Others" side that surprised you? If so, which? Why?

quirky, I never heard someone call me "quirky"

Figure J5: C.F. Personal Identity Adjective Collection

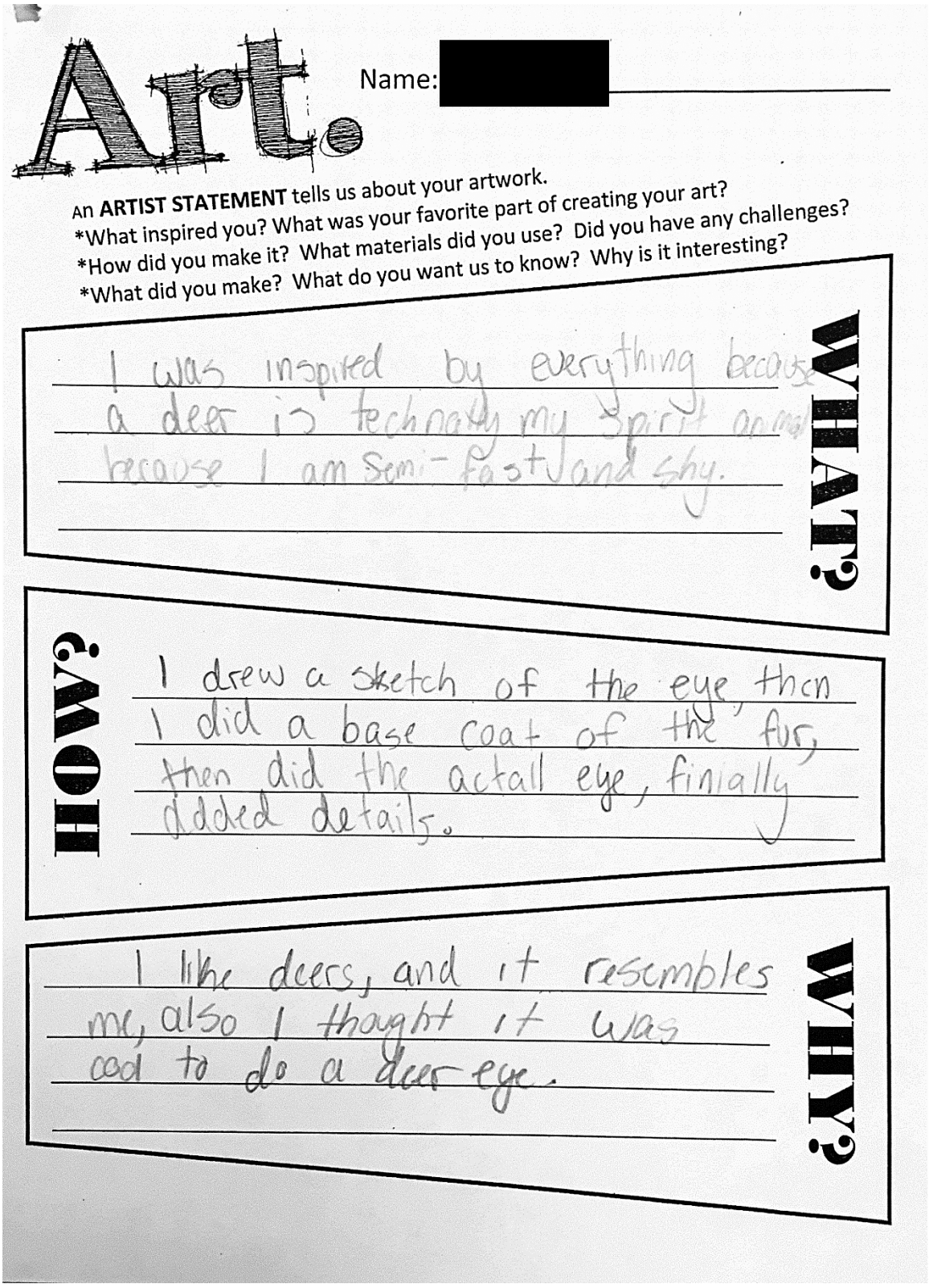


My EYE-dentity

For this project you will be illustrating your identity "through the eyes" of someone/something else. Fill in the boxes below to help you decide whose eyes the world will see you through....

1. Who Inspires Me?	2. What are some characteristics of my personality?
a lot of people - - my friends?	energetic smart nice intellegent shy
3. What animal do I think could represent me?	**4. What do I want this EYE to communicate to the viewer?**
deer	they are shy, intellegent, and energetic, like me

Figure J6: C.F. My Eye-dentity Brainstorming Sheet



Art.

Name: [redacted]

An **ARTIST STATEMENT** tells us about your artwork.
*What inspired you? What was your favorite part of creating your art?
*How did you make it? What materials did you use? Did you have any challenges?
*What did you make? What do you want us to know? Why is it interesting?

WHAT?

I was inspired by everything because a deer is technically my spirit animal because I am semi-fast and shy.

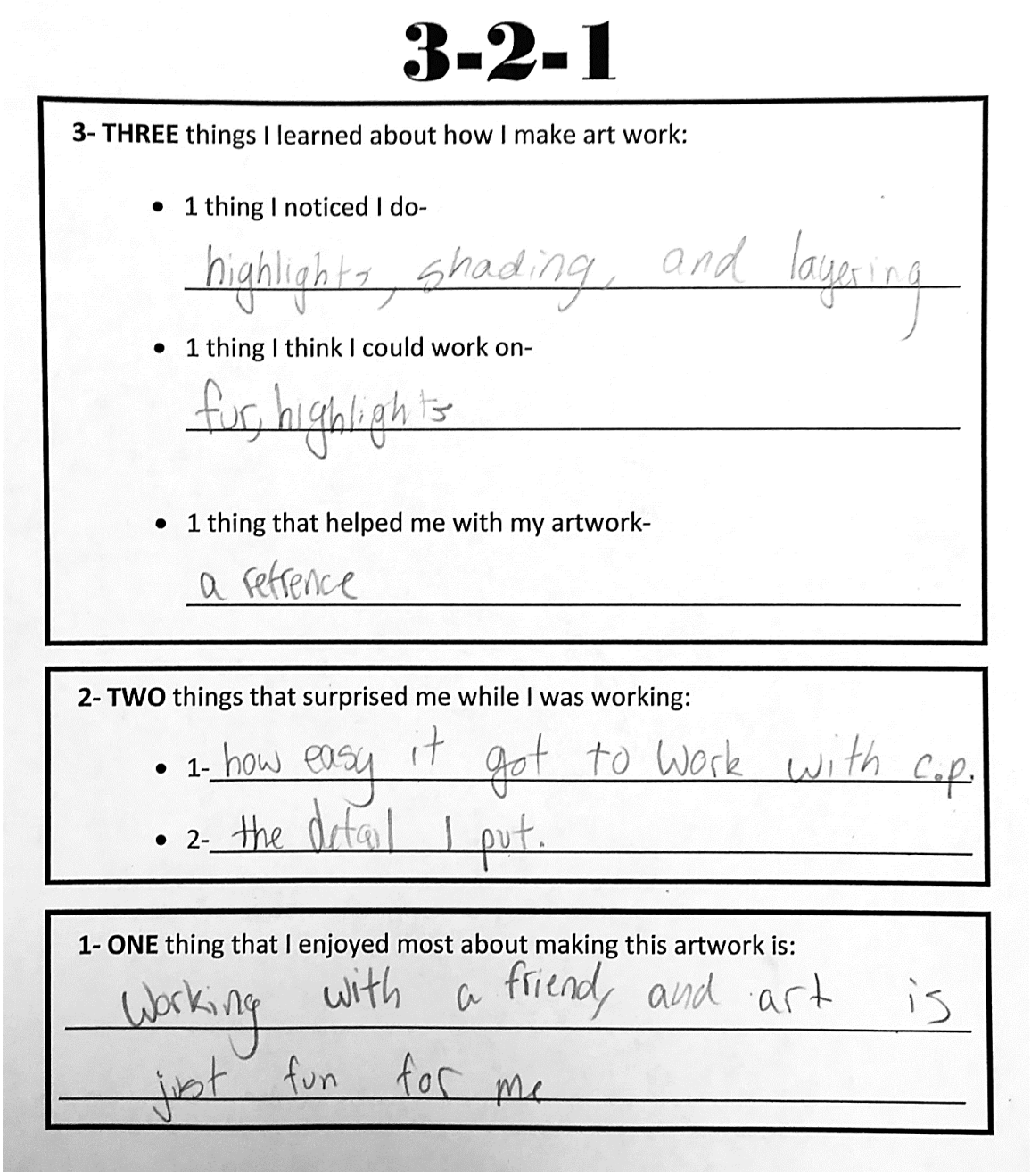
HOW?

I drew a sketch of the eye, then I did a base coat of the fur, then did the actall eye, finially added details.

WHY?

I like deers, and it resembles me, also I thought it was cool to do a deer eye.

Figure J7: C.F. Eye-dentity Project Artist Statement



3-2-1

3- THREE things I learned about how I make art work:

- 1 thing I noticed I do-

  highlights, shading, and layering

- 1 thing I think I could work on-

  fur, highlights

- 1 thing that helped me with my artwork-

  a refrence

2- TWO things that surprised me while I was working:

- 1- how easy it got to work with c.p.
- 2- the detail I put.

1- ONE thing that I enjoyed most about making this artwork is:

Working with a friend, and art is just fun for me

Figure J8: C.F. 3-2-1 Assessment

Figure J9a: C.F. Eye-dentity Project Process Beginning Stage

Figure J9b: C.F. Eye-dentity Project Process Middle Stage

Figure J9c: C.F. Eye-dentity Project Process Completed

Art Project Rubric

Student Name: C.F_____ **Class Initials:** My5

Criteria	Master/ Professional 4	Journeyman/ Semi-Pro 3	Apprentice/ Varsity 2	Novice/ Beginner 1	Score
CRAFTSMANSHIP & ART MAKING	➢ Student used materials with great care and proper technique. ➢ Artwork is created skillfully with attention to detail and composition.	➢ Student used materials well but lacked some technique. ➢ Artwork is created with attention to detail and composition but lacks finishing touches.	➢ Student attempted to use materials but struggled with technique. ➢ Artwork is created with little attention to detail or composition.	➢ Student used materials carelessly or inappropriately. ➢ Artwork is created with no attempt at details or composition.	4
WORK ETHIC & TIME MANAGEMENT	➢ Student completed project within the allotted timeframe. ➢ Student is self-motivated and self-starting	➢ Student completed project within the allotted timeframe. ➢ Student needed some reminders to begin work and stay on task.	➢ Project is incomplete but shows evidence of effort. ➢ Student needed frequent reminders to begin work and stay on task.	➢ Project is incomplete and shows little evidence of effort. ➢ Student needed constant reminders to begin work and stay on task.	4
ATTITUDE & RESPONSIBILITY	➢ Student is interested and engaged in class ➢ Student consistently cared for materials and workspace.	➢ Student worked respectfully and responsibly ➢ Student mostly cared for materials and workspace.	➢ Student attitude was inconsistent or indifferent. ➢ Student had difficulty caring for materials and workspace.	➢ Student was disruptive, negative, and showed a poor attitude. ➢ Student did not take care of materials or workspace.	4
REFLECTION & EDITING	➢ Student made outstanding effort to reflect on their work and make improvements.	➢ Student made some effort to reflect on their work and make improvements.	➢ Student made minimal effort to reflect on their work and make improvements.	➢ Student showed no attempt to reflect or make any changes or improvements	4
SHARING & COLLABORATION	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully with some clarification.	➢ Student struggles to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is unable to unwilling to communicate clearly and respectfully about their artwork.	4
				Total Score:	**20**

Figure J10: C.F. Eye-dentity Project Rubric

APPENDIX K: Student Participant D.M. Project Artifacts

Figure K1a: D.M. Materials Exploration- Oil Pastel Pear

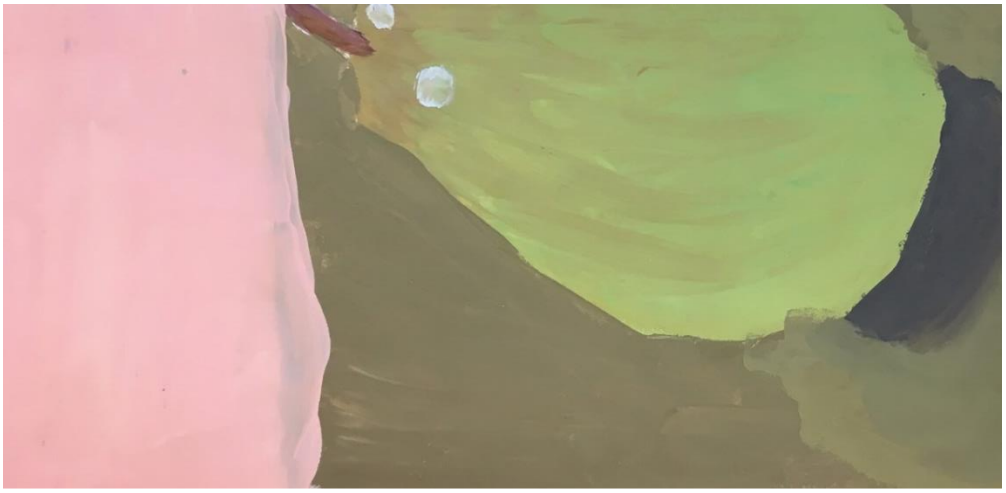
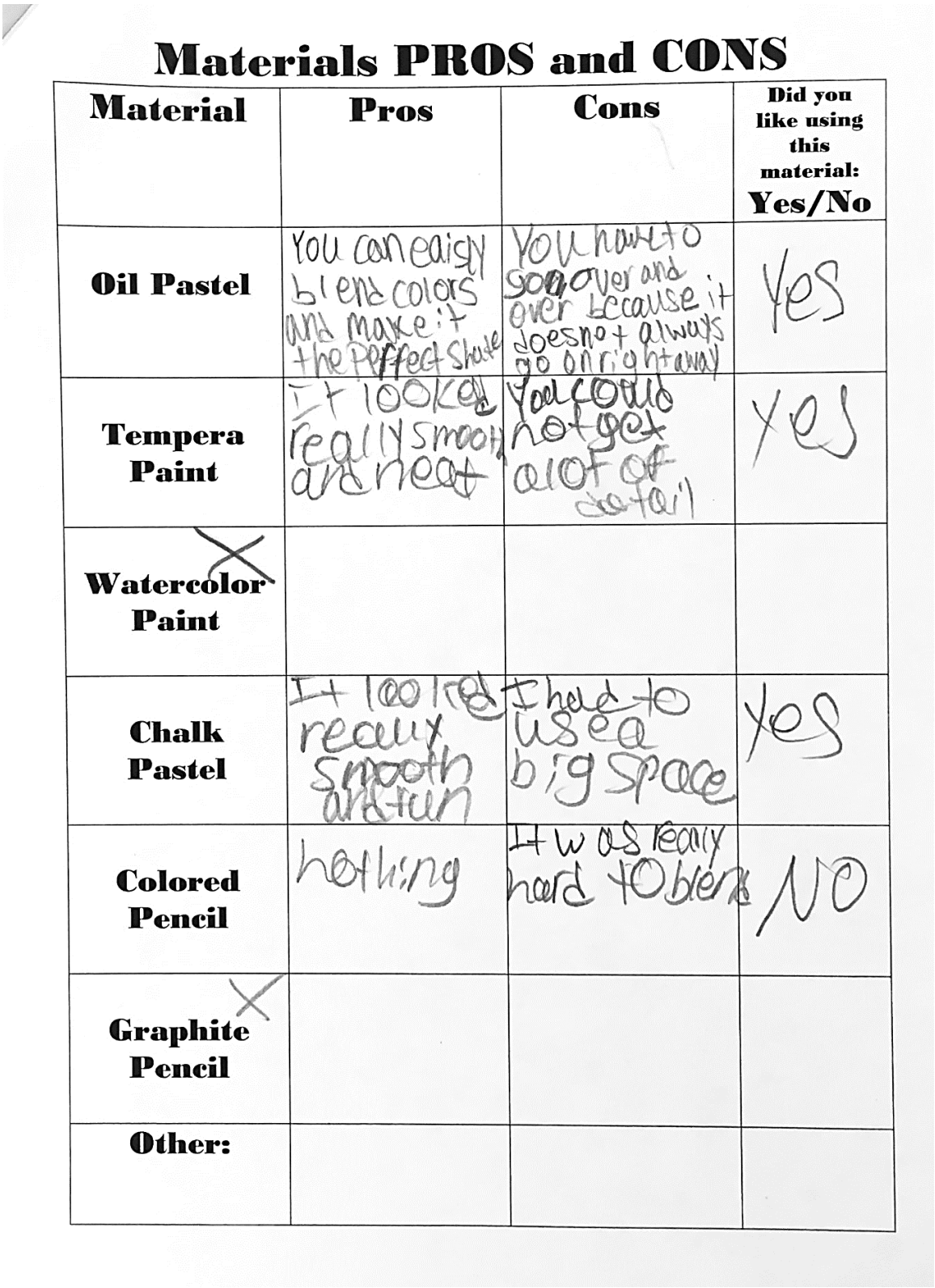


Figure K1b: D.M. Materials Exploration- Tempera Paint Pear

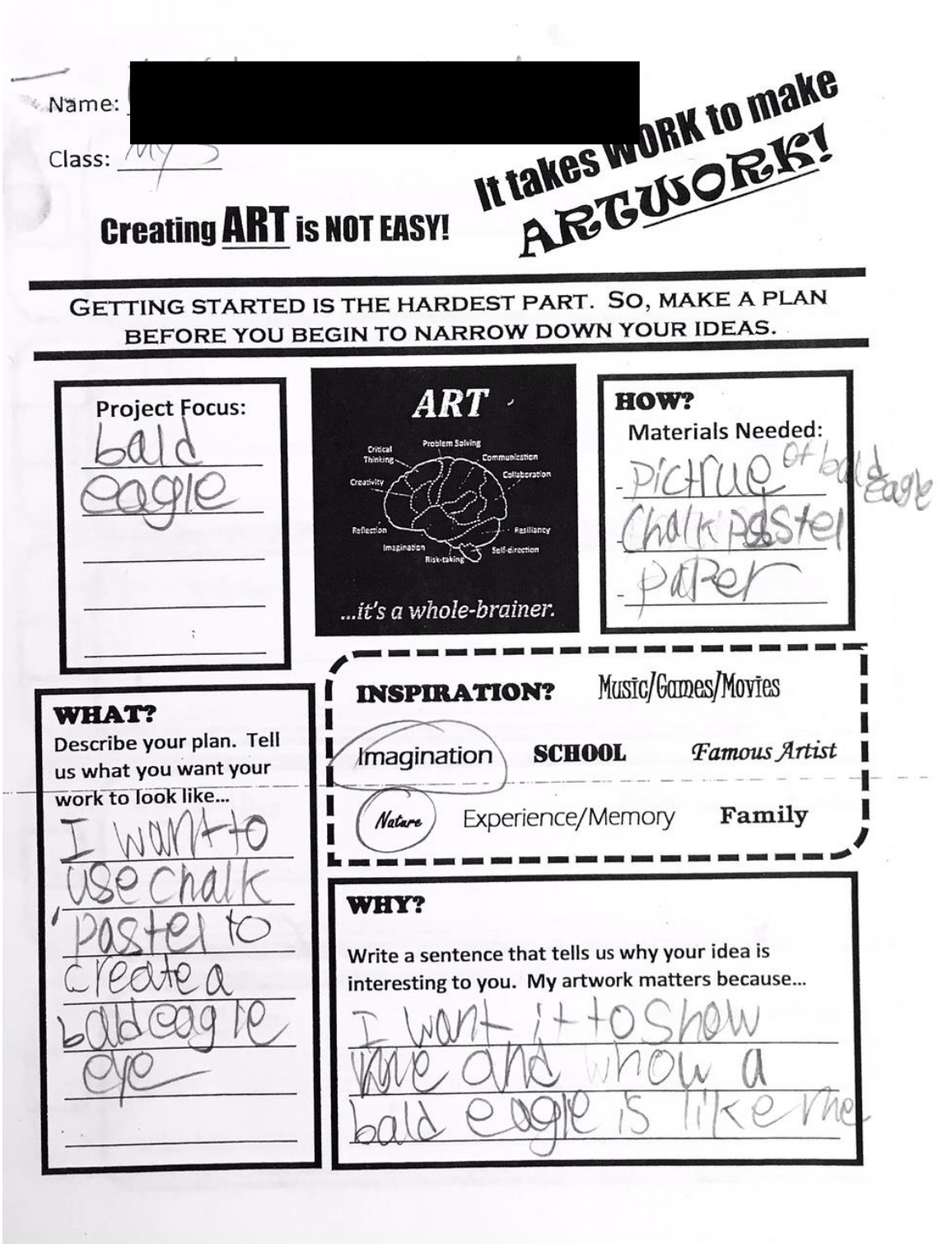
Figure K1c: D.M. Materials Exploration- Chalk Pastel Pear



Materials PROS and CONS

Material	Pros	Cons	Did you like using this material: Yes/No
Oil Pastel	You can eaisy blend colors and make it the perfect shade	You have to go over and over because it does not always go on right away	Yes
Tempera Paint	It looked really smooth and neat	You could not get a lot of detail	Yes
Watercolor Paint			
Chalk Pastel	It looked really smooth and fun	I had to use a big space	Yes
Colored Pencil	nothing	It was really hard to blend	NO
Graphite Pencil			
Other:			

Figure K2: D.M. Materials Pros and Cons



Name: [redacted]

Class: My 3

Creating ART is NOT EASY!

It takes WORK to make ARTWORK!

GETTING STARTED IS THE HARDEST PART. SO, MAKE A PLAN BEFORE YOU BEGIN TO NARROW DOWN YOUR IDEAS.

Project Focus:
bald eagle

ART
Critical Thinking
Problem Solving
Communication
Collaboration
Creativity
Reflection
Fasiliancy
Imagination
Self-direction
Risk-taking
...it's a whole-brainer.

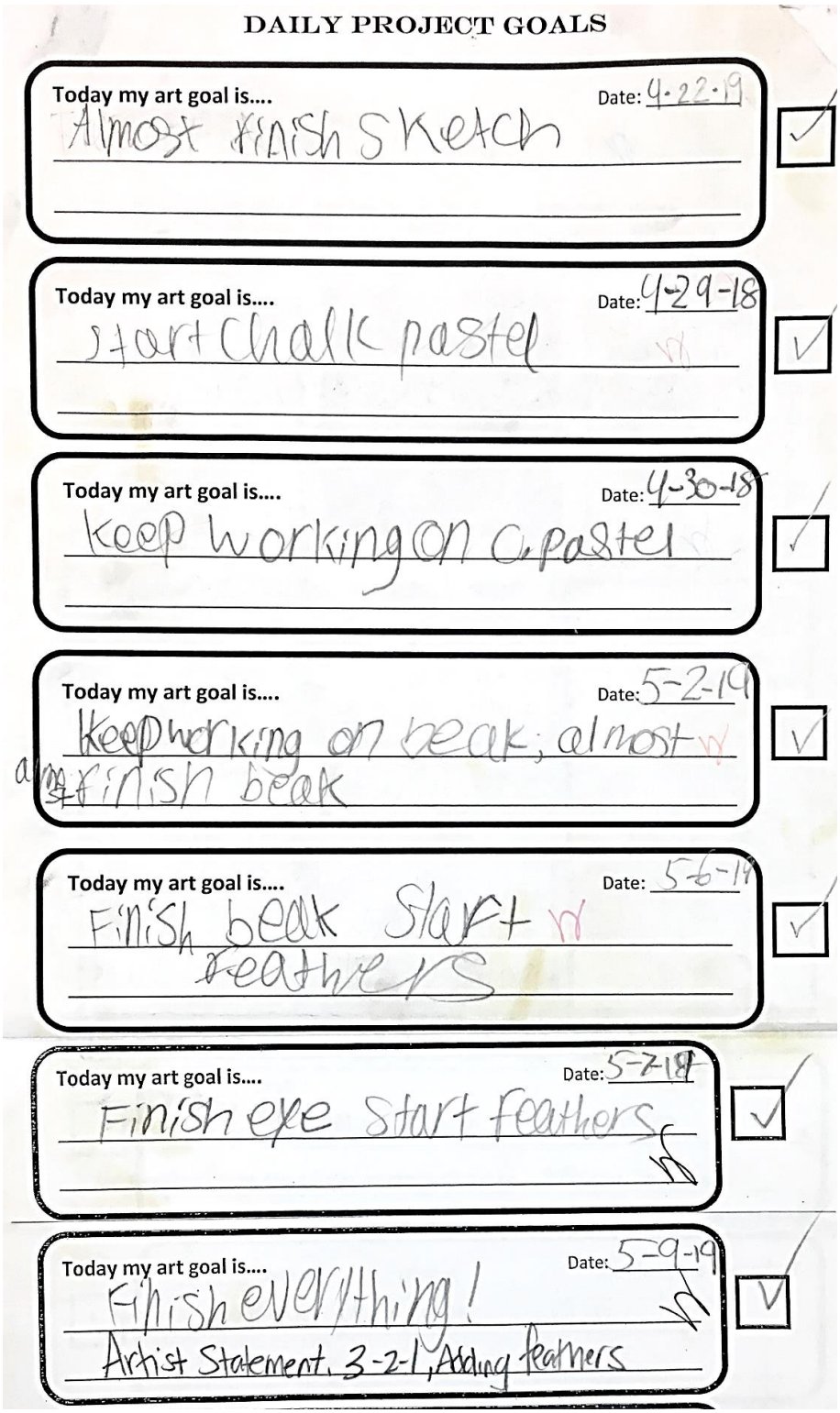
HOW?
Materials Needed:
- picture of bald eagle
- Chalk pastel
- paper

WHAT?
Describe your plan. Tell us what you want your work to look like...
I want to use chalk pastel to create a bald eagle eye

INSPIRATION? Music/Games/Movies
Imagination SCHOOL Famous Artist
Nature Experience/Memory Family

WHY?
Write a sentence that tells us why your idea is interesting to you. My artwork matters because...
I want it to show me and show a bald eagle is like me

Figure K3: D.M. Eye-dentity Project Plan



DAILY PROJECT GOALS

Today my art goal is.... Date: 4-22-19
Almost finish sketch

Today my art goal is.... Date: 4-29-18
start chalk pastel

Today my art goal is.... Date: 4-30-18
keep working on c.pastel

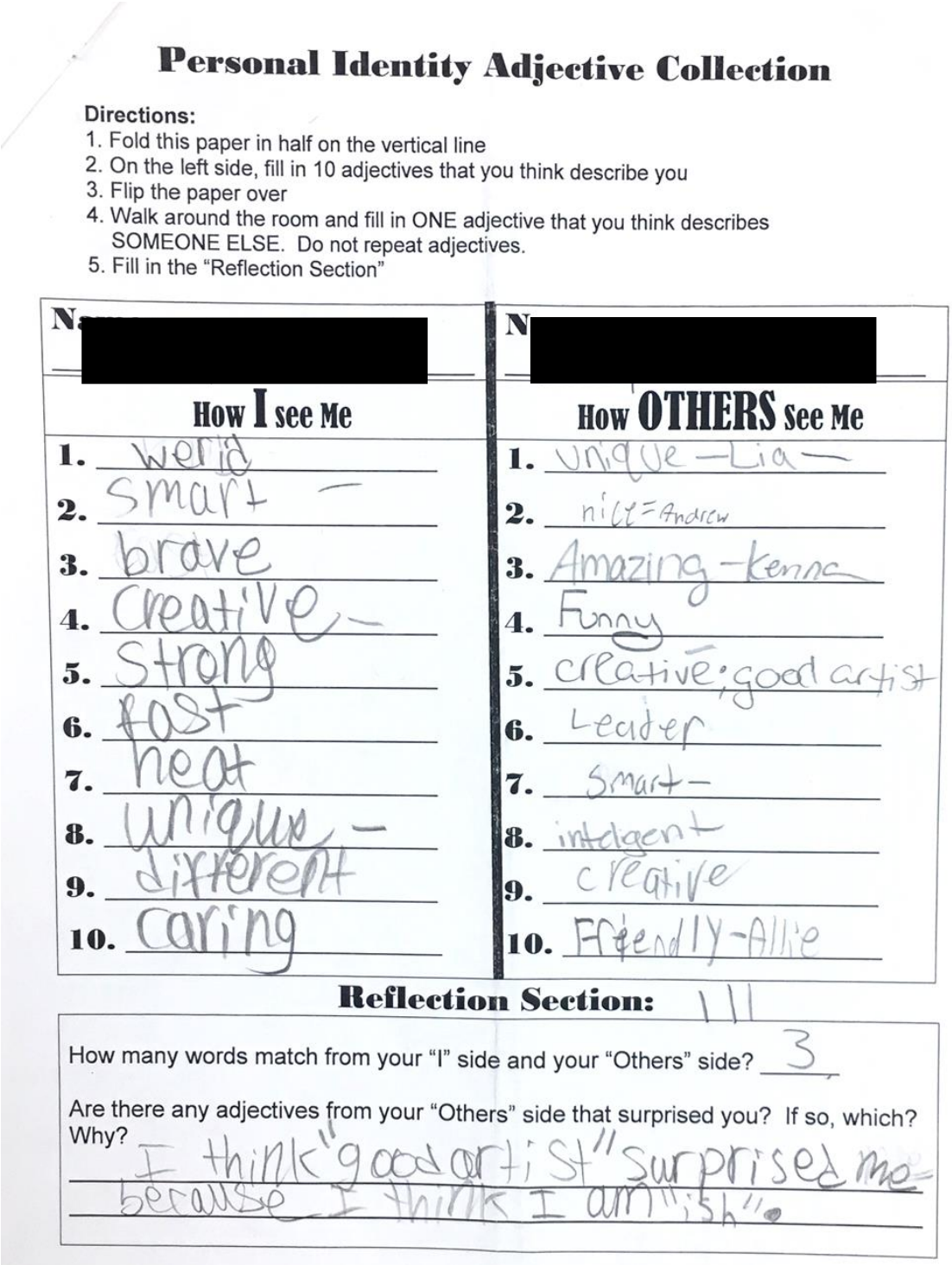
Today my art goal is.... Date: 5-2-19
Keep working on beak; almost finish beak

Today my art goal is.... Date: 5-6-19
Finish beak Start feathers

Today my art goal is.... Date: 5-7-19
Finish eye Start feathers

Today my art goal is.... Date: 5-9-19
Finish everything!
Artist Statement, 3-2-1, Adding feathers

Figure K4: D.M. Eye-dentity Project Goals



Personal Identity Adjective Collection

Directions:
1. Fold this paper in half on the vertical line
2. On the left side, fill in 10 adjectives that you think describe you
3. Flip the paper over
4. Walk around the room and fill in ONE adjective that you think describes SOMEONE ELSE. Do not repeat adjectives.
5. Fill in the "Reflection Section"

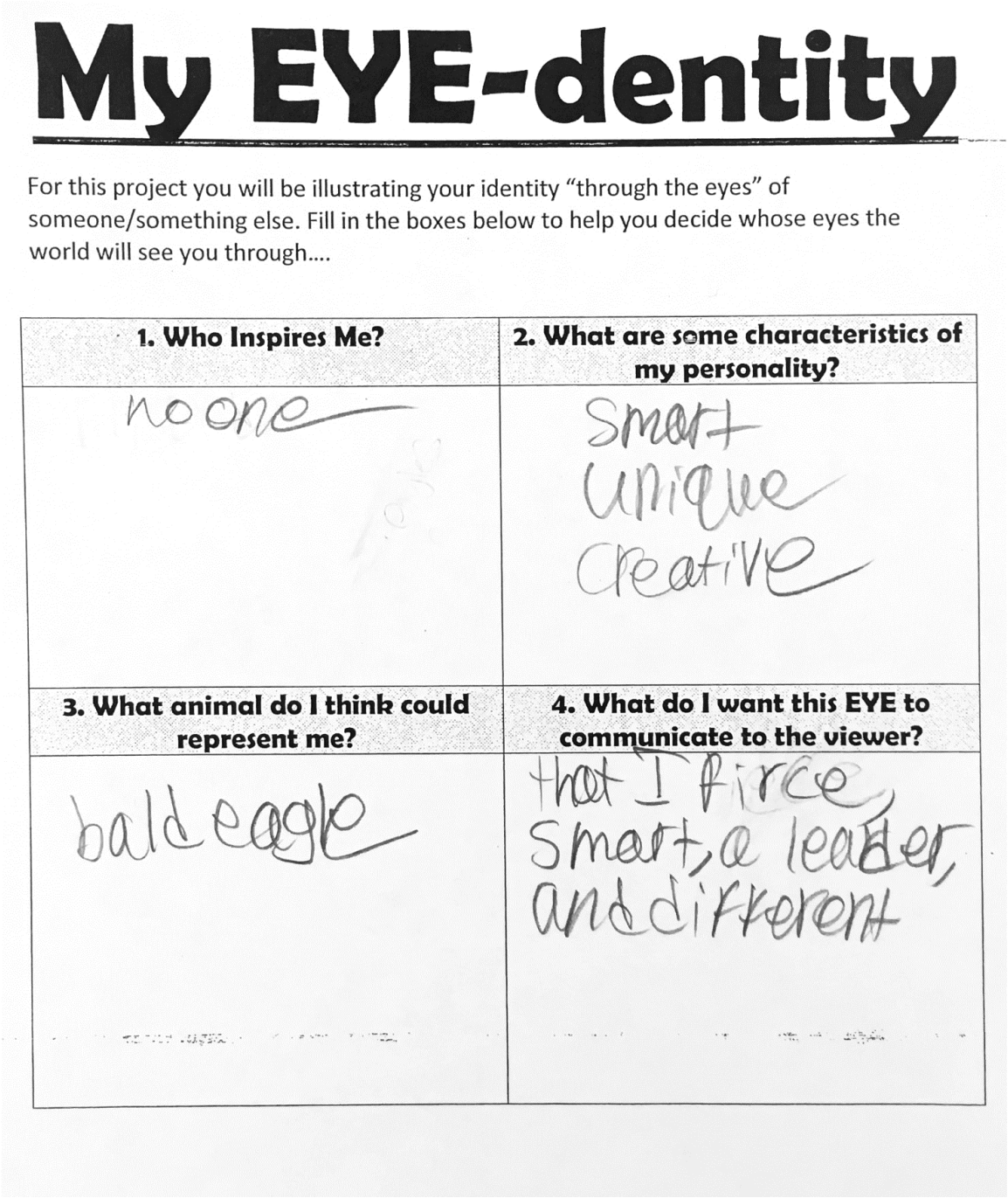
N[redacted]	N[redacted]
How I see Me	**How OTHERS See Me**
1. werid	1. unique – Lia –
2. smart –	2. nice = Andrew
3. brave	3. Amazing – Kenna
4. Creative –	4. Funny
5. Strong	5. creative; good artist
6. fast	6. Leader
7. heat	7. smart –
8. unique –	8. intelgent
9. different	9. creative
10. caring	10. Friendly – Allie

Reflection Section: 111

How many words match from your "I" side and your "Others" side? 3

Are there any adjectives from your "Others" side that surprised you? If so, which? Why? I think "good artist" surprised me because I think I am "ish".

Figure K5: D.M. Personal Identity Adjective Collection



My EYE-dentity

For this project you will be illustrating your identity "through the eyes" of someone/something else. Fill in the boxes below to help you decide whose eyes the world will see you through....

1. Who Inspires Me?	2. What are some characteristics of my personality?
no one	smart unique creative
3. What animal do I think could represent me?	**4. What do I want this EYE to communicate to the viewer?**
bald eagle	that I fierce, smart, a leader, and different

Figure K6: D.M. My Eye-dentity Brainstorming Sheet

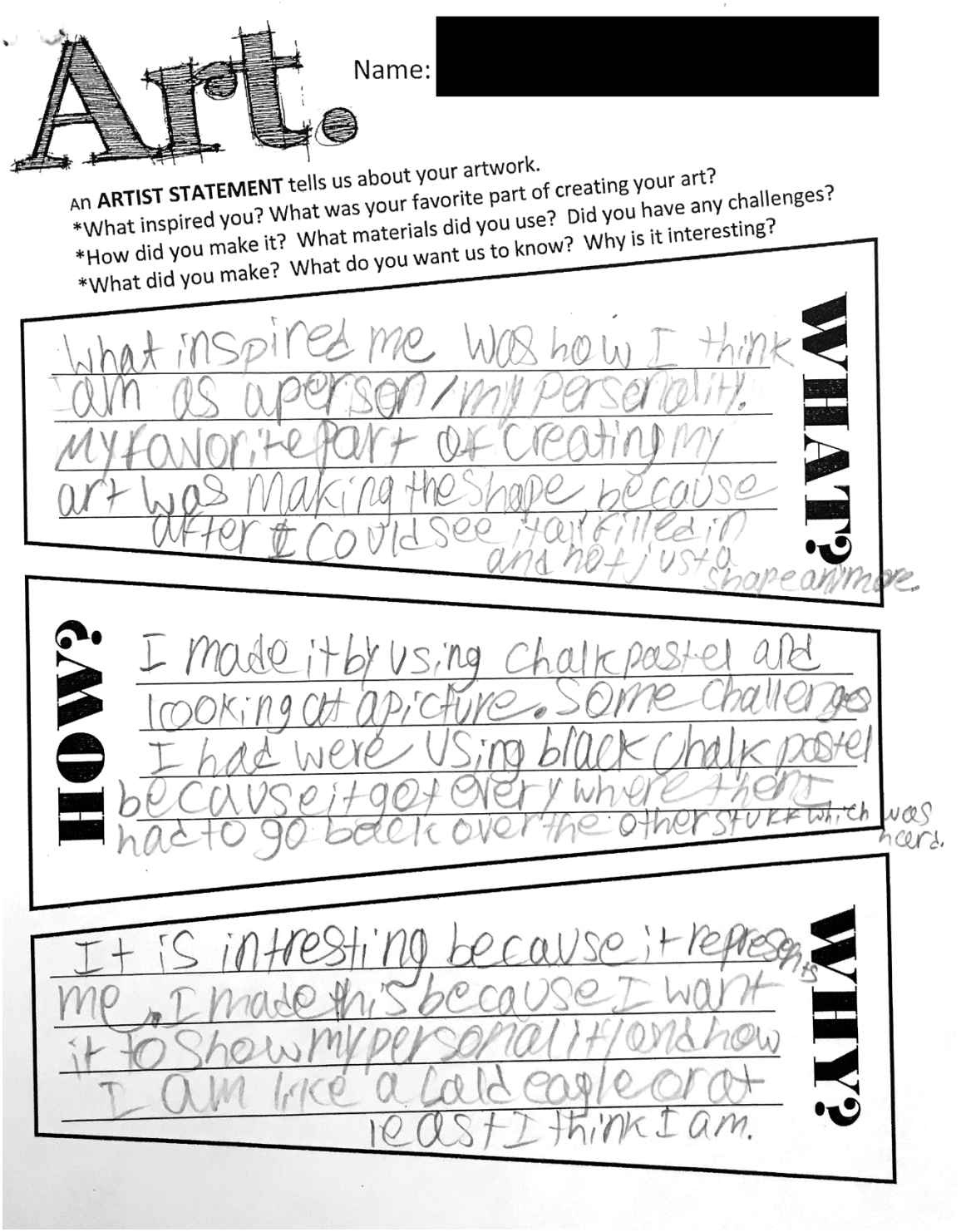
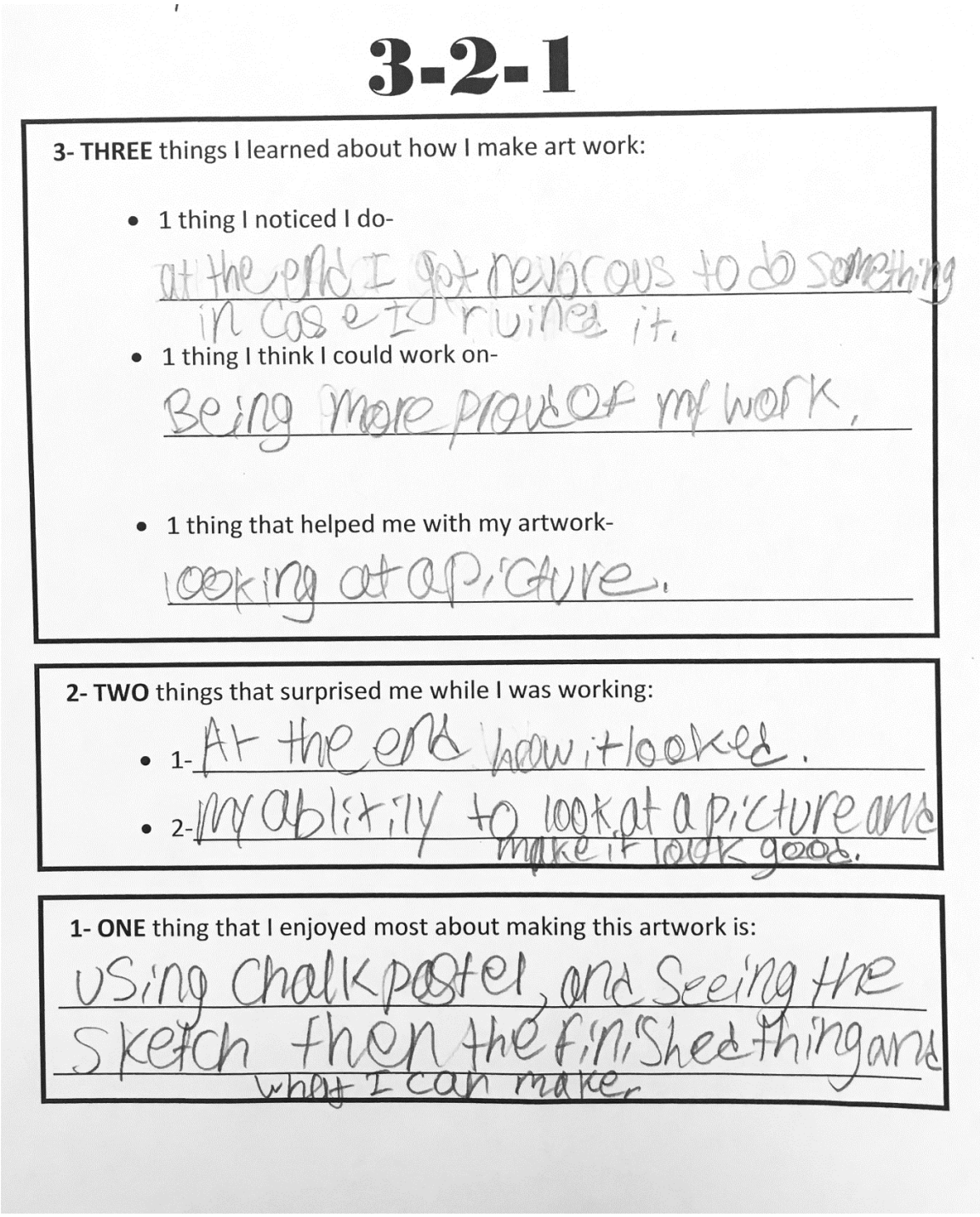


Figure K7: D.M. Eye-dentity Project Artist Statement



3-2-1

3- THREE things I learned about how I make art work:

- 1 thing I noticed I do-

at the end I get nervous to do something in case I ruined it.

- 1 thing I think I could work on-

Being more proud of my work.

- 1 thing that helped me with my artwork-

looking at a picture.

2- TWO things that surprised me while I was working:

- 1- At the end how it looked.
- 2- my ablitiy to look at a picture and make it look good.

1- ONE thing that I enjoyed most about making this artwork is:

using chalk pastel, and seeing the sketch then the finished thing and what I can make.

Figure K8: D.M. 3-2-1 Assessment

Figure K9a: D.M. Eye-dentity Project Process Beginning Stage

Figure K9b: D.M. Eye-dentity Project Process Middle Stage

Figure K9c: D.M. Eye-dentity Project Process Completed

Art Project Rubric

Student Name: D.M. **Class Initials:** My5

Criteria	Master/ Professional 4	Journeyman/ Semi-Pro 3	Apprentice/ Varsity 2	Novice/ Beginner 1	Score
CRAFTSMANSHIP & ART MAKING	➢ Student used materials with great care and proper technique. ➢ Artwork is created skillfully with attention to detail and composition.	➢ Student used materials well but lacked some technique. ➢ Artwork is created with attention to detail and composition but lacks finishing touches.	➢ Student attempted to use materials but struggled with technique. ➢ Artwork is created with little attention to detail or composition.	➢ Student used materials carelessly or inappropriately. ➢ Artwork is created with no attempt at details or composition.	3
WORK ETHIC & TIME MANAGEMENT	➢ Student completed project within the allotted timeframe. ➢ Student is self-motivated and self-starting	➢ Student completed project within the allotted timeframe. ➢ Student needed some reminders to begin work and stay on task.	➢ Project is incomplete but shows evidence of effort. ➢ Student needed frequent reminders to begin work and stay on task.	➢ Project is incomplete and shows little evidence of effort. ➢ Student needed constant reminders to begin work and stay on task.	4
ATTITUDE & RESPONSIBILITY	➢ Student is interested and engaged in class ➢ Student consistently cared for materials and workspace.	➢ Student worked respectfully and responsibly ➢ Student mostly cared for materials and workspace.	➢ Student attitude was inconsistent or indifferent. ➢ Student had difficulty caring for materials and workspace.	➢ Student was disruptive, negative, and showed a poor attitude. ➢ Student did not take care of materials or workspace.	4
REFLECTION & EDITING	➢ Student made outstanding effort to reflect on their work and make improvements.	➢ Student made some effort to reflect on their work and make improvements.	➢ Student made minimal effort to reflect on their work and make improvements.	➢ Student showed no attempt to reflect or make any changes or improvements	3
SHARING & COLLABORATION	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully with some clarification.	➢ Student struggles to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is unable to unwilling to communicate clearly and respectfully about their artwork.	3
				Total Score:	**17**

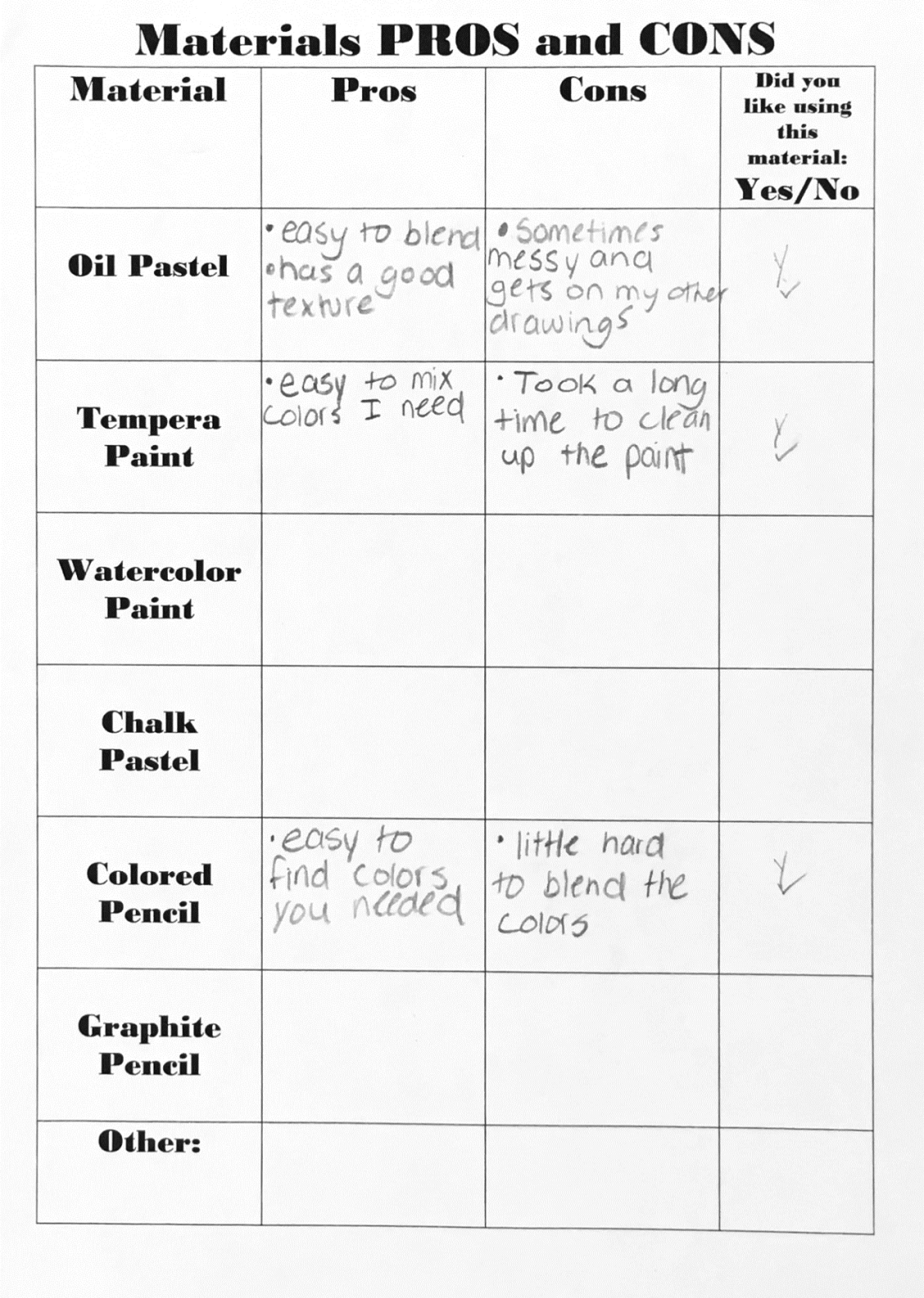
Figure K10: D.M. Eye-dentity Project Rubric

APPENDIX L: Student Participant K.P. Project Artifacts

Figure L1a: K.P. Materials Exploration- Oil Pastel Pear

Figure L1b: K.P. Materials Exploration- Tempera Paint Pear

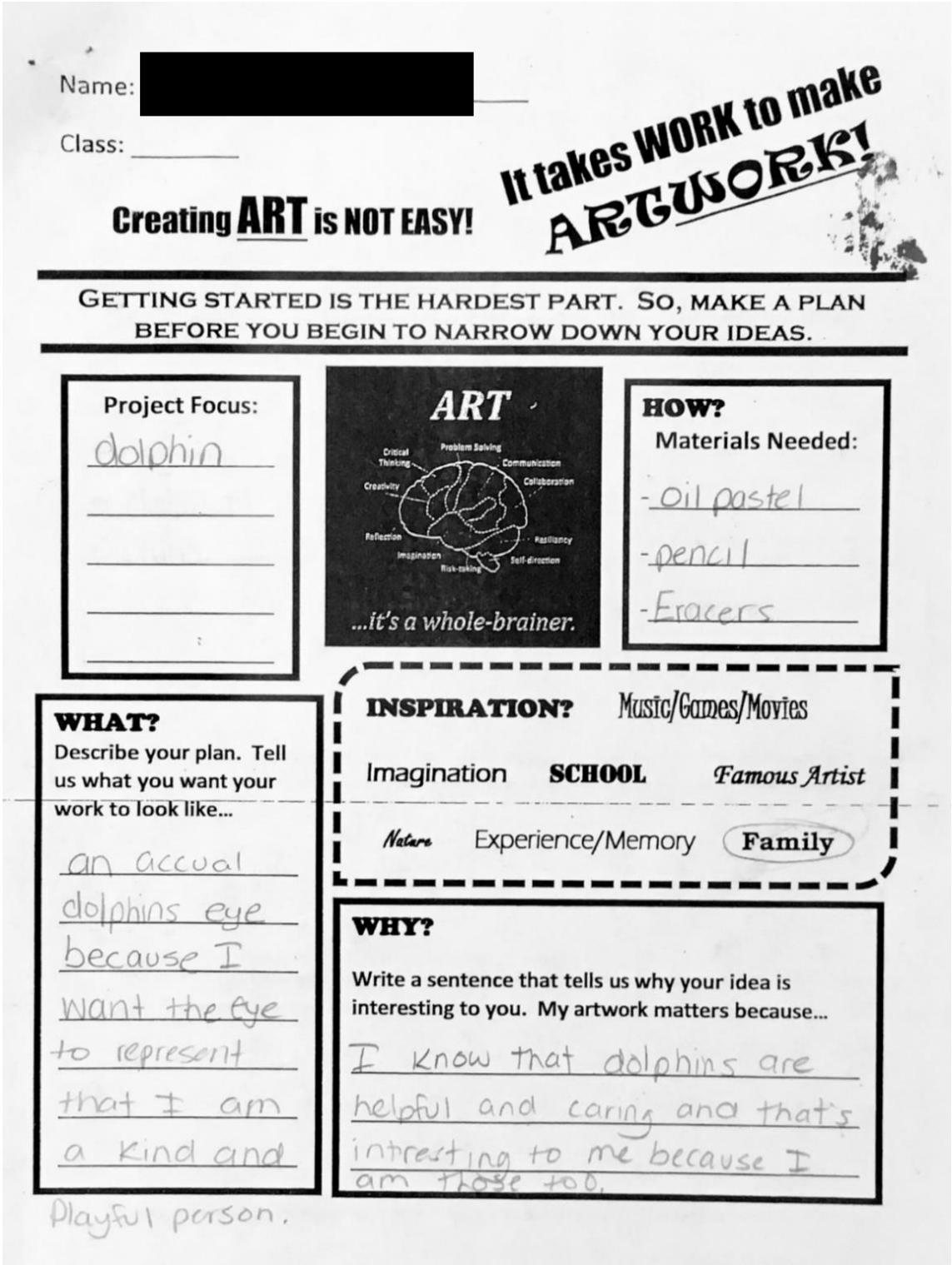
Figure L1c: K.P. Materials Exploration- Colored Pencil Pear



Materials PROS and CONS

Material	Pros	Cons	Did you like using this material: Yes/No
Oil Pastel	• easy to blend • has a good texture	• Sometimes messy and gets on my other drawings	Y ✓
Tempera Paint	• easy to mix colors I need	• Took a long time to clean up the paint	Y ✓
Watercolor Paint			
Chalk Pastel			
Colored Pencil	• easy to find colors you needed	• little hard to blend the colors	✓
Graphite Pencil			
Other:			

Figure L2: K.P. Materials Pros and Cons



Name: [redacted]

Class: _____

Creating ART is NOT EASY!

It takes WORK to make ARTWORK!

GETTING STARTED IS THE HARDEST PART. SO, MAKE A PLAN BEFORE YOU BEGIN TO NARROW DOWN YOUR IDEAS.

Project Focus:

dolphin

ART

Critical Thinking, Problem Solving, Communication, Collaboration, Creativity, Reflection, Resiliency, Imagination, Self-direction, Risk-taking

...it's a whole-brainer.

HOW?

Materials Needed:

- oil pastel
- pencil
- Eracers

WHAT?

Describe your plan. Tell us what you want your work to look like...

an accual dolphins eye because I want the eye to represent that I am a kind and Playful person.

INSPIRATION? Music/Games/Movies

Imagination **SCHOOL** *Famous Artist*

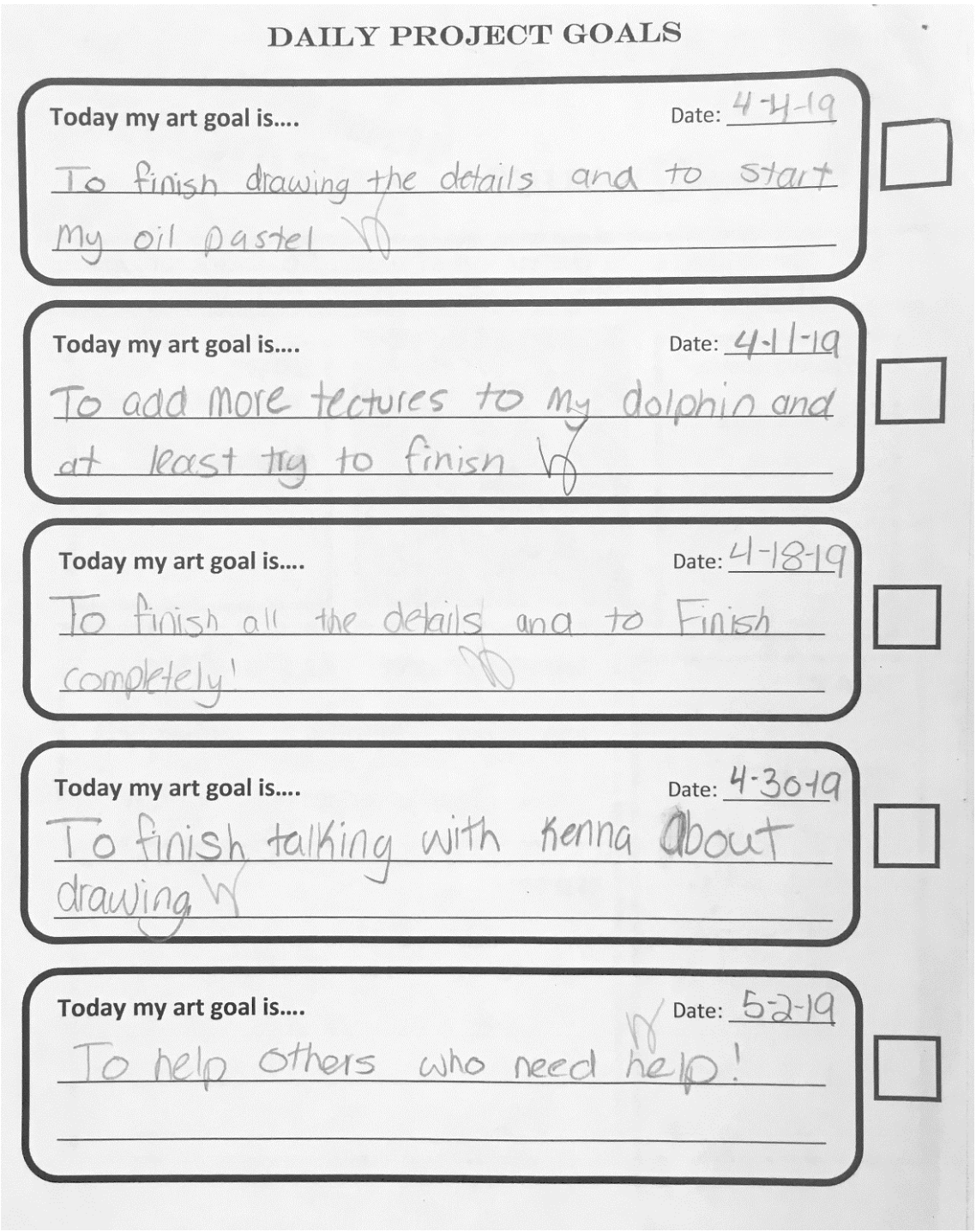
Nature Experience/Memory **Family**

WHY?

Write a sentence that tells us why your idea is interesting to you. My artwork matters because...

I know that dolphins are helpful and caring and that's intresting to me because I am those too.

Figure L3: K.P. Eye-dentity Project Plan



DAILY PROJECT GOALS

Today my art goal is.... Date: 4-4-19

To finish drawing the details and to start my oil pastel

Today my art goal is.... Date: 4-11-19

To add more tectures to my dolphin and at least try to finisn

Today my art goal is.... Date: 4-18-19

To finish all the details and to Finish completely!

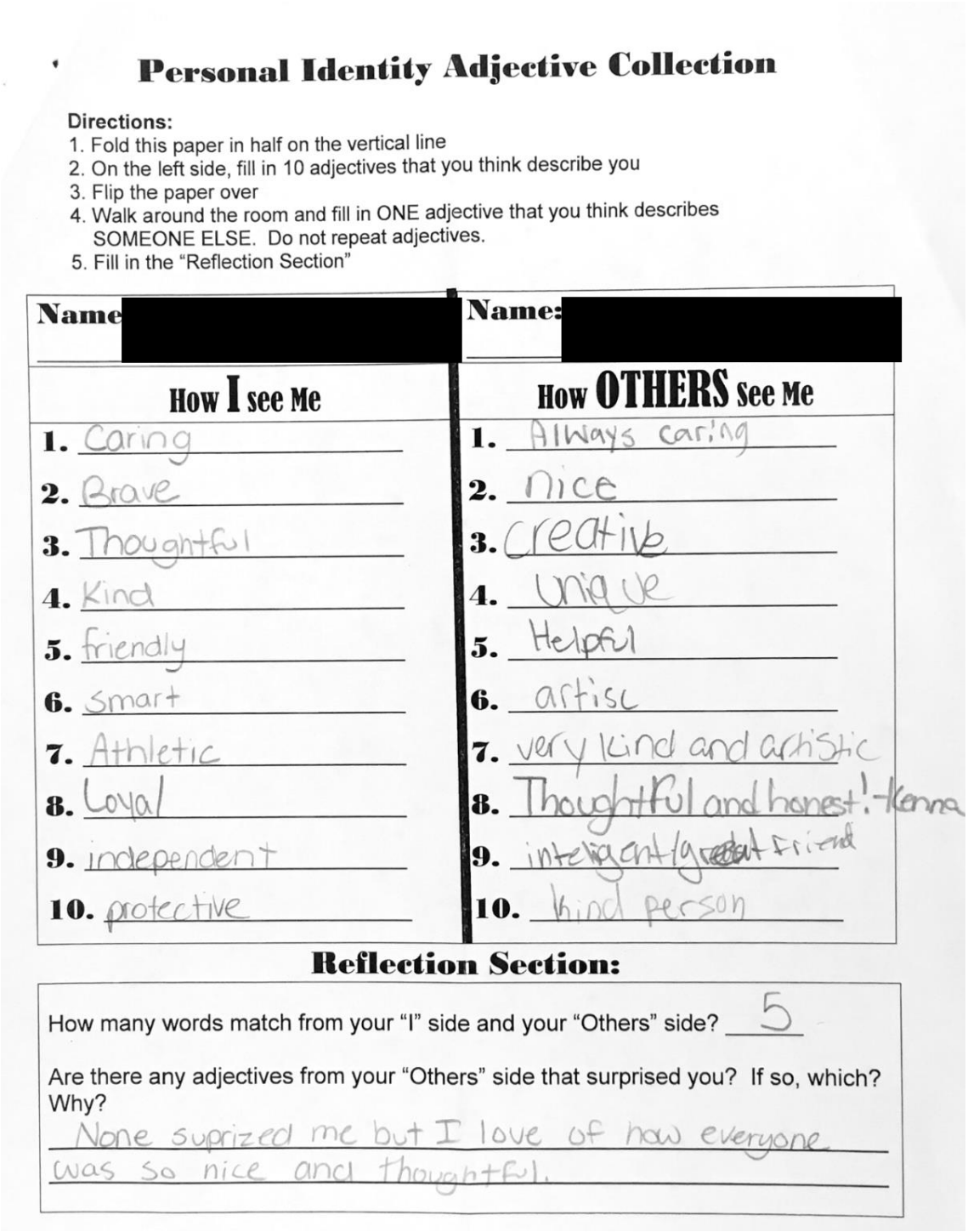
Today my art goal is.... Date: 4-30-19

To finish talking with Kenna about drawing

Today my art goal is.... Date: 5-2-19

To help others who need help!

Figure L4: K.P. Eye-dentity Project Goals



Personal Identity Adjective Collection

Directions:
1. Fold this paper in half on the vertical line
2. On the left side, fill in 10 adjectives that you think describe you
3. Flip the paper over
4. Walk around the room and fill in ONE adjective that you think describes SOMEONE ELSE. Do not repeat adjectives.
5. Fill in the "Reflection Section"

Name [redacted]	Name: [redacted]
How I see Me	**How OTHERS See Me**
1. Caring	1. Always caring
2. Brave	2. nice
3. Thoughtful	3. creative
4. Kind	4. Unique
5. friendly	5. Helpful
6. smart	6. artisc
7. Athletic	7. very kind and artistic
8. Loyal	8. Thoughtful and honest! -Kenna
9. independent	9. intelligent/great friend
10. protective	10. kind person

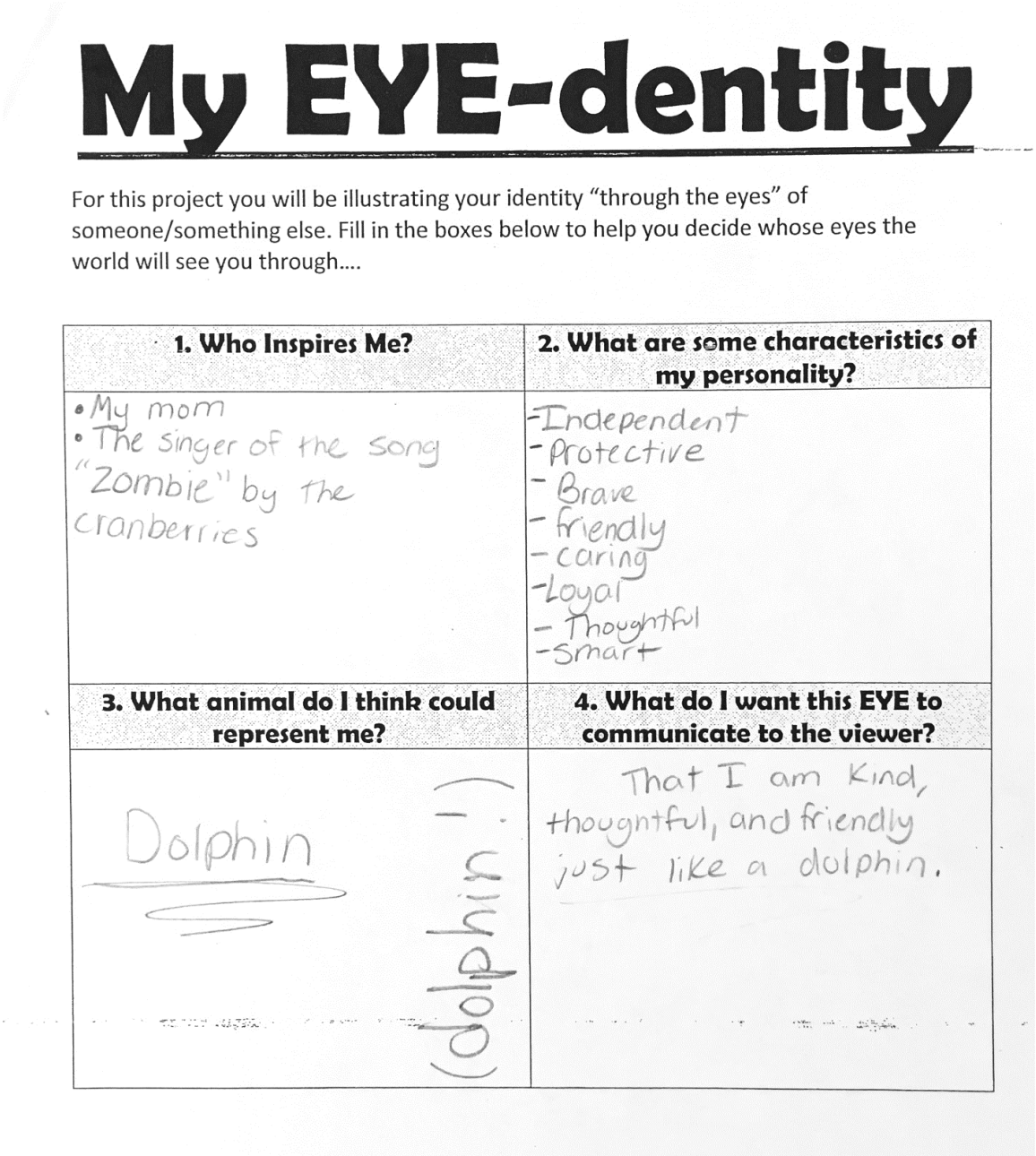
Reflection Section:

How many words match from your "I" side and your "Others" side? 5

Are there any adjectives from your "Others" side that surprised you? If so, which? Why?

None suprized me but I love of how everyone was so nice and thoughtful.

Figure L5: K.P. Personal Identity Adjective Collection

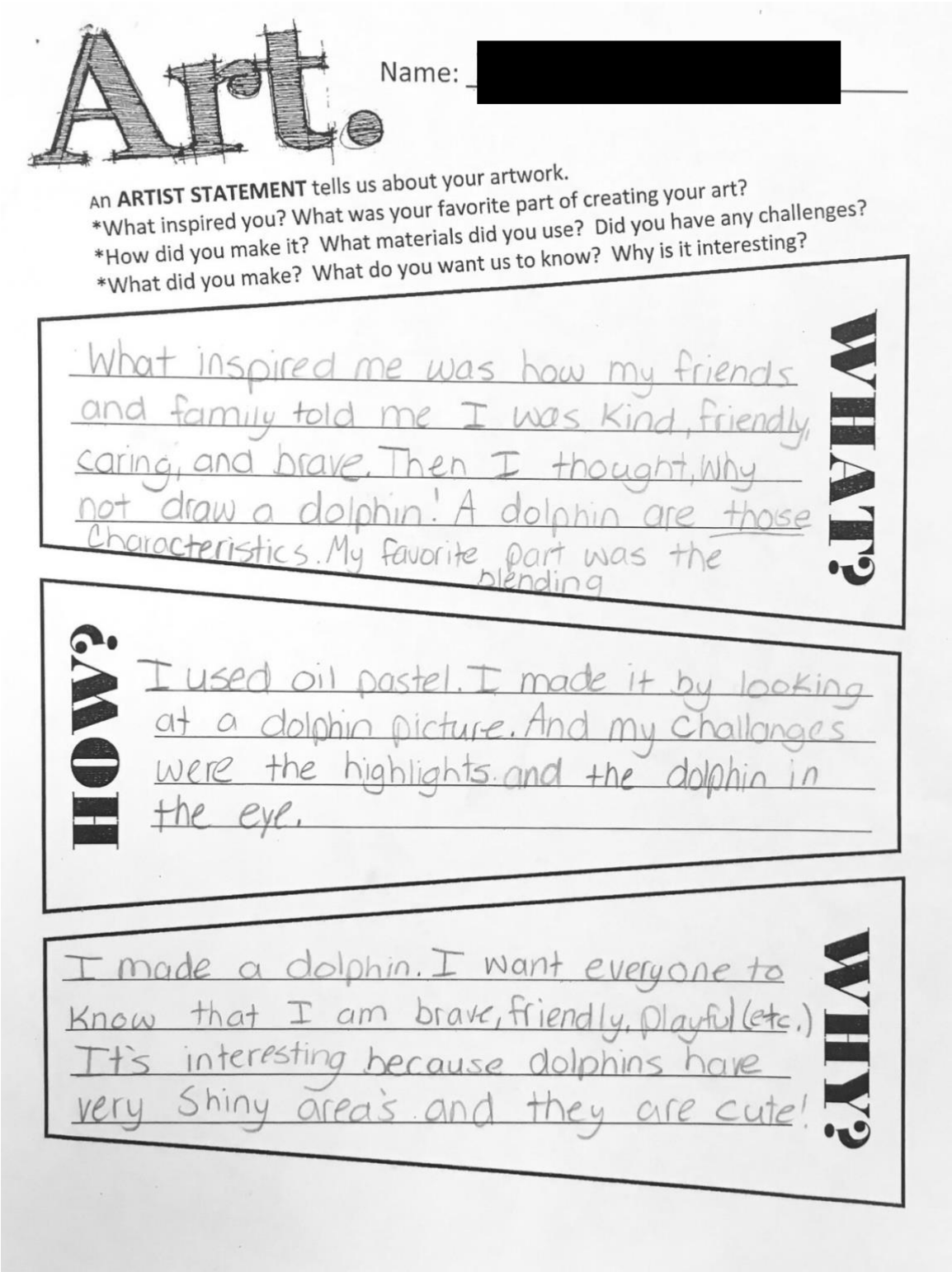


My EYE-dentity

For this project you will be illustrating your identity "through the eyes" of someone/something else. Fill in the boxes below to help you decide whose eyes the world will see you through....

1. Who Inspires Me?	2. What are some characteristics of my personality?
• My mom • The singer of the song "Zombie" by the Cranberries	-Independent - Protective - Brave - friendly - caring -Loyal - Thoughtful -Smart
3. What animal do I think could represent me?	**4. What do I want this EYE to communicate to the viewer?**
Dolphin (dolphin)	That I am Kind, thoughtful, and friendly just like a dolphin.

Figure L6: K.P. My Eye-dentity Brainstorming Sheet



Art.

Name: [redacted]

An **ARTIST STATEMENT** tells us about your artwork.
*What inspired you? What was your favorite part of creating your art?
*How did you make it? What materials did you use? Did you have any challenges?
*What did you make? What do you want us to know? Why is it interesting?

WHAT?

What inspired me was how my friends and family told me I was Kind, friendly, caring, and brave. Then I thought, Why not draw a dolphin! A dolphin are those Characteristics. My favorite part was the blending

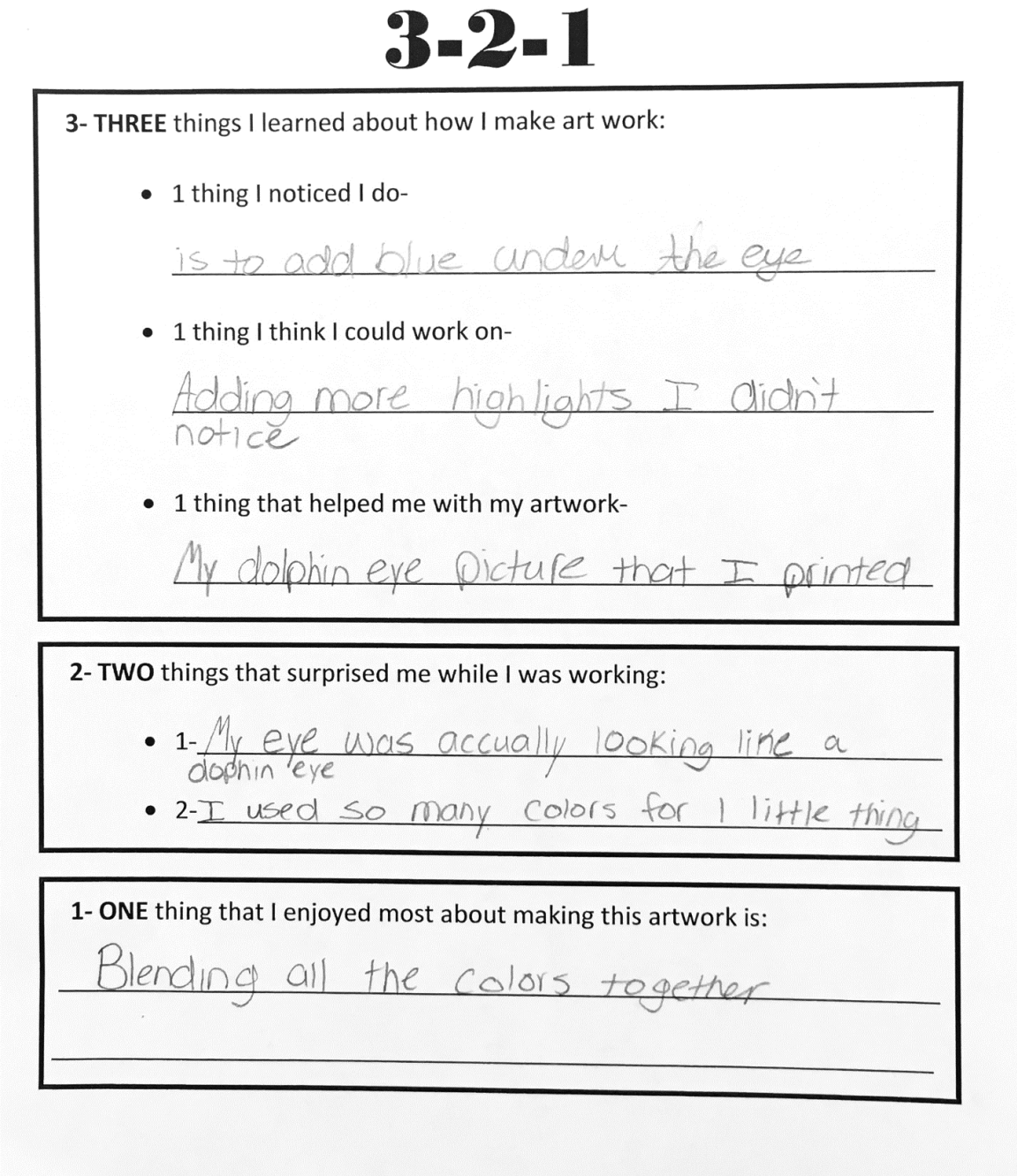
HOW?

I used oil pastel. I made it by looking at a dolphin picture. And my Challanges were the highlights and the dolphin in the eye.

WHY?

I made a dolphin. I want everyone to Know that I am brave, friendly, Playful (etc.) It's interesting because dolphins have very Shiny area's and they are cute!

Figure L7: K.P. Eye-dentity Project Artist Statement



3-2-1

3- THREE things I learned about how I make art work:

- 1 thing I noticed I do-

  is to add blue underm the eye

- 1 thing I think I could work on-

  Adding more highlights I didn't notice

- 1 thing that helped me with my artwork-

  My dolphin eye picture that I printed

2- TWO things that surprised me while I was working:

- 1- My eye was accually looking like a dophin eye
- 2- I used so many colors for 1 little thing

1- ONE thing that I enjoyed most about making this artwork is:

Blending all the colors together

Figure L8: K.P. 3-2-1 Assessment

Figure L9a: K.P. Eye-dentity Project Process Beginning Stage

Figure L9b: K.P. Eye-dentity Project Process Middle Stage

Figure L9c: K.P. Eye-dentity Project Process Completed

Art Project Rubric

Student Name: K.P. **Class Initials:** My5

Criteria	Master/ Professional 4	Journeyman/ Semi-Pro 3	Apprentice/ Varsity 2	Novice/ Beginner 1	Score
CRAFTSMANSHIP & ART MAKING	➢ Student used materials with great care and proper technique. ➢ Artwork is created skillfully with attention to detail and composition.	➢ Student used materials well but lacked some technique. ➢ Artwork is created with attention to detail and composition but lacks finishing touches.	➢ Student attempted to use materials but struggled with technique. ➢ Artwork is created with little attention to detail or composition.	➢ Student used materials carelessly or inappropriately. ➢ Artwork is created with no attempt at details or composition.	4
WORK ETHIC & TIME MANAGEMENT	➢ Student completed project within the allotted timeframe. ➢ Student is self-motivated and self-starting	➢ Student completed project within the allotted timeframe. ➢ Student needed some reminders to begin work and stay on task.	➢ Project is incomplete but shows evidence of effort. ➢ Student needed frequent reminders to begin work and stay on task.	➢ Project is incomplete and shows little evidence of effort. ➢ Student needed constant reminders to begin work and stay on task.	4
ATTITUDE & RESPONSIBILITY	➢ Student is interested and engaged in class ➢ Student consistently cared for materials and workspace.	➢ Student worked respectfully and responsibly ➢ Student mostly cared for materials and workspace.	➢ Student attitude was inconsistent or indifferent. ➢ Student had difficulty caring for materials and workspace.	➢ Student was disruptive, negative, and showed a poor attitude. ➢ Student did not take care of materials or workspace.	4
REFLECTION & EDITING	➢ Student made outstanding effort to reflect on their work and make improvements.	➢ Student made some effort to reflect on their work and make improvements.	➢ Student made minimal effort to reflect on their work and make improvements.	➢ Student showed no attempt to reflect or make any changes or improvements	4
SHARING & COLLABORATION	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is able to communicate ideas about their work using art vocabulary clearly and respectfully with some clarification.	➢ Student struggles to communicate ideas about their work using art vocabulary clearly and respectfully.	➢ Student is unable to unwilling to communicate clearly and respectfully about their artwork.	4
				Total Score:	**20**

Figure L10: K.P. Eye-dentity Project Rubric