This book is part of a series of case studies that demonstrate better ways to educate Ohio's students. The case study is part of the Transforming Learning Communities (TLC) Project, designed to support significant school-reform efforts among Ohio's elementary, middle, and high schools. This report describes the implementation of an innovative program at a high school in central Ohio. It is based on a 9-month study that included observations, analysis of documents, and interviews of faculty, staff, administrators, and other stakeholders. Some of the questions researchers asked about the program included: "What are the structures, strategies, and support networks that have developed to encourage change?" and "What is the nature of the learning community at the high school?" The text provides a history of the school and details the nature of the professional community, emphasizing the presence of reflective dialogue, shared norms and values, the collective focus on student learning, collaborative practices, and the de-privatization of practice. It then examines the collective focus on student learning and explores further the de-privatization of practice. The book closes with a plea to reformers to embrace innovation while valuing tradition. Two appendices outline the methodology and the observation protocol used for the study. (Contains 28 references and 27 figures.) (RJM)
The Case Study of Franklin Heights High School
BUILDING A PROFESSIONAL COMMUNITY:
THE CASE STUDY OF
FRANKLIN HEIGHTS HIGH SCHOOL

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Ohio Department of Education
Columbus, Ohio
1999
Dear Readers:

The 12 Transforming Learning Communities case studies enlighten readers about the search for better ways to educate Ohio’s young people. The stories, told by educators themselves, paint a realistic picture of schools in Ohio.

The unique and inspirational perspectives of the school people highlight the triumphs of team spirit, the drive to turn obstacles into opportunities, and the effort to consider complex questions and find answers that lead to higher student achievement.

At the core of educational change is a long-term commitment to teaching and learning that has the potential for creating positive change throughout society. The case studies emphasize intense, high-quality professional development; increased service to others; a holistic approach to education; the promotion of a sense of community; and a deepening understanding of the daily work in the classrooms, the corridors, and the boardrooms of public schools.

The educators at the heart of change encourage us to examine and refresh our views about schools. They describe ways to improve the quality of education in Ohio schools.

Sincere thanks is extended to the local educators, university researchers, and concerned citizens for their willingness to openly examine the lessons from the past, the realities of the present, and the likely consequences of change.

This research tells stories of success and frustration in the tireless crusade to make life better for future generations.

Sincerely,

Linda C. Nusbaum
Research Project Manager
Transforming Learning Communities Project

INTRODUCTION

The Transforming Learning Communities (TLC) Project was an initiative funded by the Ohio Department of Education (ODE) to support significant school reform efforts among Ohio's elementary, middle, and high schools. Education researchers associated with the International Centre for Educational Change at the Ontario Institute for Studies in Education of the University of Toronto were contracted to undertake in-depth case studies of school improvement in a select number of schools supported by the Ohio's Venture Capital grants. The aim was to understand the school improvement efforts in these schools, and to engage other Ohio educators in the lessons learned from these schools' experiences.

The project title communicates the orientation to the study. "Learning communities" is a metaphor for schools as learning places for everyone (especially students and teachers) who has a stake in the success of schools as educational environments. "Transforming" signifies that the schools are in a process of change, and that the changes they are striving to achieve involve fundamental reforms in teaching and learning, assessment, organization, professional development, and/or governance. Transforming also captures the intent of the project to support — not just to document — the process of change in participating schools.

The TLC Project began in the Spring of 1997. A three-stage process was used to identify and select schools that have demonstrated notable progress in their efforts to implement significant change over the preceding three to five years: (1) solicitation of nominations from ODE staff familiar with the Venture Capital schools, corroborating opinions from independent sources, e.g., Regional Professional Development Center staff, and statistical profiles for nominated schools, e.g., performance and demographic data; (2) telephone interviews with the principal of each nominated school; and (3) ranking of schools according to relevant sampling criteria. Twelve schools were chosen for variation in type — elementary, middle, secondary; location — rural, urban, and suburban from various regions in Ohio; focus for change, e.g., teaching and learning, professional growth, school-community partnerships; school improvement model, and evidence of progress.

The individual case studies were carried out during the 1997/98 school year by teams consisting of at least two members of the school staff and researchers from four Ohio universities that partnered with the schools. Each team designed and implemented a multi-method study of school improvement activities and outcomes in their school learning community. These included interviews, observations, surveys, and documents. While each case study reflected the unique character of school change at each school, the studies employed a common conceptual framework to guide their exploration and analysis of change in these school learning communities. The TLC framework oriented the case study teams to investigate change and change processes in multiple contexts — the classroom, the corridors, and the community — and in relation to three key processes of learning in organizations: collaboration, inquiry, and integration.

The major products of the Transforming Learning Communities Project include 12 individual case study monographs, a cross-case study and handbook, and a companion video at www.ode.ohio.gov.
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Franklin Heights High School, constructed in 1955, was designed and built with unadorned frugality to meet the needs of a rapidly growing baby-boom student population. Its two-story, factory-like brick facade greets Franklin Heights students, staff, and visitors. A stark brick chimney towers above the second story. Two pairs of steel doors open at the top of four concrete steps at the front and center. To the left of these entry doors, the southeast corner of the building extends above the second level, a windowless brick wall, printed with the words “Franklin Heights High School.” Above and to the right of the doors are large rectangular windows, some of which open to the outside. A single-level brick structure juts out from the center of this frontal view. The architecture of this 1986 single-level addition blends with the existing structure. The landscape is sparsely groomed with flowers planted around the flag post and the entry steps. The American flag waves in the wind.

To the south of the building are six rows of cars in a paved parking lot separating the school building from a practice field. The community center and the football stadium occupy the southwest and west fields, respectively. Between the stadium and the back of the high school is additional parking, usually reserved for the staff. To the north side of the building are tennis courts surrounded by chain-link fencing. At first glance, one sees a largely unremarkable American public high school.

The staff at Franklin Heights includes 68 certificated and 32 classified personnel, as well as four administrators, four counselors, and one librarian. Longevity is the norm. Many staff members have been at Franklin Heights for 10 years or more. Graduates return as teachers. Current administrators were initially part of the Franklin Heights teaching staff. Adults who come to work at Franklin Heights choose to stay. A myriad of voices echo, “It's a great place to be.” There is clearly more here than first meets the eye.

Franklin Heights is a comprehensive high school serving students in grades nine through 12. The building currently houses approximately 1,100 students. Over the past 15 years, the student population has remained relatively stable, despite a yearly mobility rate that approaches 35 percent. Ten percent of the student population is African-American, and three percent is Asian. The remaining 87 percent is
European-American. The average income of families in the Franklin Heights attendance area is slightly below $20,000, compared with the district average of slightly above $29,000. The student attendance rate is 92 percent. The graduation rate is 86 percent.

The Larger Community

Moving out beyond the school grounds, the immediate neighborhood combines residential, industrial, and retail properties. Modest single-family dwellings and numerous rental complexes (some subsidized) largely comprise the available housing stock. Small local businesses are dispersed in close proximity to the school. Industrial properties and large shopping plazas occupy land only a couple of miles away.

The students of Franklin Heights High School come primarily from working-class families. The blue-collar, urban community includes a population where 57 percent of the parents have graduated from high school and a small percentage of parents have a post high school education. A modest number of parents serve on the local parent-teacher association (PTA); some parents are members of the athletic boosters; others contribute as school committee members or student project evaluators. School administrators and teachers maintain that these parents play a critical role within the Franklin Heights school community.

The South-Western City School District is located in the southwest quadrant of Franklin County. With 18,300 students, it is the seventh largest district in Ohio. Because of its size and complexity, creating a unified sense of community across schools is difficult to accomplish. There are three comprehensive high schools around which have grown separate and distinct neighboring communities. The Franklin Heights attendance area borders a large urban school district. Although it is the smallest, with a student body about half the size of the other two high schools, the urban and industrial nature of the place makes it difficult for this high school to foster a strong connection with the neighborhood.

In addition to the three comprehensive high schools, the South-Western City School District includes one vocational technical high school, five middle schools, 17 elementary schools, and two alternative schools. The alternative schools serve the needs of students with severe emotional and behavioral disabilities. Juniors and seniors in the district may also choose to spend half of their day at a local four-year university. This project-oriented program offers students an opportunity to interact with students from other districts in the area and to earn two and a half credits a year through interdisciplinary work in social studies, the arts, and English.
A Decade of Change

Over the past 10 years, faculty, staff, and administrators at Franklin Heights High School have altered the way they work with students and with one another. Recognizing that eight discrete periods of academic instruction were ineffective for many of their students, they began to experiment with other manners of organizing people, time, instruction, and curricular content.

First, they intervened with specific freshman students who were at risk of school failure. Then, they expanded their efforts to a much larger percentage of freshman students through a Tech Prep curricu- lum. Tech Prep programs offer at least four years of sequential course work at the secondary and post-secondary levels to prepare students for technical careers. Programs typically begin in the eleventh grade and result in an award of an associate degree or certificate after two years of postsecondary training. At Franklin Heights, this program placed students and teachers within teams, modified the daily schedule, and introduced an interdisciplinary curriculum. Next, they extended this Tech Prep program to the sophomore level, and also added new technical options for eleventh and twelfth graders. These teaming and scheduling strategies have more recently been introduced to freshman college-preparatory students, with plans to extend this curricular program to the sophomore level as well. All the while, individual teachers have been experimenting with formal and informal teaching dyads and triads, making modifications to the master schedule where necessary. Schoolwide decision structures have also changed over time, resulting in expanded teacher influence across the school and throughout the district.

The chronology of these changes informs the descriptions of each. We are able to see how some have been planful and others more fortuitous. We begin to understand how one change may act as a point of departure for others. We also consider how changes sometimes occur simultaneously, seemingly unbeknownst to another, and the dynamic nature of a complex community begins to emerge.

As stated, Franklin Heights’ school improvements were first introduced at the ninth-grade level, with the staff speculating that if students succeeded as ninth graders, they would make it through to graduate. During the 1988-89 school year, a building committee was formed to address the needs of the lowest 10 percent of the freshman students. This intervention team served as a catalyst, encouraging the staff to view each student as an individual.

Simultaneous to changing perspectives about students, teachers also learned new ways to work with one another through a 1990 school-wide, community-building initiative. This year-long project provided teachers formal time to team and collaborate, with the focus of their energies being increased student motivation. Each team of teachers was to design a three-day learning project. Student participation would be based on individual choice. This endeavor introduced teachers to team teaching and focused their attention on the quality of student work.
In the early 1990s, Franklin Heights became part of a local Tech Prep consortium with other high schools, vocational schools, and colleges in the area. The Tech Prep curriculum gave Franklin Heights faculty a means to institutionalize their developing notions about student and teacher work. Support was provided through the local professional development center and area businesses in the form of workshops and other training. A team of six teachers from the content areas of mathematics, science, social studies, English, foreign language, and business developed an integrated Tech Prep program. The program emphasizes skill development in communications, computer literacy, critical thinking/problem solving, and group work. Technology infusion is placed at the center of the team's planning. As early as 1981, technology became the focus and primary tool for making student work meaningful.

Each succeeding year, a program has been added at the tenth-, eleventh- and twelfth-grade levels. The sophomore program follows the integrated approach, emphasizing geometry and algebra, applied biochemistry, social studies, English, principles of technology, and computer applications. At the eleventh- and twelfth-grade levels, students are given the option of pursuing skill development in one of 18 program areas offered at Franklin Heights or at the district technical school. Programs include computer business technology, information engineering technology, multi-competency health care, and automotive diagnostic technology. Throughout the year, students at all levels are involved in group projects which conclude with some form of exhibition assessed by teachers, parents, business leaders, and fellow students. Project requirements include developing individual and group portfolios and making individual and group presentations.

As Tech Prep went about establishing itself as an accepted part of the academic community of Franklin Heights, teachers and administrators began to question how such teaching and learning experiences might be made available to other students and teachers at the school. In 1996, Franklin Heights was invited to join a group of seven high schools and four universities participating in a Goals 2000 project. Working on the Work (WOW) for Quality Results is a project that is based upon the work of Philip Schlechty at the Center for Leadership in School Reform. Using Schlechty's 10 quality work characteristics, a team of four Franklin Heights teachers has developed projects that encourage quality work. The WOW team consists of teachers in the areas of social studies, English, biology, and business. Students in this project are ninth graders enrolled in the college-preparatory curriculum.

Although separate, these two reform initiatives share certain features. Both Tech Prep and WOW include team planning time, block scheduling (students are with their instructors for a 256-minute and 192-minute block of time, respectively), and interdisciplinary learning. Approximately 50 percent of the freshman class comprise the Tech Prep I block, which is part of the College/Technical Pathway. The remaining 50 percent are equally divided between the College Preparatory WOW block and the unblocked students in the College/Technical Pathway. The unblocked students follow a traditional schedule. The teachers they see do not work as part of an integrated team. These students attend six or seven, 52-minute classes chosen from an English, social studies, science and mathematics core, and numerous electives.
Currently, about one-third of the faculty teaches as part of an integrated team. Half of this group teaches at the ninth-grade level. In addition, a triad of teachers integrates the College Preparatory English, Advanced Placement History, and art at the junior level. Through faculty meetings and staff development workshops, teachers share their expertise in teaming and interdisciplinary work. On an informal basis, teachers collaborate daily in the halls, in the staff lounge, and in their classrooms. One of the existing teams, in fact, formed after numerous informal conversations in a study hall. Collaboration between and among teachers that are not on these formal teams is still a common occurrence.

Prior to the introduction of Tech Prep, Franklin Heights teachers delivered a general “smorgasbord” curriculum. Students clocked class hours and accumulated units of academic credit. Although college-bound students were directed through the appropriate course sequence in preparation for higher education and vocational students were trained in specific skills, a large percentage of students moved through this general track of courses rarely considering how these hours and credits prepared them for life beyond high school. Only about 20 percent of the graduates attended institutions of higher education and 25 percent left high school vocationally competent to enter the job market; the remaining 55 percent were considered ill-equipped for higher education or the job market. As Franklin Heights began to examine and address these issues, the district followed suit.

According to a district office administrator:

Quite a few kids [were graduating] with this “Where do I go from here?” [challenge].
They were not prepared for a job [or] for higher education. [They] were graduating into nothingness.

The goal was to replace the current system with a system that helped give students a focus on their future before they graduated. Thus, in 1994-95, the South-Western City School District implemented a program entitled Pathways for high school students districtwide. This program encourages students to select their high school courses based on their career goals, personal interests, and abilities. Students now choose between two pathways: a College/Technical Pathway or a College Preparatory Pathway. In the College/Technical Pathway, students are prepared for post high school training at a community college and/or to begin their career. Students in the College Preparatory Pathway are prepared for the rigors of a four-year university. A bridge between the pathways has been designed after the sophomore year when students in the College/Technical Pathway choose a specific technical program or move to the College Preparatory Pathway.

Career Pathways was an idea first conceived at Franklin Heights High School. The notion of such thoughtful courses of action on the part of students, grew out of early discussions about Franklin Heights students and their particular needs. According to an assistant principal:

This was our model. We called it Highways for Tomorrow. The district adopted this from an idea that came out of Franklin Heights. It was kind of a natural for us, because only
about 20 percent of our students are in a four-year college-prep curriculum. We felt there was a real need for this because there were too many kids graduating who would not go on to any form of post secondary education and were unprepared for the job market.

By instituting Career Pathways at the district level, South-Western School District's Board of Education legitimized the innovations at Franklin Heights. In effect, their endorsement framed, enhanced further institutionalized Franklin Height's Tech Prep program, and encouraged further articulation of curricular options within the larger Career Pathways framework. If students were to make thoughtful and informed choices about their high school work, then carefully conceived and structured options must exist. These must be distinguishable from one another and must connect logically and elegantly to real post high school opportunities. Creating this sort of meaningful school work for students is exactly how Franklin Heights teachers and administrators had begun to understand their mission.

Over the past five years, Franklin Heights has been recognized at both the state and the national level for innovations. Some of these awards include a 1993 Venture Capital Grant, a 1994 Innovations in Education Lazarus Award, and a 1995 BEST Schools Award. In sharing these recognitions, the principal states that these awards are "important affirmations" in which "people see merit in their work."

Teachers, administrators, and parents appear committed to continuing and expanding upon these innovations. Recently, though, an unwelcome and unplanned change has threatened their progress. The defeat of numerous bond issues and the overcrowding in the majority of the buildings led the South-Western City School District to plan to reconfigure its school day to implement split sessions for the 1998-99 school year. The split sessions puts teachers and students in the same building on different schedules. Yet another challenge, some teachers look at this unwelcome, unplanned change optimistically: "We just have to make better use of our time." Others are wary, concerned that split sessions will divide people and efforts, ultimately damaging the school community they have worked so hard to build.

Creating and Sustaining Community

This case study chronicles the building of a community. It is a story about strong traditions as well as significant changes. From the details of this past decade, we gain understandings about how traditions provide a foundation upon which bold changes rest. Likewise, we learn about how changes become the springboard for developing new habits and conventions. Always, the community must be self-reflective and self-critical so that changes are coherent with community aims and so that traditions don't stand in the way of change.

A decade ago, administrators and teachers at Franklin Heights High School initiated a deliberate dialogue about school work and student learning. They wrestled with ideas about how they might improve daily school experiences for everyone involved. Through these conversations, they identified values
everyone shared and established norms necessary to realizing these values. As a community, they directed their collective attention to student work and set about making this work more meaningful. They agreed to collaborate with one another and opened their classrooms and their offices so that this might happen. Perhaps most importantly, they committed themselves to a conversation that would be ongoing.

Their story is set in the context of a developing professional community. Ideas about professional community seem especially apt for Franklin Heights; Chapter Two attempts to make this case. The chapter outlines the elements of a professional community, including shared norms and values, collective focus on student work, collaboration, the deprivatization of practice, and reflective dialogue (Kruse, Louis, & Bryk, 1994, p. 4). These elements, identified in current school reform literature, are defined and then applied to Franklin Heights High School.

Chapter three then goes on to provide a detailed description of teacher practice at the school and how changes in teacher practice have supported changes in the nature of student work. Here we investigate the different permutations of teaming at the school. We consider how the structures and strategies employed by each of the teaching team, help to direct and to bolster the community's collective attention to student work.

The final chapter revisits notions of community: This chapter considers the school's traditions in combination with its innovation. Everywhere traditions and innovations intersect, there is the potential for new habits and conventions to develop. These interactions between the old and the new have the capacity to change individual and community conduct. Stated simply, individuals learn together in those places where traditions and innovations meet.

Traditions must, however, remain sensitive and adaptable to new situations. Complacency represents the enemy to thoughtful, deliberate change. Active reflective dialogue requires that we continue the search for new habits, new tools, new ways to harness and direct our energies. If we are willing to face the situations where traditions no longer work, recognize them as problems, and look closely enough to determine the various possibilities for action, constraints can be turned into opportunities for reflective dialogue and learning on the part of all those involved.

Innovations alter the environment. They may render traditions obsolete. They may generate conflict among them. Community members can learn from these healthy tensions. At Franklin Heights, strong traditions support dynamic innovations, and a continuing reflective dialogue moves staff members to scrutinize their work and, in so doing, to foster a professional community within which individuals continue to learn and grow. It is to this professional community that we now turn our attention.
Chapter Two

The Nature of Professional Community

Recent research suggests that professional school communities increase "teachers' collective sense of responsibility for student achievement and common understandings of instructional processes" (Louis, Kruse, & Marks, 1996, as cited in Firestone & Louis, in press). Such professional school communities push reform efforts beyond policy changes, and deep into school structures and practices, to actually improve classroom instruction for students (Kruse, Louis, & Bryk, 1994). When teachers "[work] together in some type of sustained professional contact," they begin to develop their own shared norms and standards for instruction and learning (1994, p. 4).

Franklin Heights High School appears to be investing significant energies in establishing such a professional community. The themes which emerge from conversations with students, teachers, staff, administrators, parents, and community members and from observations of their daily work would suggest that they are actively cultivating certain elements recognized as vital to strong professional communities. Kruse, Louis, and Bryk (1994) identified five such elements of professional community as they examined teacher work life within 15 restructured schools. They maintain that professional communities are strong when teachers exercise these five elements within their work: shared norms and values, collective focus on student work, collaboration, the de-privatization of practice, and reflective dialogue (p. 4).

Current research on school reform and improvement is replete with references to teacher professionalism and professional community. Definitions vary, but most share these (or very similarly articulated) elements (Fullan, 1993; Hargreaves, 1994; Little & McLaughlin, 1993; Louis & Marks, 1996; McLaughlin, Talbert, & Bascia, 1990; Richardson, 1990; Rosenholtz, 1989; Sarason, 1996). As constructions, notions of professional community provide useful lenses through which to consider Franklin Heights High School as a learning community and to review its change efforts over this last decade. This is not to say that the story is complete and that the community exists in its consummate form. Rather, it is a work in progress: sometimes concentrated in specific centers of activity; other times faltering under internal missteps or external pressures; and frequently reinforced within day-to-day activities throughout the school.
The school's principal describes the dynamic this way:

We have tried to create an atmosphere where people can be creative, and we want them to feel very comfortable about coming and saying, "Hey, we were thinking about this, and this is the way we would like to work it." We have put teams of teachers together and have given them some common time so that, on a daily basis, they can talk through their ideas and plans about improving instruction. I was just with our WOW (Working in the Work) group, listening to their conversation and occasionally offering reflection on what they were saying. I think those are the conversations we need to continue having. If we give our people opportunity to engage in these kinds of conversations, then we are giving them opportunities to act as professionals. That is what we missed in the past. Things were fairly regimented and fairly top-down. Administrators said, "You will do this and you will do that," and people's creativity was constantly stifled.

Inside Franklin Heights: The Learning Community and How It Works

Human beings seek association. Association builds community. Community, in turn, cultivates habits of active engagement. The idea of community provides an apt exemplar for schools as they go about the business of defining their purpose and making decisions. The elements of community (i.e., voluntary association, mutual adjustment, the building of common interest) instruct us in the ways to engage divergent points of view toward common ends.

Community recognizes and fosters notions of neighborliness and collegiality, along with notions of creativity, inquiry, and rigor. From local neighborhood communities to the community of artists, to the communities of scientists or scholars, the image is of individuals dedicated to a common purpose and, as such, also dedicated to one another. There appears to be a strong sense of community among the people who work and learn at Franklin Heights High School.

Faculty and Staff

Everyone interviewed at Franklin Heights speaks about mutual respect and caring. People seem to like each other here. Longevity is prevalent. People come to work here and stay. Administrators have been teachers first. A number of teachers have taught at the school for 10 or more years. Some have grown up in the neighborhood. They use words like loyalty and commitment and understanding: "This is my fifteenth year" . . . "This is my twenty-third year" . . . "I've been at Franklin Heights for 27 years" . . . "This is the only building [that] I [have] ever taught at," are statements that exhibit this longevity.
"I was a student here," is another common statement. Examining the basic values and assumptions shared by Franklin Heights staff reveals a strong sense of family that both nurtures and is supported by this developing professional community.

Franklin Heights, as a developing professional community, seems to share a sense of history and frequently recalls this history to reinforce links between past and present practice. One teacher defines the longevity-loyalty dynamic as follows:

I think [that] when you have that kind of longevity in a teaching staff, there is a reason. Obviously, there are good things that are happening to keep people in that place for that long of a time. [Consequently,] because of the stability of it all, the kids reap that benefit. There is a unique core group of people there that have actually graduated from Franklin Heights. They have immense pride in Franklin Heights and are great role models for the kids.

But the certificated staff are not the only role models in the school. The classified staff are also a part of this dynamic. Students are frequently sent to work with a custodian or a cook when they are in need of moral support or a boost in self-esteem. As they help to accomplish the necessary work of the school community — whether it be preparing food, repairing the physical plant, or supporting daily operations — these students build lasting relationships and gain an important sense of self-worth.

The faculty acknowledges the contribution by the classified staff and publicly shows their appreciation at various times throughout the year. One example is exhibited on Valentine’s Day, when the teachers prepare lunch for the classified staff and recognize their contribution to the team. Similarly, by inviting the custodians to one of their homes for a cookout in the summer, the administrators say, “Job well done. You are an essential part of the team.” The principal clarifies the significance of these events by saying, “These are just events, but they are important events, because they tell people how much we appreciate them.” It is evident that this sense of family extends to all members of the Franklin Heights staff.

Faculty and staff attribute the family atmosphere in part to their size. With 68 certificated and 32 classified personnel, the school is small enough to foster close relationships. Staff members comment, “We’re friends.” They congregate for staff breakfasts and potluck lunches. They go out after work and have gatherings at their homes. “It’s just a good mix of people, and we like each other,” contributes one teacher.

Liking each other may be important, but beyond friendship, what about this “good mix” helps to nurture the professional community developing? Kruse, Louis, and Bryk (1994) maintain that, although structural conditions such as shared planning time, physical proximity, interdependent teaching roles, communication, and participatory decision processes all foster professional community, social and human resources are equally important to enhancing professional community. Social dynamics including openness, trust, respect, communication, and socialization of new teachers sustain the sort of healthy climate within which professionalism flourishes.
In this building, we communicate . . . at all levels. Probably the reason [that] I've been here 20 years is because the people I work with are sharing and giving people. They like to work with each other, and I guess it's kind of family. More than anything else, if I have a question about something or I need information, I feel pretty [comfortable] going to most of the staff members and [asking for] help. I think that's pretty much the way most of the teachers feel. — A social studies teacher

Another teacher agrees, "Making sure that everybody is aware of [and has an opportunity to participate in] what's happening [is key]." An open-door policy resides for all meetings, and meeting minutes are posted at various locations for review.

The Students

This sense of mutual respect and caring extends out to the students as well. A department head describes her students as "just charming." According to another staff member:

The kids like the school, and they're very proud to tell you. I think [it is] because they know [that] people care about them. It's a very positive attitude coming from most of the kids.

One student comments:

Teachers take personal interest in [the students]. They remember if you were sick or absent. They ask if you understand mistakes on papers and tests, they come to our concerts and sporting events, and they usually support us in fund-raisers. They are always available.

Another student contributes, "Teachers here are always trying to get us to strive to do the best possible job we can do, and if we need help, they are never hesitant." Walking through the halls of Franklin Heights High School, one observes staff talking and joking with the students. A teacher describes this dynamic as follows, "I think if [the teachers] feel comfortable and the students feel comfortable, then that's part of the goal."

Kathleen Cushman (1991), editor of HORACE, a Coalition of Essential Schools publication, claims that how people interact in the classroom, in the hall, and in the faculty lounge "sets a tone that has profound effects on what students learn." In her article, "Behavior in a Thoughtful School: The Principle of Decency," she posits that this behavior determines "whether students show up [for school and for class], what they strive for and achieve, and how they use their minds to solve the problems that confront them" (p. 1). With a 92 percent attendance rate and 38 percent of students now applying to a two- or four-year college (an 18 percent increase as compared with 1990 figures), students seem to have a reason to show up and work hard at Franklin Heights, despite the many socioeconomic challenges facing them.
Confounding Conditions and Influences

In addition to these conditions which nurture the developing professional community — that is, the trust, respect, caring, and ongoing communication experienced by administrators, teachers, staff, and students — there are also confounding influences and conditions. These conditions of community life, both external and internal, at times impede this work in progress.

The Franklin Heights community at large influences the school community and the teachers’ attitudes about their work. Teachers at Franklin Heights recognize that many of their students come from situations where academic performance is not necessarily rewarded for its own sake. Forty-three percent of parents have not graduated from high school. The average family income in the Franklin Heights attendance area is slightly below $20,000, leaving many families struggling to make ends meet. A previous Franklin Heights teacher reflects on her experience at Franklin Heights:

I think all of the teachers realized that these were students who did not come from a privileged background and needed that extra caring. The teachers felt a strong commitment to help these kids [reach their potential] and become productive citizens.

The yearly mobility rate also influences life at Franklin Heights. Approaching 35 percent each year, educational consistency and stability is unfamiliar to these students. An assistant principal speaks of a student who was in her fifteenth school in nine years. When asked if her mother helped her with her homework, she replied, “Mr. Thomas, my mom only went to the fifth grade.” Similarly, many parents, no matter how important they consider school, are ill-equipped to assist their children with more advanced academics. For these reasons, teachers assume responsibility for making the work itself compelling and satisfying so that students persist.

These economic and demographic realities result in a general lack of community identity. A former administrator characterizes this absence of a strong neighboring community as “a real problem.” He states, “They really don’t have a community.” Because of the nature of the area, including their close proximity to a large urban school district, Franklin Heights struggles with community ownership. Several high schools in the area compete for support from the surrounding businesses and, in turn, the businesses do not seem to feel an attachment to any one particular school. “That,” continues the former administrator, “is probably holding [Franklin Heights] back more than anything else.”

From the state level, mandated proficiency testing not only disrupts the rhythms of the school year but also introduces criteria for success that are not always consistent with what the teaching teams at Franklin Heights stress (e.g., cooperative projects, presentation and exhibition skills, integrated knowledge, and technological capabilities). This presents a constant challenge for the administrators and the teachers at the school: that is, how best to measure the progress of school reform programs established over the years. From the principal:
It isn't all about test scores. It is about the kind of skills we are giving kids so that they can be responsible in this new millennium we are facing. That is drastically different than the traditional kinds of student achievement indicators that we use. Yes, test scores are still important, but they are not the whole game. We have to be concerned with the kind of skills we give our students in their ability to be collaborators, their ability to be team members, their ability to communicate effectively, and their ability to solve problems. The vast majority of these tests are still measuring the students ability to memorize facts, but not their ability to synthesize. And what of their technological competencies? The tests do not touch these.

Internal conditions also affect the growth and development of professional community at Franklin Heights. In regard to the norms, values, and habits of the Franklin Heights faculty and staff, at times it is difficult to categorize what matters. Some days certain priorities seem to suggest deeply held values which most endorse and live by; other days, behavior seems more habitual and unconscious. The latter reflects a taken-for-granted, routinized way in which tasks are accomplished and perpetuated from year to year. For example, all faculty are permitted to engage in whatever practices suit them best as teachers. If a teacher does not want to be part of a team, he/she does not have to do so. Teachers are valued in their own right, not pushed to participate in certain innovations. Many feel that they do not have to compete for favor or resources. “There is room for all of us” seems to permeate the atmosphere.

At the same time, many teachers are either disposed or encouraged to try new ideas, approaches, and innovations. This experimentation, however, is based on teachers’ own terms, with the right to disengage if it does not fit with their style and circumstance. The gamut includes the trailblazers who frequently try new approaches and ideas; the dabblers who try on some innovations, but only from time to time; the observers who stay informed about changes, but generally do not participate; and the non-participants who choose to remain isolated and alienated from the change. All seem equally at home and affirmed in the level of engagement they choose to pursue at Franklin Heights High School.

This freedom to choose, however, can be double-edged. On the one hand, teachers do not feel pressure to learn a new style or method, students can choose teachers who accommodate their particular learning style, and the school is not locked into one model or innovation which may not meet all the teachers’ and students needs. But there are limitations to this autonomy. Some teachers may never get involved in the innovation because of innumerable fears, including fear of failure and fear of change. Still others may be uninformed, despite the staff’s attempts to keep everyone abreast of the innovations.

And yes, there are some teachers who do not feel as much a part of these school improvement efforts as they would like. As much as the structure of the building encourages interaction, there are some teachers who do feel isolated. They may spend their day in a corner of the school where adult contact is limited. They regret the lack of adult contact and the opportunity to observe others interact with their students. But like many norms, values, and habits within a community, these are not always
evident in daily events. They may come to the surface when probed, during a formal or informal interview, or when unwittingly pushed, such as when some individuals or groups feel that they did not get the same resources, time, or support that others did. These habits of nonparticipation may, in fact, diminish the shared norms and values which are so important to a healthy professional community. The following section explores the ways ongoing discussions about student abilities, and the structures and practices which maximize their achievement, have fostered a growing sense of shared norms and values at Franklin Heights. If a strong professional community is to flourish and extend itself throughout the entire school, it may be equally important to investigate the continuum of teacher involvement, initiating the same sort of deliberate dialogue about teacher choice, motivation, and participation.

Reflective Dialogue

Members of the Franklin Heights community have participated in a continuing reflective dialogue about their student population, their particular situation within the larger school district community, and the unique challenges these present. This dialogue informs decisions about mission and goals, and it pushes teachers to think critically about curricular content and instructional strategies.

Initially, these conversations targeted the bottom 10 percent of the freshman class. The Freshman Intervention Assistance Team was organized in 1988 at the direction of the administrative team. The team set about addressing the needs of the ninth-grade students who were struggling academically. The building committee consisted of teachers, administrators, and counselors. Each team member met independently with assigned students and their parents to set goals and develop strategies for success. They felt that such individualized problem solving could not help but improve the prognosis for these ninth-grade students who appeared to be at risk of failing. And yet, after assessing the program's first year, the team decided that the assistance program “did not produce the results wanted.” Such a people- and labor-intensive, crisis-focused response entered the dynamic too late. All incoming freshman needed programming that would meet them at the door and support successful academic experiences from day one.

This realization pushed participants to shift their focus from the bottom 10 percent to the entire class and to the ninth-grade curriculum. They began to better appreciate the challenges of freshman year and, as a result, identified “the freshman transition from middle school to high school” as the overarching problem. According to a participant: “There was a high failure rate across the board in [each discipline]. We are a unique attendance area. Our students have needs [that are different from the needs of the students at] the other two high schools.”

Since those initial conversations over a decade ago, the staff has continued their discussions, defining and refining their common concept of school improvement, one particular to Franklin Heights students and staff. A teacher who teaches on yet another integrated team describes it as “an ongoing
process to determine and meet the changing needs of the learning community." A district office staff member contributes, "School improvement at Franklin Heights is really based on the population. It's [learning and] growing from the population being served."

In 1997-98, a Site-Based Steering Committee was elected at Franklin Heights High School, following an agreement which was reached between the teachers' association and the board of education. The negotiated language stated that each school in the South-Western City School District was to elect members to a Site-Based Steering Committee which, in turn, would facilitate change in their building through collaboration and consensus. Responsibilities, including the distribution of professional development monies and other building-level budgetary decisions, would now be determined on-site rather than at the district level, as was traditionally the case. Initial membership was open to classified and certificated staff, as well as parents, students, and community/business members.

Despite this being the first year of implementation districtwide, this governance structure is not new to Franklin Heights. Here, faculty, staff, and parents were already experiencing this form of building-level consensus decision making. It has been this type of conversation that has driven change at Franklin Heights for a decade or more. This sort of vigorous dialogue builds communities of action. Individuals give voice to shared experiences and, in so doing, begin to understand and value them. The reflective dialogue not only directs decisions but fosters shared norms and values.

**Shared Norms and Values**

Teachers within a professional community begin to assert common values regarding student learning. These support a common identity and focus. To further advance the school's growing sense of collective responsibility, a three-day, off-site retreat was planned in the summer of 1991. Funded through state grant money, the first of three annual retreats drew 80 percent of the certificated staff. As the participants struggled with defining what skills Franklin Heights graduates should possess upon graduation, a set of beliefs and corresponding objectives were developed. Based on these beliefs and objectives, the following mission statement was created:

*Our mission at Franklin Heights is to obtain the best possible education for individual students so they may become lifelong learners who are able to manage change.*

Seven years later, the mission statement is quoted in its entirety or with key segments used to reinforce both individual and school actions. When asked, individuals talk about improving the learning experiences of students in ways that will better prepare them for the adult world outside school, a world where they can continue learning, and thus face the changes in their lives with an open mind and a sense of optimism. The mission continues to reflect a common direction, a consensus on the purpose and the goals that are being pursued. It also continues to serve as a symbol of community, reaffirming togetherness and team work.
Beyond the mission, participants appear to be encouraging a norm of integration at the school. Those administrators and teachers who have been active in the reform efforts to date value the integration of thoughts, actions, and resources on behalf of students. Many teachers work closely with one another to organize knowledge in ways which bring different disciplines and content areas together. This curricular integration is central to the work of the teaching teams, including Tech Prep I and II, WOW, several dyads and triads. Team members also speak about integrating their activities with other programs and entities, including the district vocational programs, area community colleges, and the Business and Industry Council. Those teachers who are not directly involved in these team activities, teachers who define themselves as "regular ol' teachers," seem to place themselves somewhere within these mutually reinforcing ideas and actions on behalf of the students. However, if integration is to become a school-wide norm, it will be important to continue the reflective dialogue regarding its purposes and goals.

**Collective Focus on Student Learning**

At Franklin Heights, there is a collective focus on student learning supported by the teachers. This manifests itself across different structural arrangements and within varying instructional strategies. Members of the integrated teams, as well as those teachers teaching more traditional, out-of-the-block classes, speak about setting reasonably high standards and assuming responsibility as active participants in helping their students learn.

The early discussion about freshman students proceeded from, and reinforced, a belief that more than half of Franklin Heights students were graduating without the skills necessary to be successful in college or in the job market. A teacher currently working on an integrated team recalls, "We [had] students wandering through our school, getting a high school diploma, [but] having no focus or plan [for the future]." The Franklin Heights staff set a goal for 75 percent of the students to go on to some type of post secondary educational institution, and the other 25 percent to leave high school prepared to go into the work force.

The Annenberg Institute for School Reform advocates a concept of teachers' "design[ing] their teaching around the needs of their students." They call this "adaptive teaching." In adaptive teaching, teachers "adjust their teaching to begin where the students are, and then structure their teaching to bring students from there to high levels of learning. Teachers learn what their students know and can do, how they learn, and what motivates them" (National School Reform Faculty, 1997, p. 4). Similarly, Schlechty (1997) calls for student work that is authentic, organizes knowledge in an accessible manner, and provides for student choices. The English department head observes this thinking among the teachers with whom she works. She believes that, "there has been a big effort to make school more relevant in the children's lives, [as well as] more relevant in the real world." She concedes that "it is not a new
idea," and maintains that it takes more than talk. The students must be the constant and singular focus. The learning community is regularly reevaluated to address the changing needs of the students and the staff. It is a continuous process.

"Improving student achievement" tops the school improvement goals as articulated by Franklin Heights teachers and administrators. But how does this community define the work of "improving student achievement"? A social studies teacher says, "I think it's many different things . . . . the learning environment, [the way information is] presented to the students, resources, and technology." A department head comments, "[School] improvement [at Franklin Heights] has always been geared toward ninth grade. [Through our own data collection and research], we found that if students succeed in the ninth grade, then they will [most likely] graduate."

The ultimate result of school improvement ought to be increased student achievement. [However] I am not sure we can measure that in the traditional sense [of using] test scores. Test scores are important, but they are not the whole game. [Instead], it is about the kind of skills we are giving kids, skills in their ability to be collaborators, to be team members, to communicate their ideas effectively, and to problem-solve.

By constantly keeping the students in the forefront of the discussion, a health and physical education teacher emphasizes, "The students have an increase in their knowledge level, their mastery level, and their ability to think critically. The beneficiaries are the students."

Teachers talk about making the work authentic and motivating, and they have utilized technology as an impetus to do so. As early as 1981, Franklin Heights teachers began to explore nontraditional modes of instruction, particularly in the content area of mathematics. Graphing calculators were introduced as a pilot project, in conjunction with a large local university. Along with other curriculum innovations, funds were generated to continue expanding students access to computer technology.

Students work collaboratively on a variety of projects, and teachers challenge themselves to always be improving and extending the options. There is attention to meaningful products. Teachers plan assessments that set significant standards, while at the same time affirm student effort and allow for growth over time. Student work and teacher work is visible, and people seem willing to comment and accept comment.

**Collaboration**

Members of a professional community collaborate with one another. This fact seems self-evident, and yet we cannot assume that teacher professionals will collaborate without being actively encouraged to do so. Teacher collaboration must be supported by the appropriate structural conditions: time, proximity, interdependent roles, communication structures, and a certain level of teacher autonomy (Kruse, Louis, & Bryk, 1994). In 1990, at the direction of an assistant principal, a three-day schoolwide teaming
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activity, entitled Kaleidoscope, was undertaken as a grand experiment in schoolwide collaboration at Franklin Heights. The focus of the endeavor was to increase student motivation. Teachers were instructed to organize themselves into teams according to their interests. Each team was then asked to design a project based on this interest. Two other criteria were established: (1) each team had to either take the students off campus or bring an expert in from the outside; and (2) the students were required to produce a product that illustrated their learning and could be displayed at a project culmination fair. In addition to the fair, students received credit for the project and had it documented on their transcripts. Once again, the faculty's actions were student-centered planning activities which were adaptive and authentic.

After months of planning and collaboration among teachers, students were asked to pick their top five [project] choices. They were then assigned to one of the teams based on these choices. Projects varied from traveling to another county to build a log cabin, to traveling around Columbus to study different architecture, to remaining on site to produce a local yellow pages directory for teens. Some projects even required teams to travel out of state. "It was pretty neat," commented the assistant principal. "There were some really unique things that happened. I have never seen kids so fired up in my life, especially kids that had not connected with school before." A teacher agreed, "The response of the students was so positive. Kaleidoscope [shattered the myth] that school has to be 50-minute class periods."

"I knew that we had a really talented staff," commented the former assistant principal responsible for "sticking his neck out." One teacher remarked, "It was a lot of fun! It created a lot of excitement and [gave us an opportunity to do] some things that we need to do in education. We need to take those risks." Another teacher shared, "I think the main thing is [that the administrators] allowed the teachers to think, and we really wanted to think."

As the traditional curricular and organizational boundaries were removed, teachers began to share their areas of expertise across departments and specialties. They could choose to team with whomever they wanted, and so new professional relationships were established. Creating these unique units of study required careful planning. Some teams were more skilled than others. The experience proved to be an important lesson in teacher leadership and planning.

The assistant principal also commented on "some unique dynamics [occurring with teachers]. Some of the experiences were not as rich as others." He attributed this to poor planning on the part of the teacher. A handful of teachers did not seem to take full advantage of the time allotted. These teachers became resentful of the teachers who were successful, especially when the students started comparing experiences. Overall, though, the majority of the experiences were "really positive." Teachers "felt they had really learned from the experience of working together and creating . . . across disciplines." Through this community building activity, the staff began "thinking about putting things together," and about "team teaching and working together" in order to improve the quality of student work.
Although the faculty did not vote to continue Kaleidoscope, this activity proved to be a turning point for the agents of change at Franklin Heights. Teachers realized the power of collaboration, so much so that collaboration has become a strong community norm. Teachers work together regularly within and across disciplines, within dyads and triads, and in situations of mutual support which include team meetings, schoolwide committees, staff-led professional-development sessions, and summer retreats. The work regards students and their learning and is for the purpose of developing policies, planning activities, producing materials, and crafting assessments.

### De-Privatization of Practice

Because professional communities encourage open participation and discussion, ideas and actions are public and accessible to all. At Franklin Heights, this sort of public practice is commonplace. Teachers active within the various reform efforts share their successes, talk openly about their frustrations, and teach colleagues what they learn along the way. This sharing is deliberate and planned, with presentations given at faculty meetings and teacher-led trainings conducted on in-service days. Throughout the school, classroom doors are most often left open, and people sense an open invitation to enter and observe. Teachers talk often throughout the day in the halls, in the Educational Resource Center, in the staff room, in department offices, and in each other’s classrooms. The conversation is frequently pedagogical — about a strategy, a plan, and/or a student in need of help. People “run into each other,” and because talk and work happen daily throughout the school, relationships are fostered naturally and mature within the context of this work.

The story about professional community at Franklin Heights High School is a continuing one. The community is growing within different centers of activity: within interdisciplinary teaching teams, the dyads and triads, the various decision-making groups, and the curricular departments and, on occasion, across all of these groups whenever certain norms and values become truly embedded and pervasive. This case study describes these multiple sites of community development and attempts to capture the dynamic nature of the enterprise. Also included are the artifacts and tools which have emerged from and continue to support and advance the enterprise. Kruse, Louis, and Bryk (1994) suggest that creating a professional community at the high-school level requires slow and steady work. High schools’ diverse curricula and student populations, coupled with their multiple departments and specializations, make it difficult to forge such schoolwide alliances. Franklin Heights High School appears to be in it for the long haul. The collective focus on student work serves to unite teachers and encourages them to share openly their growing knowledge and expertise with one another.
In his research on teaming, Friedman (1997) followed the development of one teaching team from its inception. He found that members spent significant amounts of time defining the problems for which the team had been established before they created the program that would be their response. They studied their students, their school, and their current practice first. “This reflective process meant engaging [in] the deeper uncertainties of their work for extended periods of time rather than rushing to implement a solution” (p. 63).

Teachers at Franklin Heights took this kind of time to identify the detail and the nuance of their particular problems. Some of the time was planned, as with the schoolwide retreat and the resulting mission statement; some was more as a result of chance and happenstance, as with a scheduling debacle which resulted in an additional year of upfront planning for the Tech Prep I team. Regardless, teachers took time to understand the uniqueness of their particular student population, to know the elements of the learning environment they wished to modify, and to pinpoint the weaknesses in their existing instructional strategies. The work of the Freshman Intervention team — targeted parent conferences, conversations with middle-school faculty, and the life experiences of those teachers and staff members who had grown up in the Franklin Heights attendance area — all informed this process.

The Franklin Heights staff established a goal that 75 percent of their students would go on to some type of post-secondary educational institution, and the other 25 percent would leave high school prepared to go into the workforce. They made a commitment to view each student as an individual, pushing him/her to reach his/her individual potential. And they created an integrated freshman team of five teachers responsible for designing an interdisciplinary program that would meet the needs of 100 to 125 students in the freshman class.
The integrated freshman program was scheduled to be implemented during the 1992-93 school year with a team of five teachers from the disciplines of mathematics, social studies, English, Spanish, and science. But according to an assistant principal, a schedule glitch brought another reality.

That summer, when we ran schedules, about 120 kids were to be in this integrated team, but I think two of them scheduled. There was a quirk in the scheduling, so you are talking about in August getting these results. What we did was continue the thoughts about integration, so the teachers were able to use that year to plan, because they had a common planning time already scheduled in addition to their individual planning time. They used that whole year to continue to refine their thoughts about integration and work on their projects that they wanted the kids to engage in. What we thought was a faux pas turned out to be a real blessing in disguise, because it really gave them that opportunity to collaborate and to work on the whole piece.

Serendipitously, it was during this year that the team discovered the nationally known Tech Prep program.

Looking at the targeted population, the staff agreed that Tech Prep would be perfect for the Franklin Heights student. Complementing and strengthening the integrated team's current plans, the Tech Prep model was merged with the existing ideas. Early implementation was not without its challenges. Perfecting the composition of the first team was crucial. Members were recruited from interested faculty, and participants were added as necessary components were identified. For example, the principal addresses the addition of the business teacher: “We quickly learned that we were ill-equipped to do a lot of this project-based work with both an individual and team portfolio without having a business component, so we quickly added teacher number six.”

Friedman (1997) speaks to this gap between “knowing what [you] wish to produce and knowing how to do it” (p. 363). During these early steps in implementing what is new to everyone, teachers experience high uncertainty; at the same time, students may challenge what is unfamiliar. This concern and skepticism may in turn be passed through to parents who are observing their own children’s uncertainties from their perspective outside the classroom.

Tech Prep 1

The Tech Prep program at Franklin Heights High School is designed to prepare students for real-world working experiences through career exploration, technological training, and a combination of academic and vocational competencies. According to the Tech Prep teachers:

We want [students] to realize that you do not have to be a doctor or a lawyer. There are all these wonderful jobs out there that are careers based on going to a two-year school rather
than a four-year school. We want them to realize that technology is the future, and [we want them to have] more of an open focus as to what they are going to look at careerwise.

In practice, Tech Prep I began to function as a “temporary research and development unit whose main object of inquiry was the school’s own practice” (Friedman, 1997, p. 355). Targeting the students who were once called “the general student[s],” the staff now claims, “There is no longer a general curriculum.” The new program is more “kid friendly,” more holistic. They talk about looking at students on an individual basis, addressing their needs on a variety of levels, including academic, social, and emotional. They also speak to covering a deeper section of the curriculum now, sacrificing breadth for depth. As a result of these changes, they say they expect to see an increase in the graduation rate, an increase in the number of students attending a post-high-school educational institution, and a decrease in the problems that the Franklin Heights student traditionally encounters both within and outside the classroom. Tech Prep I is currently in its fifth year, and daily student attendance has consistently been four to five percent higher than that of the entire ninth-grade population. Other data continue to be collected to assess the results.

Following is an observation of a Tech Prep I math class taught by Ralph:

Ralph teaches all Tech Prep I classes plus one Introduction to Algebra class at the end of the day. Today the students are working on time lines which will accompany their Can You Dig It? project. (See project description, Figure 1.) Project teams have been working over the past eight weeks to create their own ancient civilization. Presentations of these projects are scheduled for later this week.

The tables are linked across the room, creating space for four students per table. The groups of four position themselves around partially completed butcher-paper timelines spread across each table. Student groups are structured across gender and race. Ralph stands at the overhead projector, on which he has placed a transparency with a time line which stretches from 3400 BCE to 1946 CE. They discuss points he has designated along his transparency time line (e.g., 2000 BCE, the introduction of the first metallic coins in the shapes of cows; 1200 BCE, the Mexican Pyramids; 600 BCE, the first modern coins with images of leaders and varying values; 1898, birth of M.C. Escher; 1946, the first digital computer). They discuss these events and others in more detail, and he explains that much of the mathematics they learn each day was not developed until the last century.

Groups are directed to add these math-related timeline entries to their own timelines. These they have been building across several of their classes, as well as adding important highlights of their own civilizations. They are placing them within the context of world events, depending upon the time frame within which they have chosen for their people to exist. The details of their civilizations must make sense in terms of chronology and geography. They will lose points on their evaluation if they create important cultural attributes and events which are inappropriate to the context.
General Information
* Each group will be given one 3-ring binder for your project portfolio.
* There should be five sections partitioned within the binder (unless your group has only three members, then you will have four sections).
* The first section is for the written group work.
* Each member should organize his/her individual project papers within one of the other sections of the portfolio.
* Those items that do not fit in the portfolio should be clustered together in one group box or bag with identification.
* All sections of the portfolio must be in the order of the list on the next page to receive full credit.
* You may wish to decorate your portfolio in a creative way to represent your culture; please do not make any permanent marks on the binders.

Project Outline
* Complete a 9 Universals Cultural Analysis for Mayan, Egyptian, Aztec, Incan, Roman, Norse and Greek Cultures.
* As a group, create your own culture by simulating parts of the seven cultures you have been studying (Mayan, Aztec, Incan, Egyptian, Roman, Norse, and Greek) for each of the nine universals. Your new culture must be a combination of the other cultures studied, not just a replica.
* Each person will be responsible for presenting one of the nine universals.
* As a group, present as if you have completed an archeological dig. Explain your findings. The items found must represent your new culture.

Individual Project Outline
* Complete other related assignments (see Project Quadrant).
* Prepare a 5-minute speech explaining your one cultural universal by using at least one visual aid.
* Presentation.

Group Project Outline
* Prepare a 5 minute speech in which all group members participate.
* Complete all related assignments (see Project Quadrant).
* Explain the timeframe, geological location, physical descriptions, and other important information about your new culture.
* Describe what you have found in your dig and how it relates to your culture.
* You must use a map to describe the location.
* You must also use at least two other visual aids to assist in the explanation of your culture as a whole (see Project Quadrant).
* Presentation.

Grading the Portfolio
* Tech Prep I teachers will grade the portfolio following the presentation. Please make sure all items used from the portfolio for the presentation have been returned to the appropriate location in the portfolio.
* The portfolio must be organized according to the checklist provided.
At the start of class, Ralph explains, "You all need your group timelines. I have some math dates for you to add to what you have received in Mrs. Z's class. Most of the dates you received in her class are CE. Because the Mayan and Aztec cultures you studied occurred in CE, today we will add mostly BCE dates. You have to know when your civilization existed. It had to exist sometime, and the timeline facts will help you locate your civilization within a larger historical and cultural context."

He also gives specific group-related instructions: "Work as groups to complete your timeline. Put your group letter on your finished timeline and put it in the box at the front of the room."

Simultaneous to this activity, there are terms listed on the board: "associative, commutative, opposites, identity for addition." In addition, there are a number of problems worked through, with the answers provided. Ralph directs [students] to check their own answers on Master 27 with these as soon as they have completed their timelines. Before leaving, the entire class will "go over the problems in case people are having trouble with any." This is in preparation for a quiz to be taken the next day. Ralph warns that it is important that they "get both of these tasks completed — the timeline and the problems — before the end of class."

Once they have completed a five- to ten-minute discussion of the timeline, groups around the room begin to fill in entries. Some had already begun during the class discussion. They coach each other, giving suggestions and directions. "Make the lettering a little bigger. No one will be able to see that." "Do you want me to do that part?" "Use red."

"Olivia, I'd like to do some work," one student says to his group mate who has been doing all the lettering. He says this with a smile, and she turns over the marker.

On the floor at the perimeter of the room, there are various kinds of pyramids constructed from cardboard boxes. Some are covered with construction paper, some with aluminum foil, some painted with tempera. They are adorned with symbols, words, and dates. Ralph explains that these were a mandatory product to be included in each group's presentation. He makes his way around the room between tables and artifacts, answering questions and offering comments.

As groups finish timelines and place them in the designated box, one student asks, "What do we do if it is not done?" Ralph responds, "I suggest you take it with you and finish it. You will need to turn it in at the time of your presentation."

The class moves to the problems on the board. One student asks a question about the computation which reveals his misunderstanding of the process. From Ralph: "You're worrying me. You have no handle on the process. If I am giving you the answers, you know I am looking for your understanding of the process. You have no process on this one." To the class, "This quiz will help you get ready for the test next week. This is an opportunity to get yourselves prepared."

As first class leaves and another arrives, Ralph begins the same activity again for this group.
A fellow Tech Prep I team member credits vision, flexibility, support, and hard work for making the program successful. He states that to teach successfully in the block, the teachers made changes in their individual instruction. Whereas at one time the teachers acted as "the sage on the stage," the teachers now took on the role of facilitator, guide, and coach. Previously, students were the passive recipients; now they are the explorers and the workers.

During this class observation, Ralph balanced time for project activities with time for targeted content and skills. He varied activities and tempered covering content with stressing the process. He structured assignments which required group as well as individual responsibilities. His activities encompassed other disciplines, assisting students with placing their own activity into larger contexts.

Later this same day, students were making presentations of their Can You Dig It? projects. Following is an observation of one group’s presentation conducted by a university researcher who also participated as an evaluator:

   The evaluators included two upper-class students, one male and one female, a parent with a small child, and a university professor. Rating forms were distributed with instructions for their completion following. Ralph explained that these were the student’s first presentations of the year and would serve as the baseline for all subsequent presentations. He also gave a brief presentation regarding the project to be presented.

   “Groups have created their own ancient civilization, and their presentations today summarize what they might discover if they were to conduct an archeological dig of some important cultural site. They will include information regarding the time period during which the civilization flourished, a map documenting where the civilization was located, information regarding their style of architecture, physical attributes of the people, etc. Each individual will explain one of the cultural universals as developed by the group, including the civilization’s system of values, their economic structure, sources of food/clothing/shelter, the political organization, family and/or kinship structure, attitudes toward the unknown, language system, arts and recreation.”

   Evaluators are to rate individuals’ professionalism, organization, presentation skills, content, visual aides, and creativity. Groups receive points on the same standards, excluding professionalism. (See assessment instruments, Figures 2-6.)

   The second group of three students describes its civilization of the “Modnock people.” Following some confusion with the first group’s presentation, Ralph cues this group to clearly distinguish between the group and individual portions of their presentation. Each member is organized and prepared with [his or her] section of the group presentation and has either an artifact or some other visual aide prepared to share with the audience. They explain that the Modnock were a mountain people who held personal strength as a central [tenet] of their value system. Their mountain God is Cyrus. At the base of their pyramid, written in the Modnock alphabet, is inscribed, “We are a mountain people. Fear us.”
Figure 2  CAN YOU DIG IT?
The portfolio must be in the order listed below for full credit.

<table>
<thead>
<tr>
<th>INDIVIDUAL PORTFOLIO</th>
<th>GROUP PORTFOLIO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALGEBRA</strong></td>
<td><strong>GROUP TIMELINE</strong></td>
</tr>
<tr>
<td>* Number System Calculations</td>
<td>* Combination of 4 time lines</td>
</tr>
<tr>
<td>* Prefix for Metric System</td>
<td>** Spanish**</td>
</tr>
<tr>
<td><strong>ENGLISH</strong></td>
<td>** Algebra**</td>
</tr>
<tr>
<td>* Myth Logs</td>
<td>** Science**</td>
</tr>
<tr>
<td>* Pyramid Poem</td>
<td>** Global Studies**</td>
</tr>
<tr>
<td>* Movie Review</td>
<td></td>
</tr>
<tr>
<td><strong>GLOBAL STUDIES</strong></td>
<td></td>
</tr>
<tr>
<td>* Pictographs/Glyphs/Codex</td>
<td></td>
</tr>
<tr>
<td>* Compare &amp; Contrast Paper (Egypt &amp; Maya)</td>
<td></td>
</tr>
<tr>
<td><strong>SCIENCE</strong></td>
<td></td>
</tr>
<tr>
<td>* Sea Floor Spreading</td>
<td></td>
</tr>
<tr>
<td><strong>SPANISH</strong></td>
<td></td>
</tr>
<tr>
<td>* Indian Packet . \</td>
<td></td>
</tr>
<tr>
<td><strong>KEYBOARDING</strong></td>
<td></td>
</tr>
<tr>
<td>No separate section for this project only</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INDIVIDUAL PRESENTATION</th>
<th>GROUP PRESENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5 minutes per person)</td>
<td>(5 minutes for entire group—Everyone must speak!)</td>
</tr>
</tbody>
</table>

**GOAL:**
To explain 1 cultural universal of your group’s new culture:
* Values/Ethics
* Economics
* Food/Clothing/Shelter
* Political Organization
* Family and Kin
* Attitude Toward Unknown
* Communications
* Arts
* Recreation

**EXPLAIN:**
* Your universal was patterned after which culture?
* Why did you pattern your universal after this culture?
* How does your visual aid represent your universal? (Hint: a fossil could be made to represent any universal.)

**GROUP PRESENTATION**

**GOAL:**
To develop a new culture as a group and to explain general information about your new culture:
* Time
* Geographic Location — Map required
* Physical Description — People/Architect
* Miscellaneous Information

**POSSIBLE VISUAL AIDS:**
* Group Pyramid Structure
* Group Calendar
* Stele
* Fossil
* Symbol and/or Flag

1 You must use a mixture/variety of the cultures studied (Mayan, Egyptian, Incan, Aztec, Roman, and Greek) to develop your own culture. Do not just copy one culture.
Figure 3

CAN YOU DIG IT?
Grading the Presentation

* The presentation will be graded by a panel consisting of a Tech Prep teacher, another FHHS staff member, a parent or significant adult, and an upperclass FHHS student.

* Presenters will be graded on the following criteria:

**Professionalism**
- Punctuality
- Appropriate Attire
- Appropriate Language
- Respect to Others

**Content**
- Explain one cultural universal.
- Which culture studied is it based upon & why?
- How is it represented in your dig?

**Organization**
- Evidence of Preparation
- Continuity

**Visual Aids**
- Neatness
- Useful in clarifying the presentation
- At least one required

**Presentation Skills**
- Eye Contact
- Posture
- Voice Inflection/Volume
- Fluency

**Creativity**
- Maintain Interest
- Uniqueness
## CAN YOU DIG IT?

### PRESENTATION EVALUATION WORKSHEET

#### I. INDIVIDUAL PRESENTATION = 30 points total

<table>
<thead>
<tr>
<th>NAME</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Professionalism - 4 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Punctuality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Appropriate attire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Appropriate language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Respectful to others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Organization - 4 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Evidence of preparation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Continuity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Presentation Skills - 4 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Eye Contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Posture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Voice inflection/volume</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fluency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Content - 1 universal only - 9 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Explain 1 cultural universal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Which culture studied was the basis &amp; why?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. How is it represented in your dig?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Visual Aids - 6 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Neatness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Useful in clarifying presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Uniqueness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Creativity = 3 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Maintains interest throughout the presentation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS**

<table>
<thead>
<tr>
<th>NAME</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Presentation Total:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### II. GROUP PRESENTATION: — DESCRIBING THE CULTURE — 15 points total

<table>
<thead>
<tr>
<th>NAME</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Organization/Presentation Skills — 3 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Content: New Culture as a Whole — 6 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Geographic Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Physical Description — people/architect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Other relative information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Visual Aids: 3 points possible — Map required &amp; at least 2 other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Creativity: 3 points possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GROUP PRESENTATION TOTAL: (15 points possible)**
Circle the appropriate score for each group member, using the guide below.

1 — worked very little on the project
2 — worked a little on the project, but participation below average
3 — did the average amount of work on the project
4 — worked on most of the project most of the time
5 — worked on all sections of the project all of the time

1. ____________________  1  2  3  4  5

2. ____________________  1  2  3  4  5

3. ____________________  1  2  3  4  5

4. ____________________  1  2  3  4  5

Please feel free to write down comments.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Figure 6

**CAN YOU DIG IT?**

**TOTAL PROJECT GRADE**

Student Name: ________________________________  Group: __________

- Individual Portfolio .................. (30 pts) ...........
- Group Portfolio ....................... (15 pts) ...........
- Peer Assessment ....................... (10 pts) ...........
- Individual Presentation ............... (30 pts) ...........
- Group Presentation .................... (15 pts) ...........

Total Project Grade: ________

(100)

**COMMENTS:** Suggestions for presentation improvement

**INDIVIDUAL:**

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

**GROUP:**

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

30
They include all necessary products and describe each in adequate detail so that the evaluators are able to follow the narrative. Each individual presentation is equally organized. Teresa explains that the Modnock's artifacts show evidence of metalwork and jewelry making as art forms. She has examples of each to show. She also lists body painting as an art form, but displays no evidence of this. Hank describes clothing made of animal fur, fish as the main food source (showing the available river system on the map), and the structure of "homes, schools and doctor's offices." Les has forms of recreation to cover. He describes three popular games: The Abominable Snowman, Bash the Beast, and Ski and Shoot. There is a certain coherence between the games described and the rest of the culture. Mountain themes prevail, and physical strength is necessary for each. The shooting is accomplished with bows and arrows, tying in the metalwork cited earlier. It is also clear [that] Les is attempting to add a hint of levity to the presentation.

Each group member maintains eye contact with the audience while speaking. Each holds up maps, pictures, and artifacts, describing details where appropriate. Two of the three have prepared notecards from which to speak.

We are given time to complete our ratings and for group members to rate each other. After the students leave, Ralph asks that the teachers compile the scores and assign grades accordingly. There will be times for individual, group, and class debriefings.

When asked what makes the Tech Prep curriculum different from the general curriculum previously taught, the team notes that in the block, career exploration and the uses of technology are emphasized. Additional changes exhibit integrated thematic units, applied academics with a strong focus on hands-on activities, and alternative forms of assessment. Over a school year, the Tech Prep I student participates in four interdisciplinary thematic units: Ancient History, the Student's History, Careers, and the Future of Space Exploration. The student history project encourages students to interview parents, grandparents, and other family members to learn about the history of their family. The careers unit facilitates the exploration of careers through experiences such as shadowing, integrated career projects, field trips, and guest speakers. The primary goals of the Tech Prep program include developing skills in effective communication, responsible citizenship, and critical thinking. The team notes that these are pretty common goals that all teachers would have. But their approach is different. The students make presentations, telling people what they have learned in order to grow as good communicators. Teaching the students to be aware of themselves and the people around them are also important goals. Critical thinking, according to the team, is "a tough thing to teach, but we try to set situations up so the kids can become better critical thinkers and lifelong learners who realize that it does not end here. We are not going to be there to hold their hands the rest of their lives." Project assessments are conducted by parents, administrators, teachers, classified staff, and other students. The entire school community participates in the grading process, using assessment tools that have been developed by the Tech Prep team.
Beane (1997) describes the interdisciplinary planning process as one which begins with a central theme, proceeds outward through the identification of related concepts, and then moves on to the creation of activities by which students explore these ideas. The Tech Prep I team's Bull's Eye planning method follows Beane's sequence. The model brings the collective energies of the team members to bear in planning each thematic unit. At the same time, the Bull's Eye method respects the familiar teacher norms of independence and autonomy. It synthesizes individual teacher knowledge and expertise on behalf of the collective endeavors of the team. The synergy which results serves to sustain ongoing integrated curricular development. Team-developed instruments, such as the activity wheel and the interdisciplinary activities matrix, provide practical tools to accomplish the day-to-day planning tasks.

The Tech Prep I team calls its Bull's Eye approach "A Design Process for Integrated Projects." The team considers the entire process to be an organic one, changing some with each unit planned. One team member states, "It is 'on target' for our students." A second member of the Tech Prep I team, Dale, describes the Bull's Eye method to a university researcher in the following report:

[Dale] begins by describing the model as backward planning. Displaying a picture of a bull's eye (Figure 7), he talks about the initial stages of the project, beginning on the outer circle of the bull's eye. This circle represents the "theme" for the project. "We have four themes per year. The first two focus on history, namely ancient history, and the student's immediate family history. The latter two focus on the future, encompassing possible student careers in the immediate future and a design for a colony in space/on a space station in the distant future."

Working in toward the bull's eye, the next circle is described as representing the "objectives" (Figure 8). Each teacher lists the objectives in his/her discipline that apply to the project theme (Figure 9). The third circle, which the teacher also completes independently, represents activities that the teacher could design for the project specific to his/her discipline (Figures 10 & 11).

Circle four begins the integration process where the team locates overlapping objectives and complementary activities (Figures 12 & 13). The overlap in objectives and activities are places where the teachers could choose to team-teach. Circle five is the end product.

The tools that the team utilizes as these steps are carried out include:

- Step 1: Theme — Brainstorming
- Step 2: Objectives — Objective Cell Format (Figures 8 & 9)
- Step 3: Activities — Activity Wheel (Figures 10 & 11)
- Step 4: Integration — Interdisciplinary Activities Matrix (Figures 12 & 13)
- Step 5: End Product — The Project Framework (Figures 14 & 15)

Dale comments, "Assessment occurs throughout the project. We assess through individual and group portfolios (Figure 16), and presentations (Figure 17)." There is not a wide range of project themes, so that, individually, each project tends to get very in-depth.
INTERDISCIPLINARY ACTIVITY MATRIX

INDIVIDUAL OBJECTIVES

FINAL PROJECT

"BULL'S-EYE" MODEL
**Figure 8**

**INDIVIDUAL/DISCIPLINARY OBJECTIVE CELLS**

<table>
<thead>
<tr>
<th>THEME</th>
<th>TECHNOLOGY</th>
<th>SPANISH</th>
<th>GLOBAL STUDIES</th>
<th>SCIENCE</th>
<th>MATH</th>
<th>ENGLISH</th>
</tr>
</thead>
</table>

34
## INDIVIDUAL/DISCIPLINARY OBJECTIVE CELLS

### THEME
Establish a colony on a distant planet

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>SPANISH</th>
<th>GLOBAL STUDIES</th>
<th>SCIENCE</th>
<th>MATH</th>
<th>ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Apply principles used in computer assisted drawing.</td>
<td>- Recognize Pre-Columbian myths and legends.</td>
<td>- Identify direct effects of future events.</td>
<td>- Calculate the average speed and acceleration of an object.</td>
<td>- Solve percent problems using equations.</td>
<td>- Recognize myths and legends as a literary genre.</td>
</tr>
<tr>
<td>- Examine various programs utilizing graphics and word processing.</td>
<td>- Recognize and create various forms of poetry.</td>
<td>- Create a decision tree for personal decisions.</td>
<td>- Define the concept of weightlessness and acceleration due to gravity.</td>
<td>- Use the rate model for division.</td>
<td>- Identify key elements of science fiction novels.</td>
</tr>
<tr>
<td>- Improve keyboarding speed and accuracy.</td>
<td>- Examine Pre-Columbian Indian cultures and their astrological theories.</td>
<td>- Create cross impact matrix.</td>
<td>- Summarize the range of temperatures in the Universe.</td>
<td>- Solve percent and size change problems from real situations.</td>
<td>- Improve research skills.</td>
</tr>
<tr>
<td>- Planning a budget utilizing spreadsheet.</td>
<td>- Describe possible trends of the future.</td>
<td>- Describe the modes of transportation and future changes in the workplace in the year 2000.</td>
<td>- Describe the revolution and future of the Earth.</td>
<td>- Compare and contrast the planets.</td>
<td>- Improve problem-solving skills.</td>
</tr>
<tr>
<td>- Improve narrative and expository writing skills.</td>
<td>- Compare and contrast the planets.</td>
<td>- Design a legal system for the future.</td>
<td>- List and describe some instruments used in the study of the Universe.</td>
<td>- Improve presentation skills.</td>
<td>- Improve research skills.</td>
</tr>
</tbody>
</table>

### Figure 9

**BEST COPY AVAILABLE**
Figure 10

ACTIVITY WHEEL

THEME

GLOBAL STUDIES
MATH
TECH
ENGLISH
SPANISH
SCIENCE
FINAL PROJECT
ACTIVITY WHEEL

THEME
Establish a colony on a distant planet

GLOBAL STUDIES
- future studies
  - a) creating a matrix
  - b) decision wheel
  - c) futures wheel
  - d) cost/benefits analysis
- cultural studies

MATH
- 2-D blueprint of colony
- travel time
- design spaceship to scale
- planet research
- list problems and solutions

TECH
- spaceship design
  - a) interior
  - b) exterior
- 2D layout of colony
- type original myth
- project cover page

ENGLISH
- writing myths/legends
- writing myth logs
- persuasive writing
- futuristic novels
- research planets

SPANISH
- legends of solar system
- Aztec calendar
- Indian packet

SCIENCE
- design spaceship
- create a 3-D model
- weather conditions
- "Project Moonbase"
- research planets
- materials needed for habitat

FINAL PROJECT
Figure 12

**INTERDISCIPLINARY ACTIVITIES MATRIX**

**THEME**  
Establish a colony on a distant planet

<table>
<thead>
<tr>
<th>GLOBAL STUDIES</th>
<th>ENGLISH</th>
<th>SCIENCE</th>
<th>MATH</th>
<th>SPANISH</th>
<th>TECH</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL STUDIES</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGLISH</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCIENCE</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SPANISH</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>TECH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
### Interdisciplinary Activities Matrix

**Theme:** Establish a colony on a distant planet

<table>
<thead>
<tr>
<th>Theme</th>
<th>Global Studies</th>
<th>English</th>
<th>Science</th>
<th>Math</th>
<th>Spanish</th>
<th>Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Studies</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>“Moon Base”</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>Matrix</td>
<td>Crew Composite</td>
<td>Planet Research</td>
<td>X</td>
<td>Mayan Math</td>
<td>Colony Layout</td>
</tr>
<tr>
<td>Spanish</td>
<td>Cultural Aspects</td>
<td>Study of Myths</td>
<td>Astronomy and Aztec Cosmos</td>
<td>Mayan Math</td>
<td>X</td>
<td>Indian Packet</td>
</tr>
<tr>
<td>Tech</td>
<td>Design Future Wheel</td>
<td>Original Myth</td>
<td>Spaceship Design</td>
<td>Colony Layout</td>
<td>Indian Packet</td>
<td>X</td>
</tr>
</tbody>
</table>
Figure 14

PROJECT FRAMEWORK

THEME
Establish a colony on a distant planet

GROUP

INDIVIDUAL

PRESENTATION

PORTFOLIO

40

48
## Figure 15

### PROJECT FRAMEWORK

**THEME**

Establish a colony on a distant planet

<table>
<thead>
<tr>
<th>GROUP</th>
<th>INDIVIDUAL</th>
</tr>
</thead>
</table>
| Spaceship Design  
(Science & Tech)  
Original Myth (English)  
Global Studies Packet  
(Global Studies)  
List: Problems and Solutions  
(Algebra)  
2-D Layout of Colony  
(Science & Tech)  
3-D Model of Colony  
(Integrated)  
Presentation Outline  
(English) | Indian Packet (Spanish)  
Myth Logs (3) (English)  
Planet Research  
(Science & Algebra) |
|-------|------------|
| Describe your Planet  
Describe Colony  
2-D Layout  
3-D Model | Describe your Assigned Part as explained in your Global Studies packet  
One Visual Aid from Portfolio |
### Individual (18 points)

- **Indian Packet (Spanish)** = 6 points
- **Myth Logs**
  - Greek = 2 points
  - Norse = 2 points
  - American Indian = 2 points
- **Planet Research**
  - 1st planet = 3 points
  - 2nd planet = 3 points

**Total Individual Portfolio Grade**

### Group (27 points)

- **Spaceship Design** = 5 points
- **Original Myth** = 4 points
- **Global Studies Packet** = 8 points
  - Description Sheet
  - Brainstorming Sheet
  - Problem-solving steps
  - Cross-impact matrix
  - Four future work scenarios reading sheet
  - Cost/benefit analysis worksheet
  - Decision Tree over future work scenario
  - Future wheel over "Colonies in Space"
- **List of problems and solutions to building a colony on your planet** = 5 points
- **2-Dimensional layout of colony** = 5 points

**Total Group Portfolio Grade**

42

50
**STAR TECH PROJECT**

Presentation Evaluation Worksheet

<table>
<thead>
<tr>
<th>Names:</th>
</tr>
</thead>
</table>

**Individual Presentation = 25 points total**

<table>
<thead>
<tr>
<th>Professionalism</th>
<th>2 points possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 points for punctuality</td>
<td></td>
</tr>
<tr>
<td>2 points for appropriate attire</td>
<td></td>
</tr>
<tr>
<td>2 points for appropriate language</td>
<td></td>
</tr>
</tbody>
</table>

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<tr>
<td>4 points for posture</td>
<td></td>
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<tr>
<td>4 points for voice inflection/volume</td>
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<td>4 points for fluency</td>
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<tbody>
<tr>
<td>10 points for personal presentation</td>
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</table>

**Person 1:** Description of:
- Futures Wheel
- Cross-Impact Matrix
- Decision Tree
- Problem-Solving Format
- Cost/Benefit Analysis

**Person 2:** Description of Problems Encountered and Their Solutions

**Person 3:** Description of Educational System including:
- Class Schedule
- Physical Set-up
- Cross-Impact Matrix

**Person 4:** 4 possible Work Scenarios Description Scenario Chosen Evaluation of the Scenario Using the Decision Tree

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<thead>
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<td>2 points for uniqueness</td>
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**INDIVIDUAL PRESENTATION TOTAL:**

**Group Presentation = 25 points total**

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<tr>
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<th>3-Dimensional Model</th>
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<tbody>
<tr>
<td>8 points for 3-Dimensional Model</td>
<td></td>
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</tbody>
</table>

**GROUP PRESENTATION TOTAL:**

**51**
Dale shares an example of an interdisciplinary project — the one introduced at the end of the school year — called Star Tech. He notes that the students have different components to include in the final project from each of the six classes. "Sometimes we have students do presentations, but this time we chose to go with a science-fair concept. A tri-fold board displays how the students came up with solutions to the problems they encountered as they created their colony. Resource books are placed on the display table below the tri-fold board along with a model that the students construct of the colony. The model shows what the colony would look like and how the inhabitants would overcome problems of weather, lack of oxygen, lack of food, and so forth. The group's portfolio, which the students use to collect their material, is also on the display table. For this presentation, we ask members of a local business and industry council to come in to assess the projects. They come in during their lunch period, and we give them a check-off sheet and assign them to a couple of the planets. They go to the different areas and ask questions of the students, and the students feed them the information. We have a lot of success and really enjoy involving these people, and they seem to enjoy doing it."

Block scheduling has allowed the Tech Prep I team more time to focus on projects and labs. They have been allocated a 256-minute block of time, two periods in the morning, and two-and-a-half periods in the afternoon. Dale explains:

"[We] end up having complete autonomy of how we schedule our students within our time frame — one of the greatest [benefits]. We can say, "OK, this person performs better in mathematics in the morning than they do in the afternoon, so we are going to place them in the morning math class." We switch our schedules for our students. They don't have a set schedule for a whole year. Their schedule changes at least four times a year, sometimes five. [We see this as] beneficial to the students directly [as we] adapt to their learning style and their learning abilities."

Tech Prep II

The year following the implementation of the Tech Prep I program brought Tech Prep II, with the disciplines of social studies, mathematics, principles of technology, science, English, and computer applications. An assistant principal states that the Tech Prep II team was afforded the same opportunities as the Tech Prep I team. They, too, were provided a common planning period, an individual planning period, and a common block of time in which to schedule the students. He emphasizes the importance of the individual planning time, as well as the common planning time: "I think that [it] is really important when you restructure [to not] cut that team off from the rest of the staff. [It is] during their own planning time [that] they are going to see the rest of the staff, [fostering] acceptance [as they share their experiences]."
Similar to the Tech Prep I team, the Tech Prep II team develops interdisciplinary projects for students to work through extended periods of time. One project is the Junior Achievement project, in which students interview for company jobs, create a company, and design and sell a product. Following is an observation of a “company meeting” by a university researcher:

Sam was the predetermined president of the company. Mr. Janssen, the substitute teacher, asked him to run the meeting, reminding him that the task was to choose something to produce. Sam asked for input from the group. When a group member contributed an idea, Sam would summarize the idea and check that the recorder added it to the list. Sam frequently asked others to be quiet so that he could hear the ideas. He seemed to be comfortable in a leadership role, choosing to facilitate rather than dictate. After much discussion, Mr. Janssen recommended taking a vote to determine the most popular product and the least popular product. While voting, Sam reminded the group that as a company they need to make a profit. “An idea may sound fun, but will it make money?”

It was evident that the group had worked in this manner in the past. They fulfilled their responsibility with little guidance from the substitute teacher. Some students contributed a lot, some contributed very little, and others fell somewhere in between. Sam made an honest effort to include all members, calling on silent participants and recognizing all contributions.

Another company of Tech Prep II students meets in another class. Here, a student stands at the front of the class asking for input and writing on the chalkboard. The student acts in an authoritarian manner. She is serious about the task and insists that the students follow her lead. The group is brainstorming products that they could sell successfully at Franklin Heights High School. As the conversation moves to details, the teacher guides them back to the brainstorming process.

Students engaged in Junior Achievement projects also must respond to writing prompts within a project-long journal. Over the duration of the Junior Achievement project, the students have 30 to 40 entries to include in their portfolios. The portfolios consist of a cover letter, a resume, a completed job application, journal entries, a description of their company, and miscellaneous work (Figure 18). Again, the assigned activities and required skills vary. They are multi-leveled, ranging from individual to group, with the focus shifting back and forth between product and process. And finally, they must sell their product, compute profits, and pay stockholders. The outcomes are authentic, and assessment of performance extends far beyond teacher evaluations. As with Tech Prep I, teachers continue to cover curricular content which is not necessarily addressed through interdisciplinary units. Simultaneous to project activity, some class periods remain content-focused, relying upon more traditional instructional strategies. Clearly, students’ cooperative group skills are challenged across both contexts.
Your portfolio should include all of the following items in the order that they are listed below:

- Be neat, typed and well organized
- Include sections and dividers between those sections
- Be assembled in a plastic three-ring binder or other binder that will hold the papers as well as a three-ring binder
- Be turned in no later than ____________ (date)

Contents

1) Cover page  
2) Table of contents  
3) Cover letter  
4) Resume  
5) Job application  
6) Personal journal  
7) Description of your company which includes the following:  
   a) Name of your company  
   b) Organizational chart of your company  
   c) Description of your company's project or service  
   d) Complete market research done by your company including target market  
   e) Your company's preliminary and final business plan  
   f) Your company's product pricing worksheet  
   g) Your company's break-even point chart and an explanation of this in your own words.  
8) Individual work — This should include all work done by you during the entire project  
   a) Your sales letter  
   b) Your personal sales record and receipt book  
   c) Your version of your companies sales flier and a sketch of your sales poster  
   d) Your vocabulary terms and related work  
9) Your version of your company's annual report, which includes:  
   a) Your company's profit and loss statement  
   b) Your company's balance sheet  
   c) Your shareholder letter  
   d) Your product pricing worksheet draft and a final copy based on actual numbers  
10) Company evaluation packet
The researchers report continues:

About 12:30 p.m. we moved to Principles of Technology with Mr. Parker. When the bell rang, Mr. Parker distributed a seven-page handout and gave a teacher-centered lecture using the board. He instructed the students to get out their lab equipment and begin the lab. The students did this without question. Mr. Parker walked around the room while the students were working. When the lab and the related handout were completed, the students turned in the handout and put their lab equipment away. The teacher did not give another assignment.

At 1:50 p.m. we moved to Ms. Franks’ English class. The entire body of students did not move to the same class. Instead, three or four groups stayed together, while the others moved to other classes. (The Tech Prep II team assigns each student to a group with three other students to work on extended projects.)

In Ms. Franks’ class, the students orally reviewed questions from a reading guide. This activity was led by the teacher. This teacher-led review solicited much input from the students. Most (95 percent) were participating. It was evident that the students had read the chapters of the book required for the review.

Next on the agenda was an open-book/open-notes quiz on the chapters reviewed. The quiz was multiple-choice, true-and-false, and short-answer. Ms. Franks told the students that the short answers did not need to be written as complete sentences.

After the quiz, Sam’s group went into the hall to make final preparations for teaching Chapter 11. This group of four finalized questions to ask the class and crumbled newspaper to represent rocks in their skit.

At the last minute, the group decided to ask the questions in “jeopardy” format. The class seemed to like this. Most of the students participated. Some were guessing the answers; others were recalling from their reading. Ms. Franks asked additional and probing questions when the students seemed to be unclear about a question or an answer. She also extended some of the questions and answers to push the students’ thinking and to help them make connections.

Sam’s group was not as well prepared for this activity as they might have been. They were unsure of answers, sometimes acting with hesitation and uncertainty.

With six teachers included on a team, students can be divided into six groups. On a given day, a teacher may see only three of these student groups, catching up with the remaining three on the following day. (See Block Schedule, Figure 19.) Students on both Tech Prep teams sometimes complain about the length of classes. Teacher planning that leaves students with nothing to do for the remainder of a given period works at odds with larger team purposes. Teachers must constantly challenge themselves and each other regarding the range of instructional strategies they employ, and the productive manner in which they utilize students’ time within the block.
Figure 18

Block Schedule

<table>
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<tr>
<th>PERIOD</th>
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<th>3</th>
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<th>7</th>
<th>8</th>
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<td>Lunch</td>
<td>Tech Prep I</td>
<td>Lunch</td>
<td>Tech Prep II</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Regular School Schedule (four 1/2-hour lunch periods)</td>
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<td>Tech Prep I Schedule</td>
<td></td>
<td>Tech Prep II Schedule</td>
<td></td>
<td></td>
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</table>
Students are placed into Tech Prep as a program option when they leave middle school. In eighth grade, students are tested in mathematics and English. If they perform somewhere between the 25th and 75th percentile, they are assigned to Tech Prep I. Parents always have the option of initiating a change through meetings with middle school guidance and high school administration.

Following the sophomore year, all Tech Prep students face three options. First, they can continue within the Tech Prep cluster. This is composed of a series of programs designed by the school district in cooperation with a local community college, including computer business technology, information engineering technology, multiple competency health care, and automotive diagnostic technology. Second, they can choose the College Prep Pathway, continuing through the necessary academic course work. The Tech Prep curriculum includes more advanced mathematics, science, and a foreign language, so that students are prepared to make this change if they choose to do so. Finally, they can opt for a traditional vocational program, attending the district vocational school for programs such as automotive technology, property management, carpentry, automotive body, dental assisting, and cosmetology, to name a few. Horticulture, marketing, and child care are additional vocational opportunities available at the Franklin Heights school site. The Tech Prep teams “hope they choose the Tech Prep cluster” They are convinced of the value of this curricular pathway for this portion of the student population, and students who choose to stay concur.

**Working on the Work (WOW)**

Working on the Work (WOW) for Quality Results is a project that is based upon the work of Philip Schlechty at the Center for Leadership in School Reform in Louisville, Kentucky. Using Schlechty’s 10 quality work characteristics, teams of high school teachers and university collaborators are taught to develop projects that encourage quality work. The 10 components are figuratively illustrated as forming the circumference of a circle with Quality Work as the center point (Figure 20). The illustration emphasizes that the 10 components are equally necessary to create quality work. The 10 components include: content and substance, product focus, clear and compelling product standards, affiliation, affirmation of performance, choice, novelty and variety, organization of knowledge, authenticity, and protection from adverse consequences for initial failures.

In 1996, a team from Franklin Heights High School was invited to participate in a Goals 2000 project designed around Schlechty’s work. Having recently been the focus of a North Central Evaluation (1996), Franklin Heights was eager to move forward on one of the review team’s recommendations which spoke to “[expanding] teaming opportunities . . . [to] the college prep pathway” (p. 5). Administrators saw this invitation as an opportunity to push teaming, block scheduling and access to technology beyond Tech Prep into College Prep programming. Further, the project would introduce teachers to yet another means of improving classroom instruction. Figures 21 and 22 — “How is the Teacher’s Role Different in the WOW?” and “How is the Student’s Role Different in the WOW?” — are
Transforming Learning Communities (TLC)

Figure 20

TEN COMPONENTS OF QUALITY WORK

- Content and Substance
- Product Focus
- Protect from Adverse Consequences for Initial Failures
- Authenticity
- Organization of Knowledge
- Novelty and Variety
- Clean and Compelling Product Standards
- Affiliation
- Affirmation of Performance
- Choice

Dr. Phil Schlechty
Center for Leadership in School Reform

50
STUDENTS' RESPONSES TO:

HOW IS THE TEACHER'S ROLE DIFFERENT IN THE W O W?

Teachers:
• have to think about the big picture of the project
• have to be more creative
• have to tie project in with class (curriculum)
• don't grade as many papers
• are more sociable with students
• have lots of grading to do at the end
• work one on one with groups
• "traditional" teachers don't talk to you, here they do
• are more like advisors than teachers
• find out which students are good at what
• don't have to do lesson plans
• get more time to do what they need to do
• get to see how creative kids can be
• put a lot of work into making project requirements
• don't have pressure of making kids learn; kids are teaching themselves
• get to know students better
• "don't have to watch us sitting and being bored out of our minds"
• get out of school for meetings
• have more interesting work to grade
• have to deal with students being loud
• are happier and more energetic
• have partners too

Kim Hartman & Brenda Tudor
Franklin Heights H.S., Columbus, Ohio
Working on the Work
Figure 22

STUDENTS' RESPONSES TO:

HOW IS THE STUDENT'S ROLE DIFFERENT IN THE WOW?

Students:

• have more interesting homework
• have to be more creative
• have to go to Education Resource Center/Library & do research more
• use computers more
• have to work with others (easier, yet harder)
• get to see who you can work well with
• have more work outside class
• have to meet deadlines
• need good finished projects
• confront slackers
• have more freedom
• don't always do book work
• have to be more responsible for themselves & others
• learn to respect each other
• learn about real life stuff instead of book stuff
• grade each other
• are not bored in class
• do more work
• get some choice on who's in group
• get to talk
• if work turns out good, we are more proud of if
• teachers don't get mad at you, but students do
• get to use more than one mind for ideas
• get to check over work more than once

Kim Hartman & Brenda Tudor
Franklin Heights H.S., Columbus, Ohio
Working on the Work

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handouts which were designed to answer parent questions. These summaries seem to suggest that the WOW team intends to craft learning experiences that actively engage both students and their teachers. The work itself seeks to motivate all learners, children and adults alike.

Schlechty’s work was not new to the Franklin Heights staff. In 1990, a team of eight had traveled to Louisville to learn about his approach to building staff capacity and designing quality student work. These ideas led the early dialogue about students as workers involved in active learning with technology as a necessary “means of getting [the] job done” (Dreeben, 1970, p. 83, as cited in Schlechty, 1997, p. 26). Along with teams from seven other high schools and four universities in the central Ohio area, the Franklin Heights team learned to develop projects using the 10 components. This initial work has led to the current Franklin Heights WOW team, consisting of teachers in the areas of social studies, English, biology, and business. Two of the current teachers were the original participants in the Goals 2000 project and piloted the work before the formal team was organized. The other two teachers were added in 1998, with one teacher transferring from another high school in the district specifically to work on this team.

Students (approximately 80) in this program are ninth graders enrolled in the College Prep curriculum. Similar to the Tech Prep program, the WOW team utilizes formal team planning time, block scheduling, and interdisciplinary teaching to create work that is meaningful and engaging for the students.

Following are excerpts from team meeting minutes which focus on the development of the third, and final, project of the 1997-98 school year. The topic of the project is change:

The team is in the initial stages of forming student groups for the upcoming project. They are working through their lunch period to give them an hour of planning time. Normally, they meet from 11:03 a.m. to 11:33 a.m. and eat lunch from 11:33 a.m. to 12:03 p.m. Today they are eating as they work, planning to spend the entire hour together.

They discuss the assigned groups. “Do any need to be reconfigured?” they ask. One teacher states that they have “never been able to form all strong groups.” A second teacher reminds the others that it is difficult to foresee all problems. This prompts a discussion about student absences. Next, the group reviews the logistics of the project. The WOW students will teach four second-grade classes at an elementary school located behind Franklin Heights High School. One WOW class will be paired with one second-grade class per day for four days. The size of each second-grade class is between 20 and 28 students. The WOW students will meet with the second graders in the elementary cafeteria. Only one class of second graders may be in the cafeteria at a time. One teacher stresses, “This is a one-time shot.” The students will only have 45 minutes with the second graders. There will not be any “second chances.” The topic, “Animal and Plant Change,” was determined by the second-grade teachers. One teacher on the WOW team will be the liaison with the elementary teachers. This teacher has already initiated the first contact.
The science teacher is making notes on the board. The others continue discussing the logistics. They tentatively set times for the days that the ninth and second graders will meet.

The team moves on to brainstorming the project requirements, the research, the hands-on activity, and the evaluation. "What about the dates?" one teacher queries. Another suggests that the project could be introduced to the WOW students on the 23rd of March, with the presentations scheduled for Monday through Thursday during the week of April 13th.

The discussion next moves to the similar topic of "change in species," how the body grows. The science teacher shares that the students have already studied how the body grows. He would like to encourage them to build upon this knowledge as they learn about animal and plant change. Under the topic of "change in species" written on the board, they list the categories of fitness, adaptation, survival of the fittest, and fossil record.

"How will we assess?" is the next inquiry. "A self-assessment from the student teams would be very authentic," states one teacher. The remainder of the meeting is spent discussing project components, the time line, check points for the students. Final decisions are not made. They continue to oscillate from topic to topic. A project team day may be necessary on April 1st. The structure that day will need to be a 3 X 3 (meaning that three teachers will alternate three groups of students; the fourth teacher will not be in the structure that day).

A decision is reached to meet the following two days during their individual conference period, as well as during their formal planning time. The question that remains is, "Who will bring breakfast?" Team meetings over the next three weeks were productive, but not without challenges, delays, and constant revisions to the plan. A memo had been sent to the elementary teachers listing the project goal and objectives for the ninth graders. The goal stated, "Students will create a lesson (see lesson plan, Figure 23) for a specific audience (2nd-grade students) that teaches basic knowledge of changes in plants and animals."

The student objectives included:

1. Creating a hands-on activity teaching the basic concepts of change.
2. Developing a children's book containing a fictional story based on the factual concepts of change.
3. Developing an evaluation instrument to determine the effectiveness of the activity and the book.
4. Demonstrating competency in the fundamentals of public speaking.
5. Employing writing and keyboarding skills in the development of the project.
6. Utilizing a self-evaluation process to determine the quality of the experience.
### WOW PROJECT

**Lesson Plan**  
**Second Grade**

<table>
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<tbody>
<tr>
<td>Group Letter</td>
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<tr>
<td>Group Members</td>
<td></td>
</tr>
<tr>
<td>Lesson Topic</td>
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<tr>
<td>Lesson Goal</td>
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<tr>
<td>Lesson Objectives</td>
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<tr>
<td>Materials Needed</td>
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<tr>
<td>Methods</td>
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</table>
Additional information in the memo included possible dates for the dual grade interaction, and a request for specific types of plant and animal change that would be studied by the second graders, second-grade science benchmarks, and some examples of second-grade fictional books. Requests were made to assist the ninth graders with age-appropriate material and to complement the current work of the second-grade students and teachers.

Schlechty (1997) maintains that, "[i]f the work presented to students is to be improved systematically, teachers and administrators must be in a position to analyze its qualities. This analysis should be aimed at determining whether the desired qualities and attributes are present in the work and the extent to which they are present" (p. 7). According to Schlechty, "[t]he goal should be to design and redesign the tasks and activities assigned in order to increase the presence of the attributes found to be missing or found to be present in insufficient quantities to appeal to students" (p. 7).

The WOW team conducted such an analysis of their project on change. What follows is a description of the evaluation and a description of the manner in which the 10 components of quality work impacted and connected to the project, as recorded by a university researcher:

The students had a four-page evaluation that they went through as a reflective exercise, describing how they felt about the project — first of all, who contributed what to the final product, and exactly what each person's responsibilities were. We paid a lot of attention to these student assessments when we did our evaluations.

The grading for the project consisted of looking at the overall project grade, how the group performed at the elementary school, and the quality of the finished product, the book itself. (See "How Your Book Should Look," Figure 24.) It is a combination of the hands-on activities planned for the elementary students, the book itself, and then the presentation. We also had peer evaluations in the mix. Then we figured the averages, and then the individual grades. They each came out with an individual grade based on peer evaluations, as well as our evaluation of the quality of their work.

The first [of the 10] components is the "product focus," and that means that you develop a meaningful product. I would say that the hands-on activity and the book that they developed are definitely meaningful and are things they can relate to. For our first project experience this year, we did not have that strong product focus, and, in our minds, it was not very successful.

The second quality would be... "clear and compelling product standards." With a clear and compelling product standard you are able to establish specific expectations for performance. The copy of those standards and that rubric (Figure 25) are very explicit in what we expected of each of the parts of the book, in the hands-on activity, and from the oral presentation.
Figure 2.4

**W O W PROJECT: CHILDREN’S BOOK**

**HOW YOUR BOOK SHOULD LOOK**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover (on colored paper)</td>
<td>Title page</td>
<td>Copyright and publishing company page</td>
<td>Story (as many pages as needed)</td>
<td>Bibliography</td>
<td>About the Author</td>
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*BEST COPY AVAILABLE*
Figure 25

**WOW PROJECT**

**Number 3**

**Rubric**

<table>
<thead>
<tr>
<th>Group Letter</th>
<th>Group Members</th>
<th></th>
</tr>
</thead>
</table>

### 1. Children's Book (40 Possible Points)

A. Cover and Back Cover

B. Title Page

C. Copy Page

D. Story Pages (10 Min./25 Max.)

E. Bibliography Page

F. About the Author Page

G. Picture on Each Page

H. Page Numbers

I. Dialogue Correctly punctuated

J. Story Contains a Plot and Appropriate Characters

### 2. Hands-On Activity (40 Possible Points)

A. All second-grade students are actively engaged in the activity.

B. All WOW students are involved and have clearly defined roles for proceeding with the activity.

C. Steps and procedures for proceeding with the activity are keyed.

D. Quality props are used and evidence of planning and effort are present.

### 3. Lesson Plan (10 Possible Points)

### 4. Fundamentals of Public Speaking (10 Possible Points)

A. Eye Contact

B. Voice Tone and Projection

C. Speaks in Complete, Logical Sentences

D. Posture and Mannerisms

E. No Chewing Gum

**TOTAL POINTS**

**GRADE**

---

**Note:** This project will be 20% of your six-weeks grade.

**Comments:**

58 66

**BEST COPY AVAILABLE**
The third one would be “protection from adverse consequences for initial failures,” and it says that you provide feedback about progress and scores at the completion of each portion of the project. We had an early deadline, about three days before the actual day of going to the elementary school. They had to do a practice run of their oral presentations. Groups of eight students rotated between presenting and acting as audience, so they changed roles and received feedback from different points of view. At the end of the session, I gave them a list of things to correct. One group had no idea what they were doing for instruction of the hands-on activity, so I picked a focus for them and they had a make-up session.

Then on the Friday [before the actual day of teaching at the elementary school], the whole afternoon we had a repair room set up. While the groups who were ready to go worked on their English credit activity, groups who needed to went into the repair room and stayed there as long as they needed, even if they needed to be there all afternoon.

And next would be “affiliation.” This one talks about varying ways of interaction and communication valued by school. Just the amount of time we spent on all four areas of the project was very significant. I would say in my class we spent a good three weeks — two and a half developing the book, and constantly every day we were interacting. [One of the other team members] worked with them on the hands-on activity, and [a third team member] incorporated the science, so all of us were interacting back and forth across the three classes those first three weeks. The students were getting together and working out editing corrections on their own. And [notably] in the post presentation evaluations, the kids were learning to take advantage of each other's strengths and to cover for each other's weaknesses. That goes back to what we tell them from the start of the year.

The next component would be “novelty and variety.” We looked at whether the work is viewed as fresh, unusual, original, new, and different. And, to my knowledge, not one of the 50 students had ever completed a project like this. They are used to everything completed individually.

The next quality would be that you give the students a “choice,” and it includes opportunities for students to make significant decisions about presentations. I think they had very significant decisions as far as what they would do. We gave them broad topics like “What are the survival techniques of insects?” They could go off in whatever direction they wanted as long as it pertained to the main topic they were assigned. We gave them the choice, but they could always go back and look at what the final goals for the project were. I think that is how we learn. That is why we structured it a bit in the beginning. I think that is something that we have learned. If you make it too broad, then they struggle and we struggle. They don’t know what choice to make. We were talking to a worker in the social studies office, and her son is in college struggling through group projects and deciding who does what. He decided to do the tail-end of the project, but all the people in front of him didn’t get their share done.
[until the last minute]. Therefore, he couldn't do his [until the night before it was due], and he was up all night. Very often, when you think in terms of what the kids will encounter in the work world, as well as increasingly in college, they have to be able to respond to collaborative situations. It also says within this component that the paths to completion should be valued by the student. I see when the students were asked to split up the work, each person would be drawing up four or five pages of the book.

And, in terms of the “organization of knowledge,” you are to provide explicit instructions on the use of processes and tools. Again, I think we worked on it for three weeks, explicitly letting them know what the book needed to look like and what the hands on activity needed to include. And we went over it and practiced how [to do it]. From the very first day, we gave them a packet of what was required.

The last one would be the “content and substance” of the work, and it says that you should enhance the understanding of concepts significant to the community. At the very beginning, when they were doing their research, it was very good. They were working from the same concept [Change], and were learning it, but they were learning it at a much more complex level. Then they had to take those complex concepts and figure out how to simplify them [enough for second-grade understanding]. They had to be able to simplify, and so they had to have command of the content. They did a good job. They were right on what they needed to do.

I think one of the statements from one of the students summed it up. When they were giving their presentation on survival techniques of insects, they had given the [second-grade] students several pictures of centipedes, wasps, and other kinds of insects. The one student said, “You know, some of these [second-grade] students knew all about this. I didn’t know some of these survival techniques until we did this project and had to teach them.” When asked if they would use the project again next year, they responded, “Absolutely, it worked out so well, and I think the second-grade teachers were just ecstatic.”

The team skipped explicit discussion of the design qualities which speak to affirmation of performance and authenticity, as addressing the relevance and meaningful consequences of the work, although they do touch on these concerns within the context of other components. Schlechty’s template appears to give them a language with which to talk about their work. This is only the first year the team has worked together in this manner. They appear to be conscious of the components of quality work and able to analyze specific student experiences accordingly.

As communities develop, they shape action. What we observe here is a professional community under construction. “Tool kit” strategies for action, like Schlechty’s template for designing quality work and the Tech Prep I Bull’s Eye model, have the capacity to become meaningful artifacts that members can use in different ways to advance the work of teachers and students (Swidler, 1986, as cited in Firestone & Louis, in press).
Zero Period and the Triad

Beane (1997) maintains that within truly integrated curriculum, learning experiences, knowledge, social interactions, and curricular design all are integrated (p. 4). He defines curriculum integration as a "design that is concerned with enhancing the possibilities for professional and social integration through the organization of curriculum around significant problems and issues, collaboratively identified by educators and young people, without regard for subject area boundaries" (pp. x-xi). Such thematic planning is common among the Tech Prep and WOW teams, with units built around issues such as family history, careers, and problems ranging from how to create a fictional book for second graders to how to create a colony in space.

The curricular integration pursued within the dyad and triad arrangements appears to be more parallel or sequential in nature rather than thematic, as is typical of the Tech Prep and the WOW teams. One current triad developed when an art teacher joined an already established team of a College Prep English teacher and an Advanced Placement American history teacher. Their work is modeled after Roger Taylor's thoughts on integrated curricular design and is strong on student-centered products which combine art with English and history. They employ Roger Taylor's universal themes as a way to help students see the connections between their course content (see Figure 26). The English teacher describes the genesis of their integrated planning experiences as follows:

I am currently teaching on a triad. It was a neat concept started [when] the history teacher, who is the department head, and I [had] cafeteria duty together for a year's time. We would talk about what we were doing in the classroom. Many times, his students were writing about Thomas Jefferson and his work as an historian while they were also reading about his literary accomplishments in my literature text. He said, "Why should they be doing two separate two-page compositions and get two separate grades?" I was helping some of his students with their writing — how to write an analysis of Thomas Jefferson and the Declaration of Independence — and he was doing the same thing. He was busy looking for the historical content from his students, and I was busy teaching them that this guy was a great writer. We noticed that all year long, the time periods in American literature were the same as the time periods in American history, so why shouldn't they be taught together? We have then gone on during these last two years to incorporate a half-credit of art, because we noticed the same kind of parallels. We attended a Roger Taylor conference. He is a person with a lot of expertise in this integration area, and we came away so convinced that these courses needed to be taught together. There was no reason for the arbitrary split. That is just not practical for the student.

The art teacher recalls similarly serendipitous beginnings as she joined the team.
Taylor's Human Connection Model: Analyzing Human Activities: AHA!
An Interdisciplinary Model for Integrated Curriculum

Universal Themes
- Cause and effect
- Celebration of pluralism
- Change and continuity
- Citizenship
- Community
- Culture
- Equal opportunity
- Freedom and justice
- Government and authority
- Human rights
- Independence and interdependence
- Moral, ethical, and spiritual behavior
- Peace
- Scarcity and choice
- Stewardship of natural & human resources
- Survival issues and future alternatives

Critical Thinking Skills

Analyzing Human Activities: AHA!

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My students were doing some clay work that required it to be placed in an oven for about 10 minutes, so I carried those things from this department down to the home economics room. The history teacher on the team had a study hall/tutoring class in there, and it was a small group of people, so we just started talking. He showed me student papers and examples of their team planning. One day he said, “Why don’t we do this together? Why don’t we block this together?” I thought it sounded great and asked if we needed a year to plan. He said no, that we would get together over the summer and do some study days, and planning and brainstorming, and then jump into it.

What began as informal teacher talk in the corridors of the school was then reinforced through formal professional development experiences. These three teachers employ Roger Taylor’s curricular design strategies in order to shift their instructional habits from traditional teacher-centered approaches toward more pupil-centered, performance-outcome methods (see Figure 27). Taylor’s Human Connection Model, or Analyzing Human Activities, or AHA! (see Figure 26) provide the language which gives voice and definition to their ideas, allowing them to generalize and discriminate, to systematize and transfer what was previously intuitive. Once again, these teachers identified tools which, when employed, make the difficult, time-intensive work of integrating curriculum manageable. What follows is an observation of two team members in action as recorded by a university researcher. Consider teaming as work in progress:

A first-period history class completes day three of a “Think, Pair, Share” activity, à la Roger Taylor. The class takes place in a room where older bookshelves line two walls, and chalkboards go the length of the remaining two. There is one computer in the room, an overhead projector, and a television. The American flag is mounted on one wall above a chalkboard.

Students are assigned readings to cover individually. Pairs are then given responsibility for a different portion of the information to summarize and report back to the large group. The pairs write summary notes on the board for the entire class. Each class member is responsible for copying these into their notebook. The pair then shares their summary orally within the context of a whole-group discussion.

From Gerry, the English teacher, by way of explanation: “This format allows us to be more of a coach than a spin feeder.”

Gerry and Ray, the history teacher, are in the room together. This is true about 99 percent of the time for this first-period class. Beth, the art teacher, and Ray share responsibility for zero period similarly; Gerry [joins] them 50 percent of the time. Beth and Ray are officially scheduled for this zero period, which begins at 7:00 a.m., so contractually they are free to leave after ninth period. Even though Gerry starts his day at first [period] and stays through tenth [period], he often comes early to join the other two [teachers].
The shift from instruction as it is currently practiced to Pupil Performance Outcomes/Mastery Learning classrooms will call for some major operational changes:

<table>
<thead>
<tr>
<th>FROM (In the Current Classroom)</th>
<th>TO (In the Pupil Performance Outcomes/Mastery Learning Classroom)</th>
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<tbody>
<tr>
<td>Seat Time Measures of Program and Credit</td>
<td>Performance Measures of Program and Credit</td>
</tr>
<tr>
<td>Bell Curve</td>
<td>&quot;J&quot; Curve</td>
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<tr>
<td>Grades A – F</td>
<td>Grades A, B, Incomplete</td>
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<tr>
<td>Calendar-Defined Curriculum Structure</td>
<td>Pupil Performance Outcomes/Mastery Define Curriculum Structure</td>
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<tr>
<td>Curriculum Coverage</td>
<td>Coaching for Mastery</td>
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<tr>
<td>Permanent Records</td>
<td>Performance Transcripts</td>
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<tr>
<td>Assigned Activities and Tasks</td>
<td>&quot;Ultimate&quot; Outcomes Demonstrations</td>
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<td>Fixed Grouping and Assignment Structures</td>
<td>Flexible Grouping and Assignment Structures</td>
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<td>Fixed, Self-Contained Teacher Roles</td>
<td>Flexible, Team-Based Teacher Roles</td>
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<tr>
<td>Grading and Averaging Everything in INK</td>
<td>Evaluating Outcomes of Significance in Pencil</td>
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<tr>
<td>Offering and Providing Programs and Experiences</td>
<td>Intervening and Assuring Success on Outcomes</td>
</tr>
</tbody>
</table>
Ray stands at the board. He takes each pair’s set of notes one at a time, comments, elaborates, [and] offers feedback on the content ("I like that."). "He induced the king of Spain." "I couldn’t have said it any better myself."). [He] directs the discussion on each and then erases each set upon completion of that point. Although Ray does lead the discussion, he defers to Gerry in responding to specific student questions or to clarify one point or another. “Mr. B. could better address this question." “In my conversations with Mr. B. about X, he would make the point in this way.” With this sort of transition, Gerry jumps into the conversation and, when finished, defers back to Ray.

For example, one student says, “I have a question. How did we buy the Louisiana Territory when we were already in debt? What did we use for money? Is it like we had a huge credit card and charged the 10 million dollars?”

Here Ray defers to Gerry, making an analogy with an ongoing discussion they have about home improvements, and how Ray himself was originally skeptical and had to be convinced that going into debt might in time make him money — being optimistic and acting upon that optimism. Gerry explains, “The value of land is finite, and there was the added benefit of gaining and controlling access to the Mississippi. Jefferson was a southerner and a plantation owner. He could see the value of prairie grasslands in a way that others, including Napoleon, could not. Napoleon was being told that the land was worthless, while Jefferson was able to see that it was the future for the country. He was willing to go into debt on behalf of that future.”

It is a conversation within which both teachers and many of the students involve themselves. At least half of the students speak during the discussion. The rest appear to be attentive (e.g., adding to their notes, turning toward the speaker, showing each other notes, and whispering added explanation). Gerry explains they do this sort of “think, pair, share” at least once a six-week term for the reading assigned, as well as for their vocabulary work. The students identify the key words across art, history, and English. They come up with the master list of important vocabulary which Gerry and Ray have coined “the loaded word list.”

Ray adds that the tests are open-note. He says [that] when he did not allow this, students failed to see the value of note taking and so did not. He wants them to understand how these efforts connect, and what is to be learned from teaching each other — what is the payoff.

From Gerry: “This is how I got through college. My teammates and I (I played basketball) formed a study group of ourselves, and this is what we did for each other, with each other, all the way through. It just makes sense, and it works. We feel if we can give them this, we have taught them something that will serve them long past high school.”
At the end of the class period, Gerry takes the floor to review some details of the "Voice of Democracy" essay contest the class members are entering. He reminds them about finding a quote that is descriptive of their personal notion of democracy and how he will have a cassette recorder available so that they can practice hearing themselves read. "It takes some getting used to the sound of your own voice."

In a conversation following class, Ray offers the following about the team and about the genesis of zero period:

When you team, you need to leave the ego outside the door. Often you have to be willing to give up certain parts so the whole can function. We were looking for a way to make the teaming possible without disrupting the whole schedule. At first people said we couldn't do it, that kids wouldn't come, that it would disrupt bussing. Contractual concerns would not allow it. Someone from the school paper interviewed me and asked what would be new at Franklin Heights the next year, and I said "zero period," and explained our notion of how it would work. When the story ran in the paper, someone questioned the principal and he supported us. He never hinders teacher initiative. Not to say his standards and expectations are not high. You have to convince him and then you have to deliver. If it is not working, you better modify it. Ultimately, he is responsible and so he will be blamed if something bombs. But, teachers are so used to asking permission. We need to start taking initiative, and he has always encouraged that. Zero period started with two teachers who wanted to work together, and now at least five others are taking advantage of it. That kind of flexibility is key. We keep telling kids we want them to act like adults, but never give them the opportunity to do so. Again, it was something that made sense to do, and so we tried it and the students seem to agree. They come. It was never a big deal.

Ray went on to suggest that changes at the district level have helped facilitate innovation at Franklin Heights:

At one time, the policy was universal, applied to all three high schools. That has changed. I think they recognize you have to develop your own program for your own students. That is the only way it will make a difference for those particular students.

Each of the teaching teams has its own particular organizational and work style. Where the Tech Prep I team tends to rely upon more formal structures — utilizing the Bull's Eye model for planning, conducting more structured daily meetings, and giving national conference presentations about their work, the Tech Prep II team characterizes their planning style as more "spontaneous." The WOW team is just beginning to develop an identity and style during its first full year of operation. Utilizing Schlechty's framework as a template, the team members are learning how best to apply their combined expertise. The dyad-turned-triad developed around the natural rhythms of friendship, and it continues to structure much of the student and teacher collaboration within these organic kinds of associations and exchanges.
Across all teams, teachers persist in their attempts to integrate learning experiences for their students. Their determination keeps them connected. The sheer complexity of the work requires collaboration, and they engage as a matter of course. Always they are inquiring about the progress of their own teaching, and likewise about their students' ongoing learning within various instructional units. It is a matter of questioning their own work on behalf of the students they teach. By constantly comparing and adapting their joint practices, the teachers find their work becomes more and more visible. They relinquish their private time and space in favor of more public arrangements, first, to accomplish what is needed, and second, because they are excited and energized by the these shared endeavors.
Visitors to Franklin Heights High School hear unequivocal expressions of appreciation about this place. Time and again, one notes comments about what it is like to live here each day. James (1996) suggests that the culture of a place is contained within the stories people tell themselves and each other. These stories help to clarify shared values, reinforce appropriate conduct, and identify the heroes who embody and advance these desired qualities (James, 1996, as cited in DuFour & Eaker, 1998, p. 135). At Franklin Heights, the stories are about how people work together. They describe the personal regard and civility members of the community show to one another, and they emphasize each individual's investment in — and commitment to — certain core values. These traditions seem to permeate the walls and halls.

Concurrent Traditions and Innovations

At Franklin Heights High School, more traditional structures seem to thrive along with innovation. These concurrent traditions and innovations manifest themselves within classrooms and throughout corridors. Many are contained within the school's evolving decision structures. In combination, traditions and innovations encourage a professional community that, at times, extends beyond the school's walls. For example, along with building-wide decision structures and those contained within individual teaching teams, more traditional department structures continue to function. These curricular departments, led by department chairs, remain supportive of, and meaningful within, newer horizontal structures. In maintaining departmental homes, yet another form of collaboration is fostered.

Franklin Heights staff regularly communicate with their subject colleagues about both disciplinary and interdisciplinary work. Team members share their successes and challenges with staff who are not a part of formal teaching teams. This continuing dialogue about team teaching and integrated learning encourages exploration of opportunities which may exist outside teams. For example, the social stud-
ies department head is currently working with a director of curriculum within the administrative office to establish a technology-driven social studies classroom. The math and science department heads, too, continually work to introduce new technology and plan integrated programs across their departments. Together, these two departments reach down into the elementary and middle schools, providing professional learning experiences for teachers in these lower grades.

Even the traditional physical structure of Franklin Heights, with its double-loaded corridors, seems to encourage collaboration in unexpected ways. Classroom doors remain open and activity visible. People run into each other up and down the hallways. Space is scarce and so is utilized to the fullest. One teacher describes the atmosphere this way:

I do not think people are isolated here. People talk a lot. If you want to see somebody, you can actively seek them out and that is OK. If you go into somebody's room and they are teaching, it is not a big deal. People won't flip out because someone is coming in to see what they are doing.

Reflective Dialogue and Deliberative Change

Changes at Franklin Heights have been planned and deliberate, most often pursued one good idea at a time. There appears to be conscious effort to "[graft] thoughtful reforms onto what is healthy in the present system" (Tyack & Cuban, 1995, p. 133). This desire to "[p]robe the meaning of continuity in schooling, as well as understand change" is not surprising for a school whose constituency is largely blue collar and conservative (1995, p. 4). Some parents have a history as students of this high school. Most have largely traditional views about the way schools should be. One teacher explains:

Some of these parents [feel as though], "I went to school, and I got this [traditional kind of education]." You see this a lot at Franklin Heights where past graduates are parents of our children. You walk down a hallway, and you will see parents stop and look into a class and imagine their friends and themselves. Franklin Heights did right by them, and that is their reminiscence.

There is a sense that teachers and administrators place great stock in ensuring that parents and community members remain comfortable with, and confident in, the school program, even as it changes. A senior student, one of the first graduates of the Tech Prep program, offers:

"When I first started in Tech Prep, my mom had a lot of questions about the program. She finally let go and let the teachers take over. She put her confidence in them. They just kind of reassured [parents] that they knew what they were doing. A lot of times they would just flat out tell you that it was new, and they really did not know, but parents were understanding of that."

The educators at Franklin Heights have come to value this trust and are conscious not to betray it.
An equally important factor in decisions about change appears to be this collective faith in the enduring features of the school, the coherent meanings, and unified habits that have come to characterize Franklin Heights as a learning place for students, as well as for adults. Specific innovative practices and experiments are discussed as points of entry into an established and valued learning community. The principal reflects:

As a vision, I want to see this entire school organized with the teachers in teaching teams and with kids experiencing applied academics, [that is] the marriage of the best aspects of vocational education and academics. We are definitely working toward that. I believe there are great advantages in that kind of [collaborative] work. I believe there are great advantages in the integration piece. We are not there yet, but we are working toward that. But everyone has to be committed. [I]t takes a lot of work to build capacity for that. It is not just someone from above or below [who] says what they think this school [should be]. It is not a cookbook recipe. It is really studying what your community values and what you know from good sound data are going to be the kinds of skills kids are going to need [in the future]. And, you cannot abandon it just because it is not going well all the time. A project may bomb, but you must reflect and look at how you can make it better. If we believe in this kind of work, then we keep tinkering with it.

He goes on to acknowledge the potential risks and the resistance.

To prepare your lesson plans as an individual is totally different from preparing them with two or three other individuals. That is totally different, and it is a lot of hard work. Again, it is stepping out there into the unknown. It is stepping into murky waters. Some people are not comfortable with that. We are building an appreciation for that kind of sharing. It is not an event you can look at; it is a process that occurs over a period of time. When you are building capacity, you have to build it from the ground up in all facets [of the organization].

The principal describes a gradual process which builds upon existing strengths, taking every available opportunity to advance the community as a professional one.

You give people opportunities to share successes so that communication is important. When people can see and hear about those things, it whets their appetite for it. We have lists and lists of people who have engaged in professional development outside this building and outside the district. There have also been people who have shared the information. They tend to be the leaders, in terms of technology in the math classroom and in terms of Tech Prep and the project-based orientation. [And] there were no blueprints for these people. I understand that it is like anything else, you collect as many tools as you can, and you put them into your toolbox, because there are some teachers who are going to need that to be comfortable. You have to look at how you can help them with that comfort level.
The split session schedule for the 1998-99 school year has the potential to alter much of the unified character of this particular school. With staff on different/overlapping schedules, they would not likely experience the informal, incidental, and ongoing conversations that have defined and sustained the spirit of community. Likewise, a unified school environment may become more of a two-school world, with separate and distinct communities, and less school-wide consensus. Unlike previous change initiatives, this shift has occurred rapidly with little or no chance for upfront reflection. The split sessions have the capacity to accelerate the timetable for some innovations, while at the same time they threaten others. Teachers and administrators must be diligent in monitoring this most recent and unplanned challenge. Collective dialogue about this change may be vital to protecting current innovations and advancing future endeavors.

Developing Professional Habits of the Mind

This principal appears to be cognizant of the features and traits, norms and meanings, conditions and procedures which must be considered if changes are to be institutionalized within his school and professional community is to flourish. To cultivate new habits, the conditions which allow people to practice them must exist. People must have myriad opportunities to rehearse and exercise. The situations in which people live and work not only must provide the time and space, but also must openly approve and support the activity.

If teachers and students have frequent opportunities to converse, communicate, and solve problems together, they will become increasingly better at doing all these things. If Franklin Heights succeeds at implementing this kind of careful and thoughtful change, then the means to more professional and reflective habits will not have to be squeezed in, or tacked on, or double-scheduled, or even scheduled. The vehicles introduced will instead be genuine, taking into account who initiates, who facilitates and for whom, who participates and for what purposes. The experts will be insiders and the problems will be real. Starting from some live discomfort or stress, and building a meaningful solution to that specific problem, they will keep active learning and reflection always in sight as they attend to the specific ways to get it done.

Strong commitment to an enduring school community is precisely what has made each of the current innovations at Franklin Heights possible. What began as grand experiments for particular segments of the student population will, over time, become equally part of the woodwork, so much so that the community will evolve along the way. One teacher describes how this is already happening in regard to the daily schedule:

"They are allowing us [Tech Prep] to change the school day and, other than catering to certain classes that have to be taken, we can spend as much time in a math class as we want. If we decide there is something going on in math that is just so important that [it] would..."
Jans forminy ceearniny eommunities take double the normal amount of time, then we can eliminate local study that day, and students will be double-blocked in a math class. That is the kind of freedom we have been given with our classes. Tech Prep II and WOW are the same way. They are given the students for a certain block of time, and they can arrange that block any way they want. [However], I think if you walk down the hallway, you will see that it is not just the Tech Prep and WOW areas; throughout the building, there will be a group of kids that will change classes while other kids will be in class.

And, as we consider individual teachers, what does it mean for them to practice new habits of professionalism? It means they are self-conscious about what they do. They keep up on the literature in their field. They seek out those more capable, learn from them and pass on what they have learned. They look forward to learning so as to improve their own activities. They think what they are doing is valuable and necessary. They honor themselves by doing good work and thereby bring honor on their profession. These actions are ongoing and vigorous, and they cross disciplines. For the truly engaged, there are no arbitrary boundaries, no limitations, no reason not to engage, and every reason to be engaged. In the words of one teacher who joined the Franklin Heights faculty four years ago:

I have either said it myself or... heard other people say, "Test the perception. Challenge the perception." You can get away with that here and still live, and still have friends. It is a good thing, and it demonstrates an open-mindedness that is not always indicative of the teacher population. [My professional growth] has been enormous here because of this staff. They expect a lot more to happen. They really support [professional growth] and value it. Value — key word. That was not necessarily the case where I was before. There was more of a focused effort [in that school] to maintain the status quo. I am a mid-career teacher, so it is a question of either continuing to grow or die, and I am not interested in dying. They have invited me to be a part of it, and that is a huge thing. I am currently carrying way more students than what I should probably be managing, but I have such a commitment to them. The work I have done is very satisfying and engaging.

In rethinking professionalism at Franklin Heights, teachers and administrators are able to rely upon an environment where honor and responsibility have always gone hand in hand. Extending strong professional community throughout the entire school will require a continuing dialogue about teacher involvement, motivation, and participation. This does not necessarily suggest that all teachers must embrace innovations in their current form but, rather, that all teachers be engaged in ongoing dialogue about their individual teaching practice and how it might inform — and be informed by — these innovations. Teacher-to-teacher conversations, observations, and collaborations across centers of activity will be vital to this dialogue, and the entire enterprise will be advanced as those who participate see their own professional integrity tied to the good of the school, the good of the student, the good of the community, and the good of themselves.
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Transforming Learning Communities


The Transforming Learning Communities project (TLC) is an initiative funded by the Ohio Department of Education to support significant ongoing school reform efforts among Ohio's elementary, middle, and high schools. Education researchers from the Ontario Institute for Studies in Education of the University of Toronto were contracted to conduct in-depth case studies of school reform in a select number of schools that have made significant progress in school improvement efforts supported, in part, by the state's Venture Capital grants program. Twelve schools were chosen for variation in type (elementary, middle, secondary), location (rural to urban; region), focus for change (teaching and learning, professional development), school improvement model, and evidence of progress. The aim is to understand the nature and process of school improvement efforts in these schools, to explore ways to support their continued development, and to engage other educators in Ohio in the lesson learned from these schools.

The case studies were carried out by the local teams, consisting of the project co-directors from the University of Toronto, at least two members of the school staff, and subcontracted researchers from Ohio university faculties of education partnered with the schools. The project began in the spring of 1997 and continued into the fall of 1998.

Central Ohio Research Team

The Central Ohio research team comprised one faculty member and three graduate research assistants from the Ohio State University's College of Education, along with nine representatives across the three Central Ohio case-study schools, these being Franklin Heights High School, Galion Middle School, and Reynoldsburg High School. This team worked together to develop a case-study plan with common core research questions and some degree of consistency in interview guides, standardized observation strategies and protocol, and document samples across the three schools. Instruments and field visit strategies were then tailored by the members of each individual school team in order to best capture the specific content of, and process for, school improvement at each school.

Members of the cross-school research team participated in one full-day and three half-day work sessions during July and August 1997. The team agreed upon a number of fundamental research questions and went on to develop interview guides for staff, parents, and students and standardized observation protocol for use at the three schools (see Appendix B). These broad research questions and corresponding interview guides proceed from the key elements of the Transforming Learning Communities framework. They were developed around the three themes of collaboration, inquiry, and integration.
Although the focus shifted from one school to the next according to the specific features of their school improvement plan, school representatives were confident that close attention to the framework would support in-depth explorations of these three learning communities. The fundamental research questions were as follows:

1. What is the nature of the learning communities at Franklin Heights, Galion, and Reynoldsburg, including themes, tensions, and complexities?
2. Plot the critical path of change at these three schools. Place the description of each learning community in a context which acknowledges the past and anticipates the future.
3. What factors have affected, and continue to affect, the development of Franklin Heights, Galion, and Reynoldsburg as learning communities?
4. How do organizational structures and norms, socio-political conditions, and local, state, and federal policies encourage and/or impede collaboration, inquiry, and integration at Franklin Heights, Galion, and Reynoldsburg?
5. What are the structures, strategies, and support networks that have developed to encourage change?
6. How have these structures, strategies, and support networks encouraged collaboration, inquiry, and integration across classrooms, corridors, and into the community?
7. How does each learning community assess its progress to date in relation to the goals it has established and indicators for success it has identified for improved student and teacher learning?

Site Visit and Data Gathering

During these initial work sessions, tentative data gathering and site visit plans were developed. Tentative plans included early introductions, document reviews, shadowings and observations, with staff interviews beginning late September. This initial site visit gave each team opportunity to be seen and known before interviews began in earnest. From September 15 to June 3, the Ohio State University team spent one to two days each week at Franklin Heights High School interviewing staff, observing classes, shadowing students, and attending meetings/presentations. The core Franklin Heights research team was composed of a teacher, the building principal, and the two Ohio State researchers. School members assumed responsibility for scheduling interviews and for making other necessary site visit arrangements. They also assisted with ongoing revisions to the research plan, and various instruments and protocol.

Researchers analyzed relevant documents and archival evidence. Documents reviewed across the three school sites include: the Venture Capital Grant applications, school improvement plans, school district guidelines, building guidelines, faculty handbooks, and parent and student handbooks. In addition, there were documents specific to Franklin Heights, including the North Central Report, Reading Improvement report, the BEST application, a Working on the Work description, the Individual Career Plan, and a central office demographics document. Policies and procedures as outlined within these documents were compared with actual practice as described and observed.
Observations included shadowing students representative of different program areas and grade levels, attending team meetings and faculty meetings, participating in student exhibitions, and serving as project evaluators.

Key participants were identified from each of the three schools. The staff and parent guides were field-tested during August. Feedback from these field tests directed instrument revisions. The student interview guide was customized to structure questions more specific to school and program contexts, using appropriate terms and titles. Interviews with faculty, staff, district level administrators, former principals, community representatives, students, and parents included both focus group and individual interviews. One junior/senior combined class was interviewed as a whole at Franklin Heights. In keeping with Miles and Huberman (1994), questions were employed flexibly, serving as a guide to conversation rather than an oral survey. Interviews lasted on average one and one-half hours, occurring in classrooms, in school offices, in the Educational Resource Center, and at various community sites, including a student’s home. Approximately 30 interviews were conducted at Franklin Heights, including 27 teachers, seven administrators, 20 students, one parent, and two community members. All interviews were audiotaped.

Data Management and Analysis

Three levels of data collection and analysis occurred at each of the three schools, with one of the project co-directors from the University of Toronto serving as an ex officio team member spending approximately five days at each school, the faculty member from the Ohio State University dividing her time across the three sites, and each of the three graduate research assistants leading site contact at one school exclusively.

The Ohio State University research team representatives met monthly to coordinate/compare data and ongoing interpretations. They shared field notes and interview transcripts and discussed emerging themes. These conversations were shared with school team members as the research continued. The project co-director met with the team in December 1997 to discuss early impressions and provided written interpretations and suggestions in July 1998.

All audiotaped interviews were transcribed. Data were then organized, classified, and coded. Initial coding was done using a priori codes derived from the TLC framework and from the literature on school change. Additional codes were added as they emerged (Crabtree & Miller, 1992; Lincoln & Guba, 1985). The investigators employed a qualitative thematic strategy of data analysis, making inferences by objectively and systematically identifying specified characteristics of messages, searching for emerging themes, anomalies and contradictions among the interviews with key participants and the contents of relevant documents and observations (Holsti, 1969; Merriam, 1988). Appropriate software (i.e., Hyper Research) was utilized.
Potential problems of validity and reliability were addressed through triangulation of data, that is, using multiple data sources to provide multiple indicators of the same phenomenon (Denzin, 1970). In addition, member checks were conducted with key participants, asking if the data were accurate and interpretations plausible (Guba & Lincoln, 1989). School representatives to the research team participated fully in validation of research findings. Finally, rich, thick description provides a base of information appropriate to judge the transferability of the findings (Merriam, 1988).

**Ethical Considerations**

The research plan for the case study was reviewed and approved under standard ethical review procedures for research on human subjects at the Ohio State University. Although the 12 schools participating in the Transforming Learning Communities project will be identified, specific procedures were followed to protect the rights, confidentiality, and anonymity of participants to the highest degree possible within this context. Participation was voluntary, and individuals had the right to withdraw from the study at any time. Each participant was given a description of the purposes of the study and the conditions of participation, and each signed an informed consent form. The draft report was made available to school personnel for review, providing a check on confidentiality, accuracy, and the opportunity to submit alternative interpretations of findings. All tapes, transcripts, documents, and field notes were stored securely during the study and will be destroyed after a period of time designated under the project guidelines.
# APPENDIX B

## OBSERVATION PROTOCOL FOR FRANKLIN HEIGHTS HIGH SCHOOL

*(page 1 of 3)*

<table>
<thead>
<tr>
<th>In the Classroom</th>
<th>Student with Student</th>
<th>Teacher with Teacher</th>
<th>Teacher with Other Student</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collaboration</strong></td>
<td>Group work, Portfolios, Presentations, Projects, Authentic assessment, Block schedule</td>
<td>Common planning time, Conference period, Tech Prep, WOW, Triads, Dyads, Team teaching, Project design, Block schedule, Authentic Assessment, Student discipline</td>
<td>Group work, Portfolios, Presentations, Projects, Authentic assessment, Block schedule, Student discipline</td>
<td></td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>Group work, Portfolios, Presentations, Projects, Authentic assessment, Block schedule</td>
<td>Common planning time, Conference period, Tech Prep, WOW, Triads, Dyads, Team teaching, Project design, Block schedule, Authentic assessment</td>
<td>Group work, Portfolios, Presentations, Projects, Authentic assessment, Block schedule</td>
<td></td>
</tr>
<tr>
<td><strong>Inquiry</strong></td>
<td>Group work, Portfolios, Presentations, Projects, Authentic assessment, WOW Wheel, Multiple intelligences</td>
<td>Team Teaching, Project design, Authentic assessment, Student discipline, WOW Wheel, Bull's Eye Model, Collection of data</td>
<td>Group work, Portfolios, Presentations, Projects, Authentic assessment, WOW Wheel, Multiple intelligences</td>
<td></td>
</tr>
</tbody>
</table>
**Observation Protocol for Franklin Heights High School,**
*(page 2 of 3)*

<table>
<thead>
<tr>
<th>In the corridors/In the boardroom</th>
<th>Teacher with teacher</th>
<th>Teacher with administrator</th>
<th>Teachers with district administration</th>
<th>Students with administration</th>
</tr>
</thead>
</table>
| Collaboration                     | On-site steering committee  
                                         Common planning time  
                                         Conference period  
                                         Staff lounge  
                                         Lunch  
                                         Hallways | On-site steering committee  
                                         Parent conferences  
                                         Teacher evaluation  
                                         Lunch  
                                         Hallways  
                                         Student discipline  
                                         Team meetings | District committees | On-site steering committee  
                                         District committees  
                                         Student discipline |
| Integration                       | WOW Wheel  
                                         Bull's Eye Model  
                                         Project Design  
                                         Tech Prep  
                                         WOW  
                                         Triads  
                                         Dyads  
                                         Math/Science | Block schedule  
                                         Staff development  
                                         Teaching teams | Block schedule  
                                         Staff development | Block schedule  
                                         Staff development |
| Inquiry                           | On-site steering committee  
                                         WOW Wheel  
                                         Bull's Eye Model  
                                         Project design  
                                         Staff development  
                                         Collection of data | On-site steering committee  
                                         Parent conferences  
                                         Teacher evaluation  
                                         Student discipline  
                                         Team meetings  
                                         Staff development  
                                         Collection of data | District committees  
                                         Staff development | On-site steering committee |
## Observation Protocol for Franklin Heights High School

### (page 3 of 3)

<table>
<thead>
<tr>
<th>In the community</th>
<th>Teacher with parent</th>
<th>Administrator with parent</th>
<th>Parent/community member with school</th>
<th>School with community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td></td>
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<tr>
<td></td>
<td>Parent-Teacher</td>
<td>Parent conferences</td>
<td>Advisor</td>
<td>Business &amp; Industry</td>
</tr>
<tr>
<td></td>
<td>Conferences</td>
<td>Open House</td>
<td>Coach</td>
<td>Council</td>
</tr>
<tr>
<td></td>
<td>Open House</td>
<td>PTA</td>
<td>PTA</td>
<td>Doctor's West</td>
</tr>
<tr>
<td></td>
<td>PTA</td>
<td>Student discipline</td>
<td>Sports</td>
<td>Columbus State</td>
</tr>
<tr>
<td></td>
<td>Student discipline</td>
<td>Sports</td>
<td>Business &amp; Industry</td>
<td>Community College</td>
</tr>
<tr>
<td></td>
<td>Sports</td>
<td></td>
<td>Council</td>
<td>Ohio State</td>
</tr>
<tr>
<td>Integration</td>
<td></td>
<td></td>
<td></td>
<td>West Franklin College</td>
</tr>
<tr>
<td></td>
<td>Project evaluators</td>
<td>Business &amp; Industry</td>
<td></td>
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<td></td>
<td>Parent presentations</td>
<td>Council</td>
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<td>Inquiry</td>
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<td>Parent-Teacher</td>
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<tr>
<td></td>
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<td>Sports</td>
<td></td>
<td>Community College</td>
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<tr>
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<td>Sports</td>
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<td></td>
<td>Ohio State</td>
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<td></td>
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<td></td>
<td>West Franklin College</td>
</tr>
</tbody>
</table>

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ELEMENTARY SCHOOLS

1. Brentmoor Elementary School
   Mentor Exempted Village Schools
   Cleveland State University

2. Cranwood Learning Academy
   Cleveland City Schools
   Cleveland State University

3. Dawson-Bryant Elementary School
   Dawson-Bryant Local Schools
   (Lawrence County)
   Ohio University

4. Lomond Elementary School
   Shaker Heights City Schools
   Cleveland State University

5. Miami East North Elementary School
   Miami East Local Schools
   (Miami County)
   Miami University

MIDDLE SCHOOLS

6. East Muskingum Middle School
   East Muskingum Local Schools
   (Muskingum County)
   Muskingum College
   Ohio University

7. Galion Middle School
   Galion City Schools
   The Ohio State University

8. Talawanda Middle School
   Talawanda City Schools
   Miami University

SECONDARY SCHOOLS

9. Federal Hocking High School
   Federal Hocking Local Schools
   (Athens County)
   Ohio University

10. Franklin Heights High School
    South-Western City Schools
    The Ohio State University

11. Reynoldsburg High School
    Reynoldsburg City Schools
    The Ohio State University

12. Robert A. Taft High School
    Cincinnati City Schools
    Miami University
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