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ABSTRACT

The handbook, developed by the National Summer Leadership Training Institute (1972 and 1973) on the Education of the Gifted and Talented, provides background information for program development, worksheets for applying information, and models which illustrate successful program ideas. Topics considered in the section on initiating a program are answering program planning questions, replying to criticisms of programs for the gifted, planning, differing roles and responsibilities, and philosophic considerations. Examined in the section on program prototypes are elements and kinds of prototypes, intra-classroom prototypes, extra-classroom prototypes, special types of giftedness and talent, and guidelines for developing a protoyype. Discussed are aspects of curriculum design: principles process and content elements, methods for differentiating curricular activities for the gifted and talented, guidelines for developing a curriculum, types of curricula, and format and packaging of curriculum. Guidelines for developing a written plan are provided. Program preparation is seen to involve monitoring program progress and planning for inservice education. Also included are 54 bibliographic references and 10 references to written plans of various California school districts. (DB)

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Providing Programs for the Gifted and Talented:

A HANDBOOK

(INCLUDING WORKSHEETS AND MODELS)

An Instructional Syllabus for the National Summer Leadership Training Institute on the Education of the Gifted and the Talented

by
SANDRA N. KAPLAN

OFFICE OF THE VENTURA COUNTY SUPERINTENDENT OF SCHOOLS
Ventura, California

June, 1974

PREFACE

This handbook represents one phase of a unique effort to effect qualitatively-differentiated education for the gifted and the talented. While individuals frequently contend that no one listens, this publication is the outgrowth of a great deal of listening. During the period from August through December, 1972, the National/State Leadership Training Institute on the Gifted and the Talented convened educators from many areas of the Nation, to discuss their needs in order to improve educational opportunities for the gifted and the talented. Input from these area needs-assessment meetings were analyzed to identify specific needs which demand priority action. Participants consistently expressed two greatest needs: (1) more effective identification procedures and (2) appropriate program practices. This handbook deals with the second of these needs.

The purpose of this handbook is to present background information for the development of programs for the gifted and the talented, worksheets on which to apply information, and models which illustrate successful program ideas. With the helpful suggestions from participants in the 1973 Summer Institute in Squaw Valley, California, and from other users of the working draft of this publication, this final version resulted.

ACKNOWLEDGEMENTS

It would be impossible to acknowledge all those who have contributed to this syllabus. To the numerous educators across the country whose ideas prompted its writing, appreciation is hereby extended. Great gratitude goes to the following persons who contributed to this work:

-Mary Brantly (Oakland Unified School District) and Eileen Lilly (Hacienda-La Puente Unified School District) for reviewing materials submitted by State education agencies, school districts, and colleges and universities

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-Irving S. Sato (National/State Leadership Training Institute on the Gifted and the Talented) for general project direction.

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Introduction

INTRODUCTION

This handbook has been written for those initiating or expanding a program for the gifted and talented, and it presents an overview of the features and procedures which need attention in designing and implementing a program. It is intended as a handbook or supplemental resource and needs to be supplemented with additional literature and research about the gifted and talented. This is a practical guide which indicates the things a reader must know and do in order to formulate a program.

The contents focus on what a program needs and how these needs can be met. Realizing that no single formula for developing a program can be used in all situations, the author has included alternatives from which the reader may select. Because each page is a separate informational resource, it can be used as an independent unit according to the needs and interests of the individual reader.

The handbook has been constructed to make the material readable and usable. There are three types of pages: narrative pages, worksheet pages, and model pages. Each has distinctive characteristics and is designed for a specific purpose. These pages are not mutually exclusive. Rather, the three types of pages form a unit to explain, to apply, and to illustrate the facets of a program for the gifted and talented.

The Contents

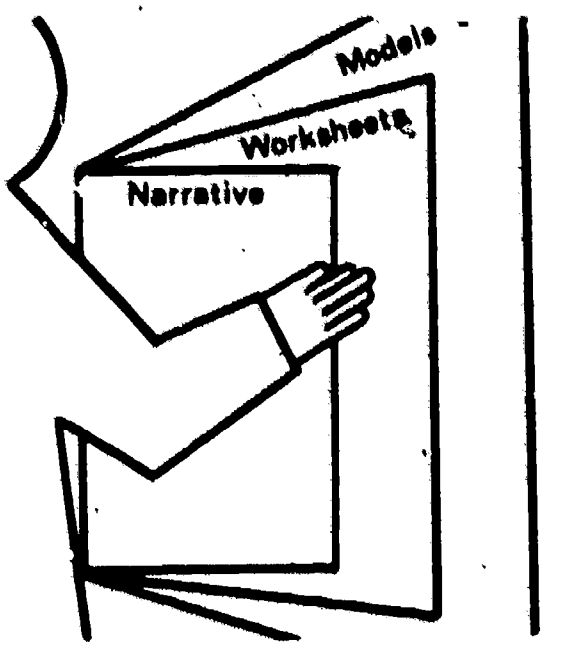
-narrative to explain information

-worksheets to apply information

-models to illustrate information

Narrative Pages

These pages summarize the principles, theories, and concepts which are conducive and applicable to organizing and executing a gifted and talented program. Points from the text are highlighted in graphic representations. These points outline and reinforce the most important concepts articulated in the narrative. It is anticipated that the graphics could be enlarged for use in orientation or inservice meetings as transparencies or charts or as illustrations in a brochure about the gifted and talented.



Worksheet Pages

These pages are designed to assist readers in applying information. They consist of forms and exercises which can be reproduced for use in meetings or work sessions by personnel responsible for the program. They need not be used in their entirety but may be adapted according to individual or group specifications. In other words, these worksheets can serve as a source for directing the thinking and activity necessary for program development and progress.

Model Pages

These pages represent examples of current materials developed and used by various agencies throughout the country. They are intended to serve as a reference in order to acquaint the reader with what others have done in relationship to established requirements for the articulation and operation of a program. They are not intended to illustrate the only or best way of doing something; they are a sample of one way something can be done. The models should be a springboard for ideation. The result of viewing these models should be the development of a document which is directly related to the reader's program.

Initiating a program

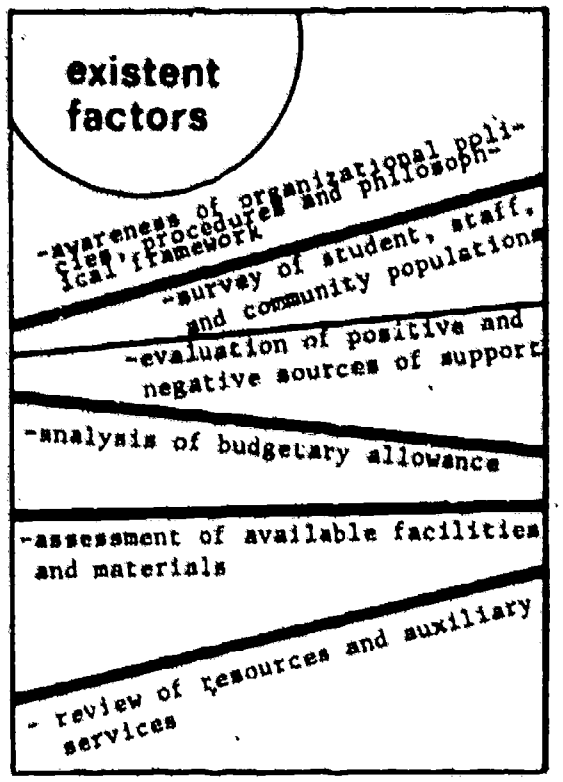
INITIATING A PROGRAM

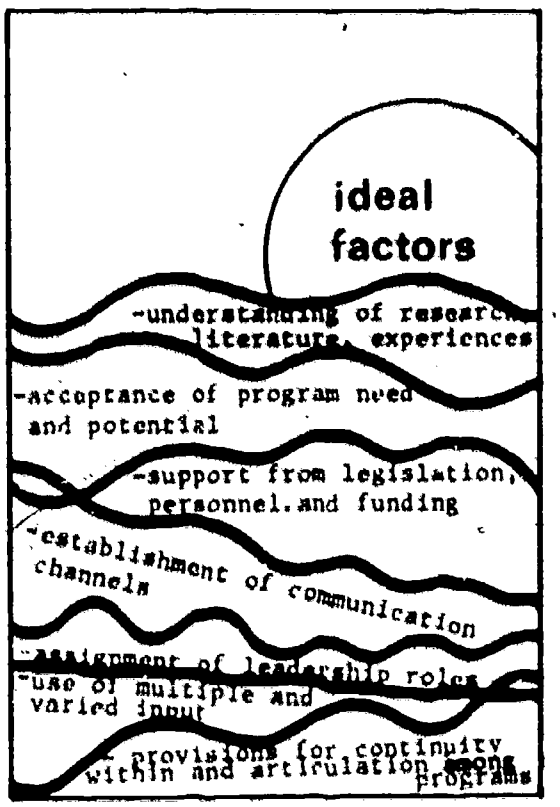
The development and implementation of a program for the gifted and talented is contingent upon assessing and integrating the factors which are EXISTENT within the institution with those which are IDEAL for students.* Although the limitations for the program are the result of features that exist within the institution, the formation of the program must be compatible with the expectations held for the gifted and talented.

A program for the gifted and talented should reinforce and be compatible with other programs within the same institution. It should exert influence over the total organization in which it will function. The impact and survival of such a program will be dependent upon its flexibility and adaptability to new and changing information and also upon its stability in adhering to the purpose and intent for which it was originally planned.

Thus, a program becomes an operational plan to serve the needs of the gifted and talented as it provides for the organization, personnel, and environments in answer to those questions:

-WHY is a program necessary?
-WHAT does a program provide?
-WHEN and WHERE will provisions for the program be made available?
-HOW will these provisions be put into operation?
-WHO will be responsible for implementing these provisions?





*Throughout this publication the term "institution" is used to refer to local, county, or State agencies responsible for the development and implementation of educational programs.

ANSWERING PROGRAM PLANNING QUESTIONS

WHY is a program necessary?

The literal interpretation of the statement, "an education commensurate with each child's ability to learn" (which is part of the philosophy of general education), reinforces and explains the reason for differentiated programs for the gifted and talented. Identification of the differences and specialties among students mandates provisions which develop these characteristics. The gifted and talented represent a group of students whose learning style and thinking dimensions demand experiences which are outside the educational mainstream.

WHAT does a program provide?

A program for the gifted and talented provides multidimensional and appropriate learning experiences and environments which incorporate the academic, psychological, and social needs of these students. The implementation of administrative procedures and instructional strategies which afford intellectual acquisition, thinking practice, and self-understanding characterize a program for the gifted and talented. A program assures each student of alternatives which teach, challenge, and expand his knowledge while simultaneously stressing the development of an independent learner who can continuously question, apply, and generate information.

WHEN and WHERE will provisions for the program be made available?

The ability of the school and home to articulate and accept the logic and objectives for a program determine the readiness and subsequent time to begin the program. Identification of the preparatory steps and implementation procedures as well as the assignment of a coordinating leader, indicate the course of action to follow as well as the time needed to implement the tasks.

HOW will the provisions be put into operation?

The operation of the program is, in many cases, dependent upon an allocation of money to be spent selectively to support it. It is totally dependent on trained personnel and appropriate facilities and materials. The program can only be put into operation when students and educators know the answers to the questions you are now reading.

WHO will be responsible for implementing these provisions?

The personnel responsible for the program must be those who are adept at working with the behavioral and mental attributes of the gifted. They are staff members who can provide flexibly and humanely for the uniqueness of this group of students as well as for the diversity among its members.

WORKSHEET--PERSONAL (PERSONNEL) EVALUATION

Individuals who are responsible for gifted and talented programs need to be aware of the basic issues and questions which are frequently posed. This form is intended to help individuals assess their understanding about education for the gifted and talented and to formulate a personal position about programs for these children.

Directions:

Respond to the items listed under the "It Has Been Said" column.

IT HAS BEEN SAID	YOUR RESPONSE
1. Programs for the gifted and talented reinforce the segregation of students.	
2. The utilization of individualized instruction abolishes the need for separate programs for the gifted and talented.	
3. Overemphasizing the gifted and talented through special programs creates an elitist population.	
4. What is good for the gifted and talented is good for all children.	
5. If classroom teachers were doing their job, there would be no need to offer a special program for the gifted and talented.	

REPLYING TO WHAT IS SAID ABOUT PROGRAMS FOR THE GIFTED AND TALENTED

1. Programs for the gifted and talented reinforce the segregation of students.

The definition of gifted and/or talented naturally segregates these children from others. Isolation, as differentiated in meaning from segregation, is not the aim of a program for these pupils. Segregation is the program's goal only as it applies to the separateness of learning experiences from the general curriculum but not as it applies to the separation of children from children. The reason for segregating students is far more important than the definition. The concept of segregation for status and expediency cannot be equated with segregation for learning efficiency and effectiveness. The segregation of the gifted and talented for various purposes at various times can promote the use of techniques and materials which enhance the quality of education for all children.

2. The utilization of individualized instruction abolishes the need for separate programs for the gifted and talented.

Individualized instruction is a term which has become misused and misinterpreted. It can be identified as a method of teaching or as an organizational pattern for teaching. Regardless of its definition, individualized instruction implies the need to provide for individual differences within the context of a given administrative arrangement. In its purest form, individualized instruction should provide a separate educational program for <u>every</u> child. Even though individualized instruction accommodates the gifted and talented to a greater degree than the traditional classroom operation, it cannot replace separate programs which expose the students to learnings that exist beyond the confines of even the best individually instructed classroom. The idea that one type of provision will satisfy the needs of these gifted students is unacceptable.

3. Overemphasizing the gifted and talented through a special program creates an elitist population.

In programs where the gifted and talented spend some portion of their school time interacting with other students, the probability of their becoming an elite group is minimized. If the students perceive participation as a reward for their intelligence and if attendance promotes status by virtue of the design and offerings of the program, then the student cannot be held responsible for flaunting or misrepresenting the group to which he belongs. Likewise, where the gifted and talented program is not seen in relationship to other programs, it presents a faulty picture of both its purpose and its

participants. When students understand the reason for their participation and where opportunities are created for them to share outcomes from the program, research has shown that they relate more successfully and are well received by others.

4. What is good for the gifted and talented is good for all children.

The premise that gifted and talented children are still children does not mean that they are like all other children. Recognition of their capacity and potential for learning characterizes them as deviating from the norm. The argument that all children should have the educational experiences, to a greater or lesser degree as it relates to their ability to learn, is one which at least gives the gifted and talented some special attention. A program tailored to the gifted and talented but applied to the average causes frustration and failure for the average; conversely, a program designed for the average and made available to the gifted and talented restricts self-fulfillment for the gifted and talented and can also cause frustration and failure for the gifted!

5. If classroom teachers were doing their job, there would be no need to offer a special program for the gifted and talented.

In most situations, the classroom teacher is a generalist who lacks the specialized preparation needed to work with the gifted and talented. The classroom teacher with a heterogeneous population can only be expected to find alternatives for the gifted and talented and to guide them toward these alternatives. The teacher is not a failure because she realizes her inadequacies and inability to be all things to all children.

6. What is offered to the gifted and talented should be commensurate with what is offered to the students in other special education programs.

Research indicates the predominance of fiscal and professional support for programs for the handicapped without the same degree of support for programs for the gifted and talented. Equality of need for all special programs must be stressed without mandating equality of the type or scope of the program. The cliché that gifted are not handicapped is incorrect, for the lack of educational means for the gifted and talented results in handicapping their potential. The amount of attention and acceptance given to "special education" must include appropriation for gifted and talented programs as part of the same title.

PLANNING

The level of acceptance, integration, and workability of a plan within an institution is directly related to the involvement of the planners and the time spent in program planning. Because the dimensions of a program are the composite result of the input, dialogue, and decision-making experiences of the team designated with the task of planning, careful consideration must be given to preparations for planning. Fundamental to the outcome of the planning team's effort is its perception of the task and the amount of latitude with which it can function. Presenting the planners with guidelines that clarify the organizational givens and instructional options provides them with necessary direction. Research data, literature, and exemplary models supplied to the team insure a common understanding of the concepts underlying a program for the gifted and talented.

The members of the planning team should be representative of the people that eventually will be directly or indirectly involved with the program. Teams must include members with divergent viewpoints in order to devise a plan that will be amenable to and supported by all populations. Because gifted and talented students are the reason for the team's endeavors, they should be allowed to participate as members of the planning team.

Rigid planning procedures may precipitate a rigid program design. However, allowing for the rotation and/or temporary assignment of some members of the team will allow wider representation and greater input of new ideas. When both the purpose and progress of the planners are communicated and when others are invited to visit or react to planning sessions, the final product will stimulate greater interest and acceptance. A program which is simply imposed upon a system is less likely to fulfill the needs of students or achieve the commitment of the system than is a program which emerges from a well-chosen, instructed, and communicative planning team.

POINTS FOR PLANNING . . .

STOP for . . .

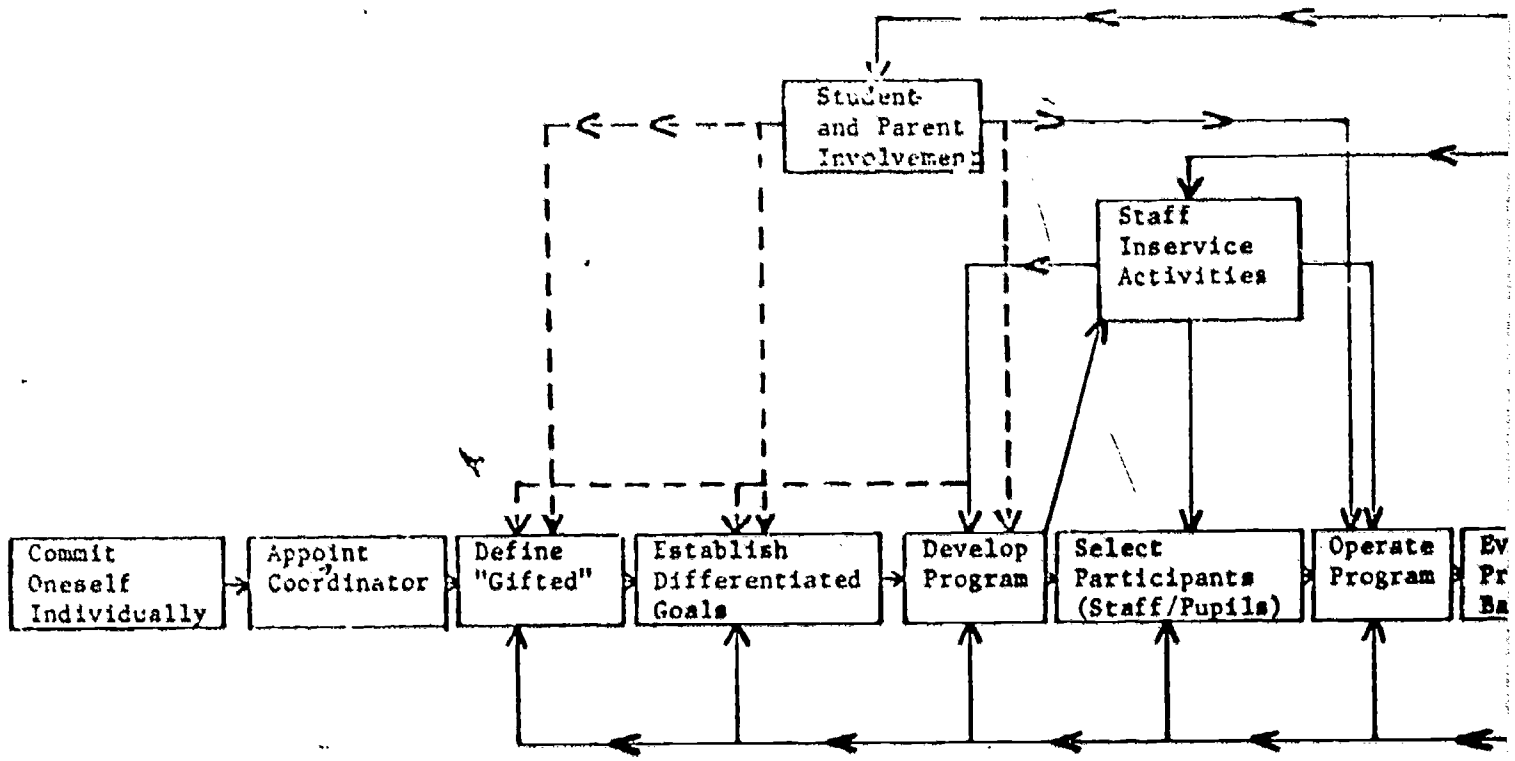
-organizing a planning team with comprehensive and diverse representation
-outlining the boundaries and standards for the end product
-incorporating implementation procedures with program design
-designating a person with supervisory responsibility for planning
-understanding the expectations and perceptions held for the program
-familiarizing the team with various program options and patterns

PROCEED with CAUTION when...

-program plans are incongruent with the organization or environment in which they will operate
-program plans center on an individual's abilities and preferences rather than on an institution's needs
-overemphasis is placed on a single feature of a program to the exclusion or dilution of other features
-program design is "paper-fancy" rather than practical
-decision-making process is shaped by fantasies rather than realities

A RECOMMENDED PROCESS FOR SETTING UP PROGRAMS FOR THE GIFTED AND THE

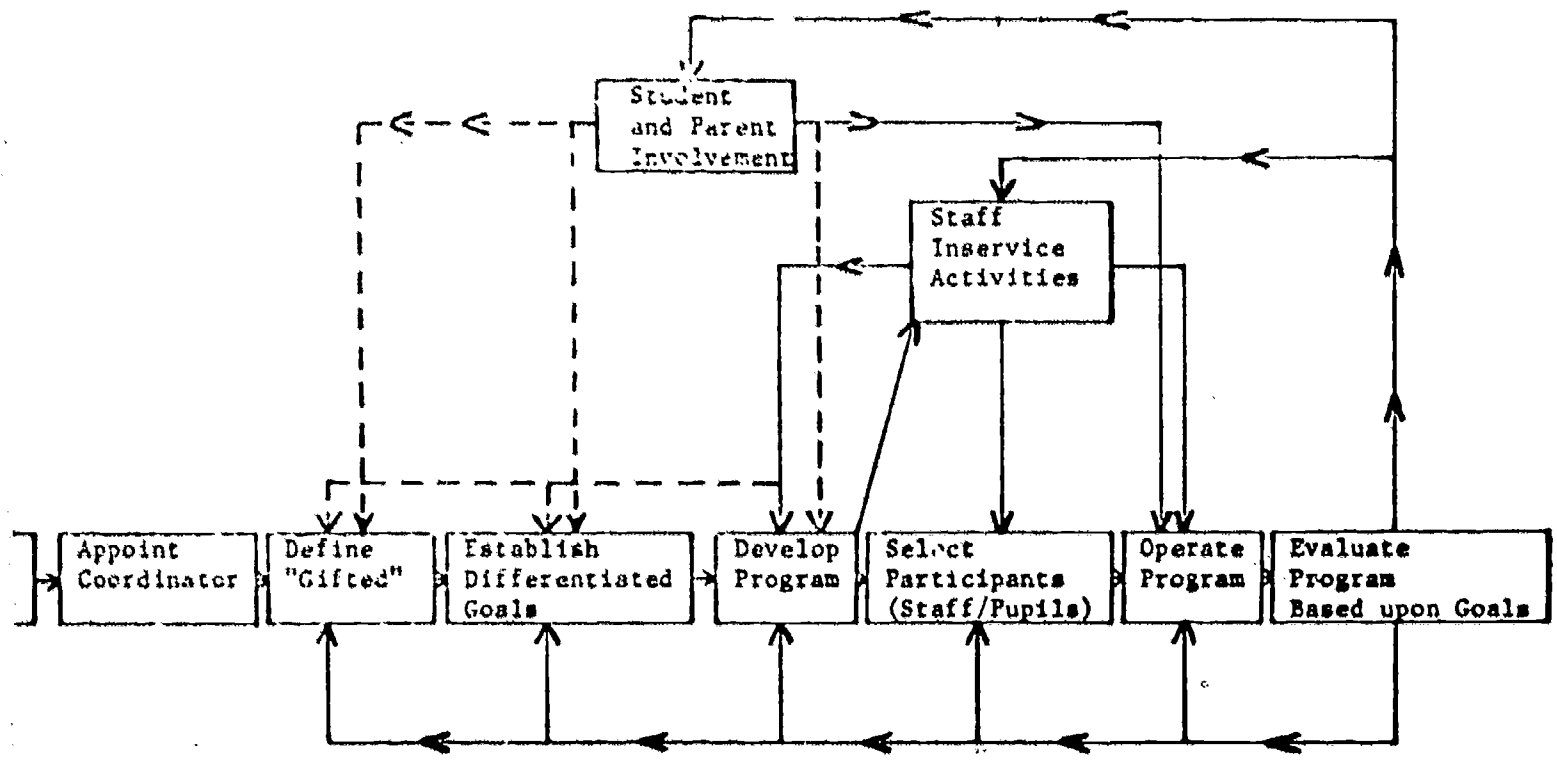
Irving S. Sato, Director, National/State Leadership Training
Institute on the Gifted and the Talented



* Based upon ideas from a chart by Dr. Robert Kelley, Burnt Hills Schools, Scotia, New York.

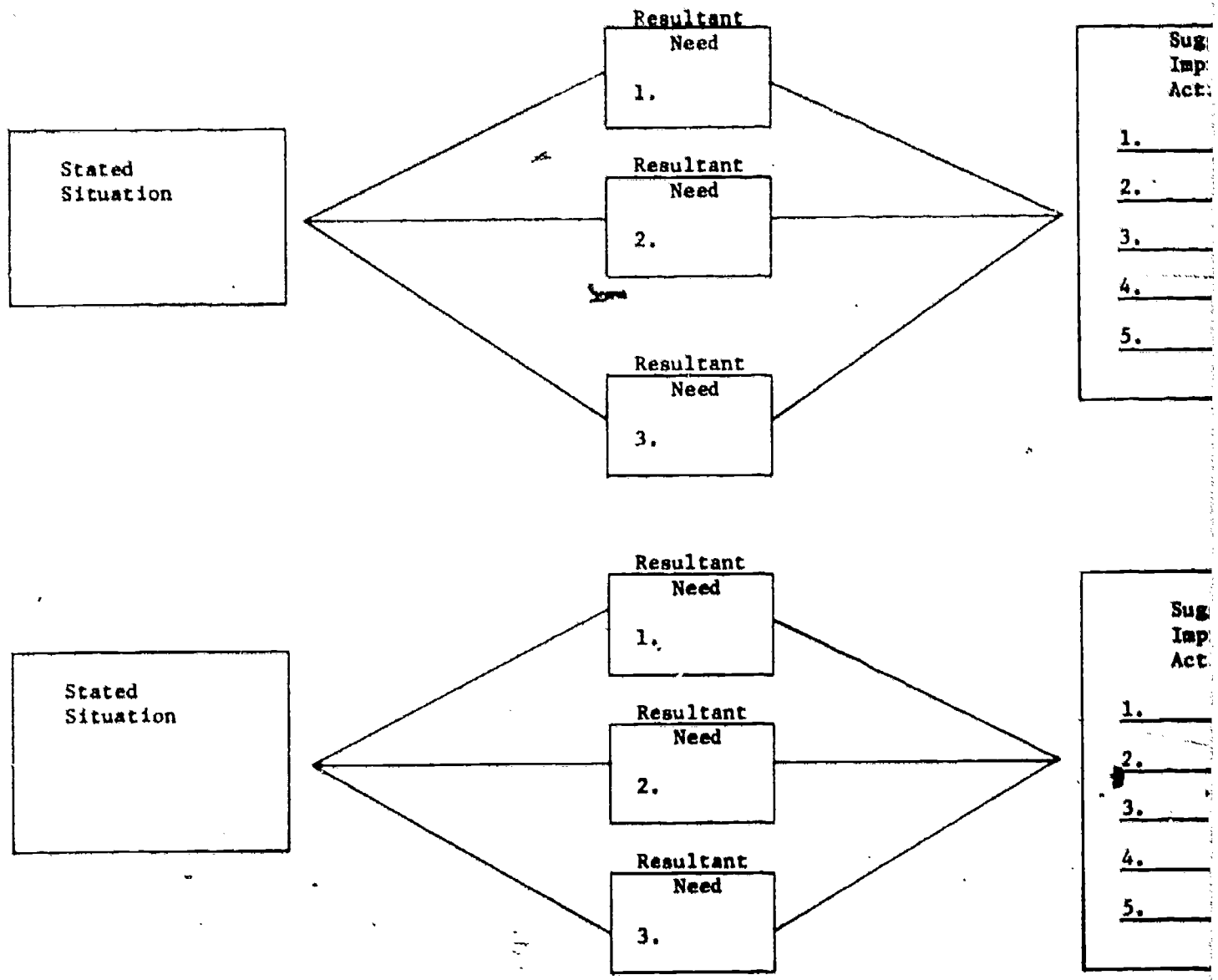
OMMENDED PROCESS FOR SETTING UP PROGRAMS FOR THE GIFTED AND THE TALENTED*

Irving S. Sato, Director, National/State Leadership Training
Institute on the Gifted and the Talented

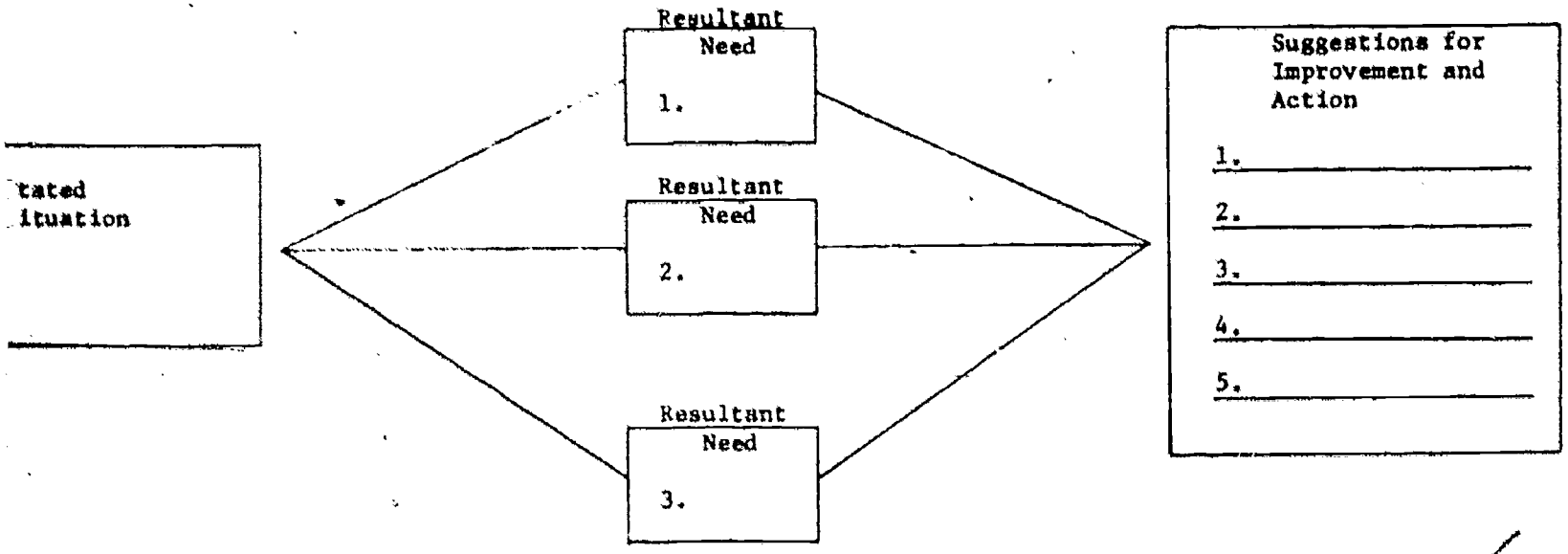


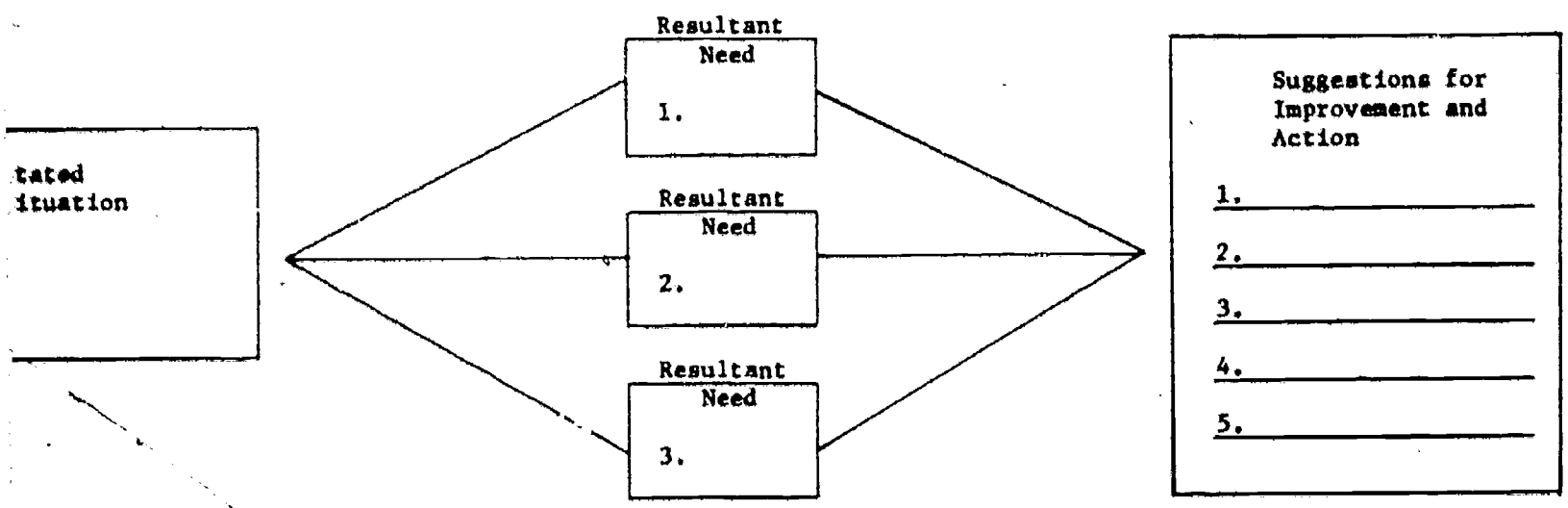
*pon ideas from a chart by Dr. Robert Kelley, Burnt Hills Schools, Scotia, New York.

WORKSHEET: NEEDS-ASSESSMENT MODEL



WORKSHEET: NEEDS-ASSESSMENT MODEL





PLANNING SEQUENCE CHECKLIST
WORKSHEET

PHASE	TASKS	STATUS	
		Organizing	In Progress
P	Designating leadership		
L	Formulating a planning committee		
A	Reviewing the research, literature, models		
N	Assessing existent local conditions		
N	Understanding program criteria, requirements		
I	Developing philosophy, goals, objectives		
N	Defining program dimensions: prototypes, materials, personnel, evaluation		
G	Formalizing a written plan		
P	Communicating and publicizing the program development		
R	Allowing for reaction and revision		
E	Obtaining formal approval and commitment		
P	Assigning roles and responsibilities		
A	Coordinating and devising forms and procedures for identification and certification of program participants		
R	Orienting students, parents, educators		
I	Organizing and providing inservice		
N	Developing curriculum and related materials		
G	Planning evaluative procedures		

PLANNING SEQUENCE CHECKLIST
WORKSHEET

TASKS	STATUS		
	Organizing	In Progress	Completed
Designating leadership			
Formulating a planning committee			
Reviewing the research, literature, models			
Assessing existent local conditions			
Understanding program criteria, requirements			
Developing philosophy, goals, objectives			
Defining program dimensions: prototypes, materials, personnel, evaluation			
Formalizing a written plan			
Communicating and publicizing the program development			
Allowing for reaction and revision			
Obtaining formal approval and commitment			
Assigning roles and responsibilities			
Coordinating and devising forms and procedures for identification and certification of program participants			
Orienting students, parents, educators			
Organizing and providing inservice			
Developing curriculum and related materials			
Planning evaluative procedures			

WORKSHEET--PLANNING ACTIVITIES AND TIME MODULES*

TASK	DELEGATED RESPONSIBILITIES	ANTICIPATED OUTCOMES			STRUCTURED TIM	
		Develop	Review	Approve	Beginning Date	

WORKSHEET--PLANNING ACTIVITIES AND TIME MODULES*

	DELEGATED RESPONSIBILITIES	ANTICIPATED OUTCOMES			STRUCTURED TIME MODULES	
		Develop	Review	Approve	Beginning Date	Ending Date

AGENDA FOR PLANNING MEETING
WORKSHEET

DATE OF MEETING _____ DATE OF NEXT MEETING _____

I. REPORT OF PROGRESS

II. ITEMS FOR ACTION

III. DISCUSSION ITEMS	RECOMMENDATIONS

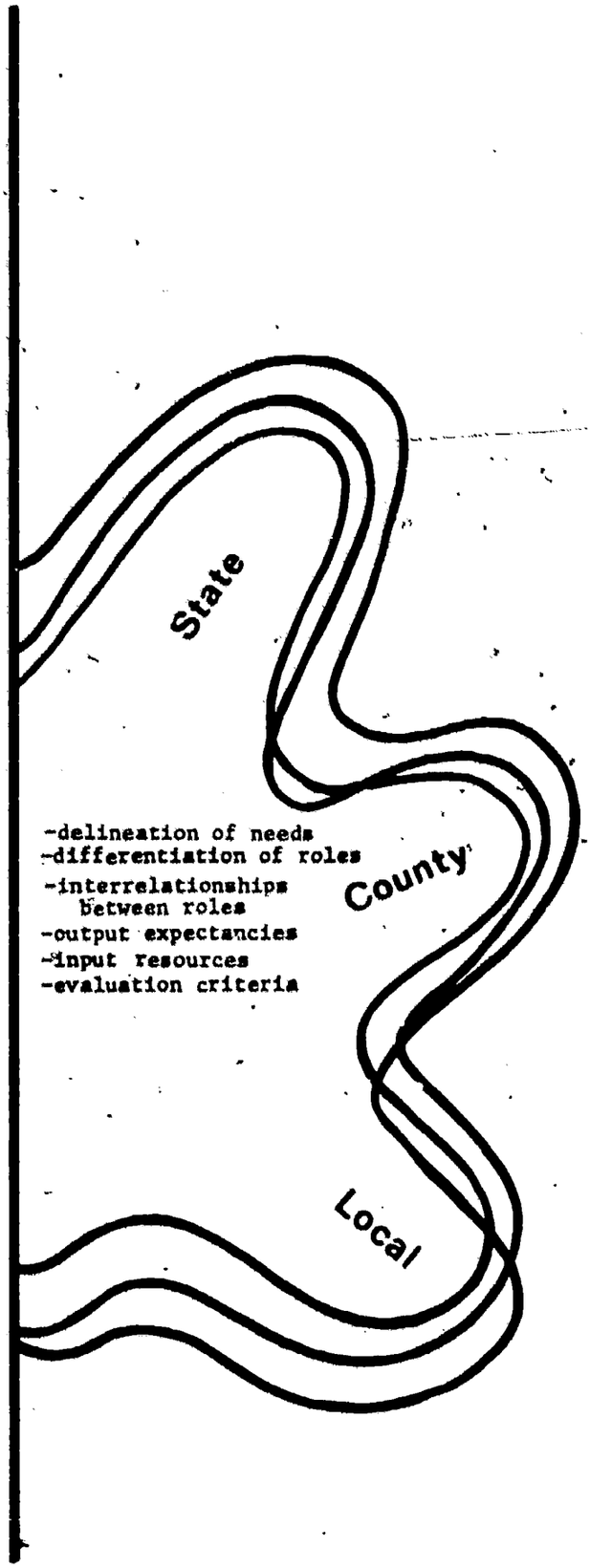
IV. ASSIGNMENT	PERSON RESPONSIBLE	DUE DATE

ROLES AND RESPONSIBILITIES

The similarities and differences between roles and responsibilities of the personnel who will perform the duties for the program must be clearly distinguished. Job descriptions should specifically articulate the roles and procedural and practical aspects of the program within the institution.

The establishment of roles and responsibilities must take into account the variations in assignment between those who serve the program as generalists and those who function as specialists. Care must be exercised to make sure that overlapping duties do not result in failure to perform a task because "someone else was supposed to do it." Although explicit job descriptions lead to program effectiveness, no description should be so rigidly formulated that individual style, expertise, and preference in performing the task are seriously inhibited.

The careful delineation of roles and responsibilities is also an important aid to personnel interested in assessing their qualifications for a particular position. Attractive but unclear or unrealistic job descriptions can be a deterrent to securing the best applicants for any position. The duties of the job should underscore the expectations for effective performance and assist individuals in developing a clear perception of who they are and what they need to do. Only after this is done can an honest and constructive evaluation of the job be made.



INSTITUTIONAL ROLES AND RESPONSIBILITIES

REGIONAL OFFICE	STATE	COUNTY	LOCAL SCHO
- Gather names of responsible individuals and target groups. - Establish regional action team. - Aid State education agencies in locating appropriate regional expertise. - Develop intraregional demonstration center network.	- Establish the position of State consultant on the education of the gifted. - Advise and assist districts in determining the need for programs for the gifted. - Develop, promote, coordinate, and assist county and local districts in establishing programs for the gifted - Interpret and apply State law and administrative regulations. - Secure and compile information about local programs for the gifted	- Establish the position of consultant on gifted education with appropriate funding. - Provide inservice education for interested administrators, teachers, and parents. - Advise school districts regarding identification procedures, program development, and evaluation. - Prepare packets of suggested goals and objectives, identification procedures, qualitatively-different curriculum activities, administrative planning, and evaluation techniques. - Assist districts in developing individual case studies and in writing programs. - Assist districts in establishing parent-district advisory councils.	- Work coopera county and - Acquire and tensive back needs of the talented. - Develop appr fication an opment proce - Plan modifi current pro - Evolve progr and evaluat - Actively sup program wit als, adequa sufficient teachers, e and consulta democratic guidance.

INSTITUTIONAL ROLES AND RESPONSIBILITIES

OFFICE	STATE	COUNTY	LOCAL SCHOOL DISTRICT
of responsible and target onal action cation agen- ng appro- l expertise egional center net-	- Establish the position of State consultant on the education of the gifted. - Advise and assist districts in determining the need for programs for the gifted - Develop, promote, coordinate, and assist county and local districts in establishing programs for the gifted - Interpret and apply State law and administrative regulations. - Secure and compile information about local programs for the gifted	- Establish the position of consultant on gifted education with appropriate funding. - Provide inservice education for interested administrators, teachers, and parents. - Advise school districts regarding identification procedures, program development, and evaluation. - Prepare packets of suggested goals and objectives, identification procedures, qualitatively-different curriculum activities, administrative planning, and evaluation techniques. - Assist districts in developing individual case studies and in writing programs. - Assist districts in establishing parent-district advisory councils.	- Work cooperatively with county and State agencies. - Acquire and disseminate extensive background on the needs of the gifted and talented. - Develop appropriate identification and program development procedures. - Plan modifications of the current program. - Evolve program development and evaluation models. - Actively support the gifted program with needed materials, adequate facilities, sufficient freedom for teachers, expert resource and consultant help, and democratic administrative guidance.

SCHOOL DISTRICT ROLES AND RESPONSIBILITIES

COORDINATOR	TEACHER	STUDENT	PRINCIPAL	CENTR
-Design, develop, coordinate, and evaluate the program. -Develop and implement curriculum (techniques, materials) related to enriching the total program. -Prepare financial, statistical, and descriptive reports as needed to develop, maintain, and account for the program. -Coordinate identification and certification procedures. -Serve as a consultant and resource to the staff, students, and parents involved with the program. -Participate as part of the Educational Services staff. -Promote public relations activities at the local, county, and State levels.	Classroom: -Provide an enriched individualized program for the gifted. -Assist students in planning, organizing, and evaluating tasks. -Screen, develop, and provide appropriate materials for the gifted. -Evaluate pupil progress. -Interpret the program to parents. Itinerant: -Support classroom teachers and building principals in their teaching relationships with the gifted and talented. -Provide an enriched extension of the regular curriculum for gifted students in intra- or extra-classroom settings. -Demonstrate diverse methods of instruction appropriate for the gifted, such as problem solving, independent study, etc.	-Attend regular or specially scheduled programs or events. -Complete selected tasks. -Communicate and share learning experiences with peers, teachers, and parents. -Practice decision-making skills. -Develop self-awareness and understanding. -Participate in planning and evaluating learning experiences within the program.	-Become knowledgeable about the unique needs of the gifted. -Become acquainted with gifted students in the school. -Stimulate interest in and concern for the gifted. -Urge teachers to provide qualitatively-differentiated programs for the gifted in their classrooms. -Cooperate with district personnel in identifying the gifted and implementing programs for them. -Encourage and assist teachers in securing appropriate instructional materials for the gifted. -Meet regularly with parents to explain the program to them. -Work cooperatively with other personnel in objectively evaluating the program.	-Provid staff suppor cation, opment quisit trainir evalua procedu requir qualit entiat the gi ed. -Define the re and re of the superin cholog trist, classro

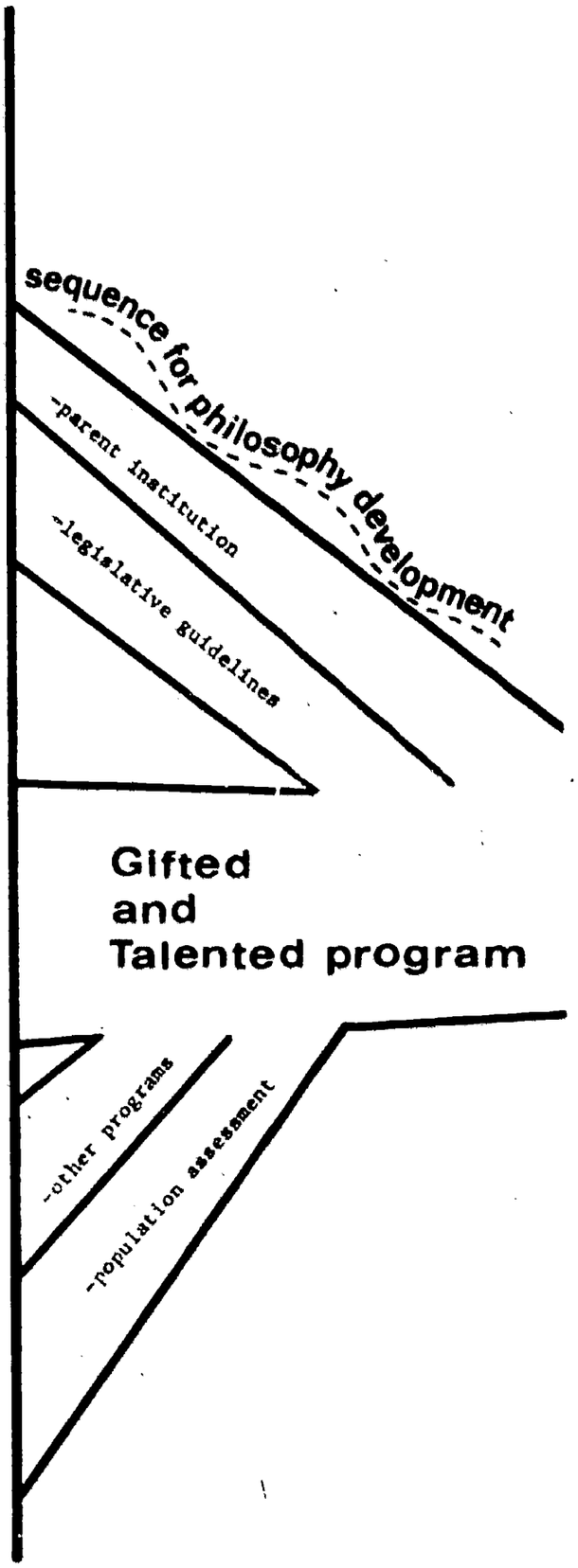
SCHOOL DISTRICT ROLES AND RESPONSIBILITIES

TEACHER	STUDENT	PRINCIPAL	CENTRAL OFFICE STAFF
Classroom: -Provide an enriched individualized program for the gifted. -Assist students in planning, organizing, and evaluating tasks. -Screen, develop, and provide appropriate materials for the gifted. -Evaluate pupil progress. -Interpret the program to parents. Itinerant: -Support classroom teachers and building principals in their teaching relationships with the gifted and talented. -Provide an enriched extension of the regular curriculum for gifted students in intra- or extra-classroom settings. -Demonstrate diverse methods of instruction appropriate for the gifted, such as problem solving, independent study, etc.	-Attend regular or specially scheduled programs or events. -Complete selected tasks. -Communicate and share learning experiences with peers, teachers, and parents. -Practice decision-making skills. -Develop self-awareness and understanding. -Participate in planning and evaluating learning experiences within the program.	-Become knowledgeable about the unique needs of the gifted. -Become acquainted with gifted students in the school. -Stimulate interest in and concern for the gifted. -Urge teachers to provide qualitatively-differentiated programs for the gifted in their classrooms. -Cooperate with district personnel in identifying the gifted and implementing programs for them. -Encourage and assist teachers in securing appropriate instructional materials for the gifted. -Meet regularly with parents to explain the program to them. -Work cooperatively with other personnel in objectively evaluating the program.	-Provide the necessary staff to implement and support all identification, program development, material acquisition, inservice training, publicity, evaluation, and related procedures that are required to provide a qualitatively differentiated program for the gifted and talented. -Define and coordinate the requisite roles and responsibilities of the school board, superintendent, psychologist, psychometrist, counselor and classroom teacher.

PHILOSOPHY

A successful program is constructed on a philosophical framework which supports the overall program design and lends purpose to its implementation. The program which is based on a rationale and operates as an extension of a defined philosophy is more likely to be successfully maintained by the system and is less likely to have to justify its existence than the one which does not have a sound philosophical base. The philosophy which is created for the gifted and talented program should be exclusive in its appropriateness for the educational needs of these students. However, it must also be inclusive of the appropriate aspects of the general philosophy written by the parent institution for all students.

The philosophy consists of a pervasive concept for attending to the gifted and talented. It also contains the specific statements (objectives) which relate to the purposes, practices, and evaluation procedures involved in administering the program. Analogous to building with blocks is the idea that each objective rests on the other and is dependent on the support of a solid philosophical foundation. Effort needs to be exerted to state the philosophy in meaningful terms so that what is said about the program can be correlated with what is happening in the program. Pragmatism and visibility are the benchmarks by which the philosophy can be measured. The philosophy should be the core of the program rather than an adjunct to it.



PHILOSOPHIC CONSIDERATIONS

The weaving of personal and societal values with principles and theories of learning and psychology into a rationale which substantiates the purpose for a program becomes its philosophy. The selection of staff, the development of curriculum, and the arrangement for experiences are dictated by the philosophy of the program. Formulating a program without synchronizing purpose with practice is much the same as performing a ritual without understanding why. The philosophy is the benchmark against which decisions about program participants and provisions are made.

VALUES

CONSIDERATIONS	IMPLICATIONS	APPLICATION
What do we want gifted and talented students to be or do as an outcome of their education? Is the purpose of education for the gifted and talented to promote the development of self or the contributions they can make to society? Is learning how to learn more or less important than what is being learned? Is quantity or quality the focus of a program? Should learning emphasize the assimilation of information or the development of thinking processes? Is the progress of the gifted and talented measured against the group, the average, or the self? Is the winning of prizes, scholarships, and "A's" an indicator of program success?	The answers to these questions reflect personal biases, experiences, and knowledge. Reviewing the purposes for a gifted and talented program and understanding the elements of a program can shape values for the program. What is to be valued for the gifted and talented cannot be separated from research data about the characteristics and needs of these students, the contemporary feelings of society about education, and the interests, backgrounds, and attitudes of the students.	The goals and objectives of an educational program for the gifted and talented should stress the development of the self as the top priority. Objectives which are open-ended allow for student determination in the learning process. Goals and objectives which are student written are consonant with the concept of self-direction and self-evaluation. Goals and objectives which stress the attainment of learning skills such as research, inquiry, and problem solving are conducive to teaching students how to learn.

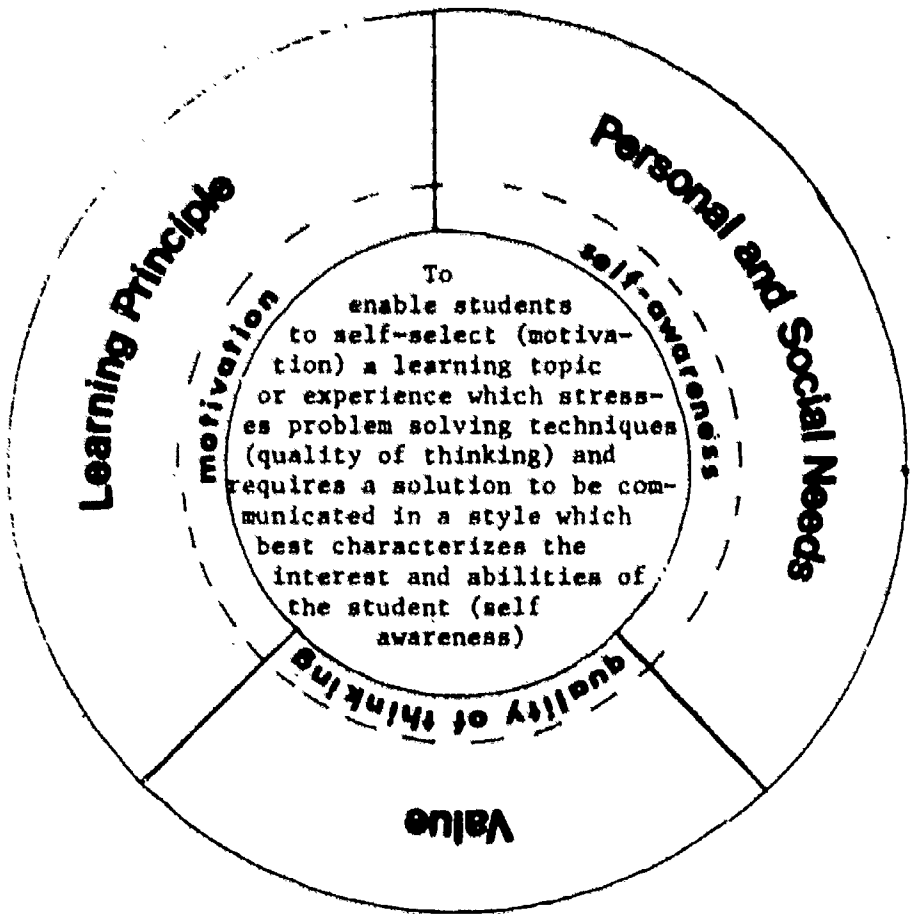
PRINCIPLES OF LEARNING

CONSIDERATIONS	IMPLICATIONS	APPLICATION
Learning is developmental.	The advanced mental age of the gifted and talented determines their readiness for learning. While the lockstep concept which matches content to be learned with chronological or grade-level placement is incongruous with the learning characteristics of the gifted, the presentation of material to these students needs to follow a conceptual sequence in order for it to have meaning.	The goals and objectives should be designed to free the gifted and talented learner from the requirements which prohibit his entry into learning experiences appropriate for him. Ability rather than tradition should govern what is available for these students.
Learning is achieved through motivation and purposeful activity.	Learning opportunities which satisfy the innate desire of the gifted and talented to be curious and to achieve mastery provide the stimulus for learning. Learning activities which originate from student interests result in meaningful and rewarding experiences which in turn motivate them toward further intellectual and personal endeavors.	The goals and/or objectives of the program should outline the possibilities for learning while allowing students to pursue individually what they wish to learn and do.
An outcome of learning should be the ability to retain and transfer what has been learned.	The ability of the gifted and talented to perceive relationships quickly, to comprehend the essence of a concept, and to think abstractly, means that experiences which foster the application and associations of learning must be stressed. Situations which allow students to note similarities and encourage the development of higher cognitive processes should be considered.	The goals and objectives of the program should specify the learning of generalizations rather than fact. They should encourage problem solving and inquiry as a strategy for using and evaluating what has been learned.

PERSONAL AND SOCIAL ADJUSTMENTS

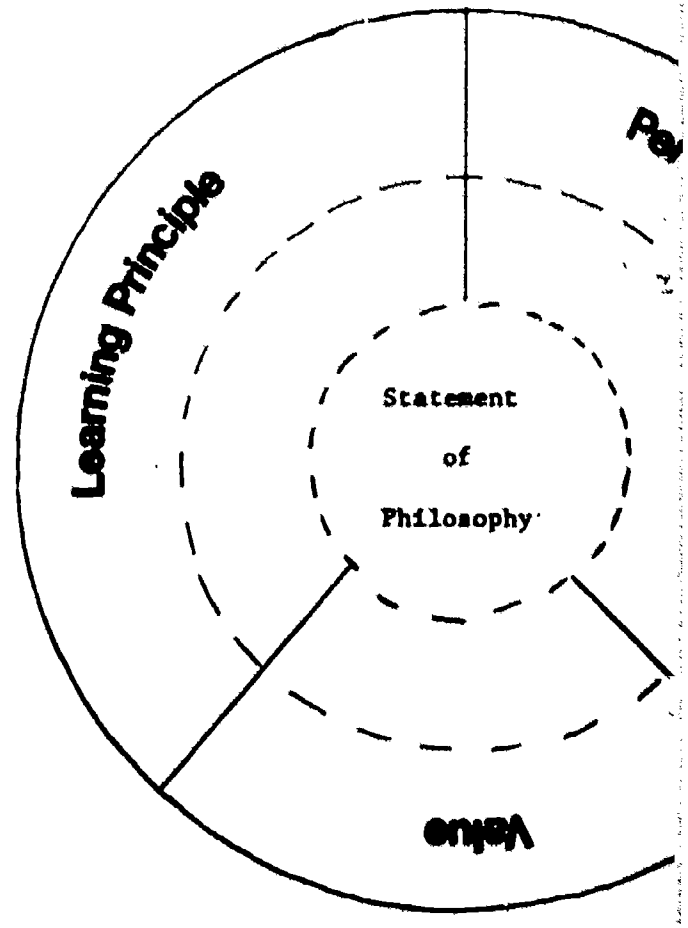
CONSIDERATIONS	IMPLICATIONS	APPLICATION
Behavior is determined by one's ability to respond to these questions: Who am I? Where am I going? Why have I chosen this path?	Unless the gifted and talented understand the ramifications of the label which has been attributed to them, they cannot be expected to realize their potential. The development of a realistic self and group reference leads students to the setting of realistic goals.	A goal and objective for the program must be that the student develop a personal philosophy which is representative of both his value system and his knowledge of the nature of man. Goals and objectives should incorporate affective learning with cognitive learning.
The acquisition of the basic skills is fundamental to the individual's ability to grow.	A successful program cannot dismiss instruction of the basics of learning as a foundation for extended and enriched experiences. The assumption that the fundamentals are already acquired by the gifted or talented student is erroneous. The stereotyped concept that <u>all</u> gifted and talented students achieve and excel and that a program is always enrichment rather than remediation disregards the need for opportunities to teach and reinforce the basic skills.	The goals and objectives should provide for rudimentary learning.
The ability to communicate is essential to personal and social adjustment.	A program must include opportunities and techniques for students to express what has been learned through various media and creative forms. The development of people-to-people communication assists the gifted and talented in establishing relationships and thus learning how to live and work within multiple level societies.	The goals and objectives must provide for the attainment of skills in communicating through multimedia and multimodal sources. Also, the goals and objectives should be stated so students can be taught how to cooperate and live with other people.

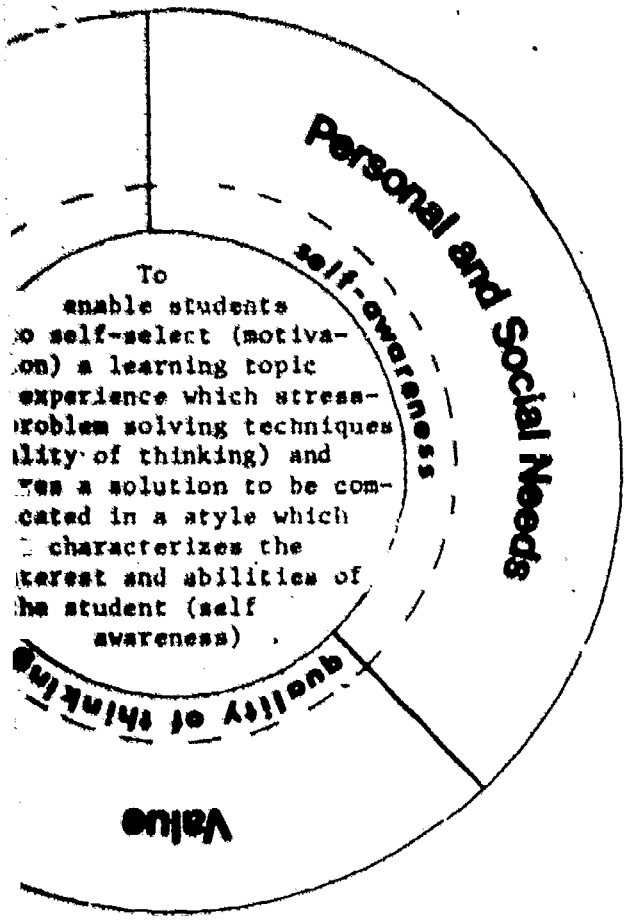
Example



WORKSHEET -- DEFINING PHILOSOPHY

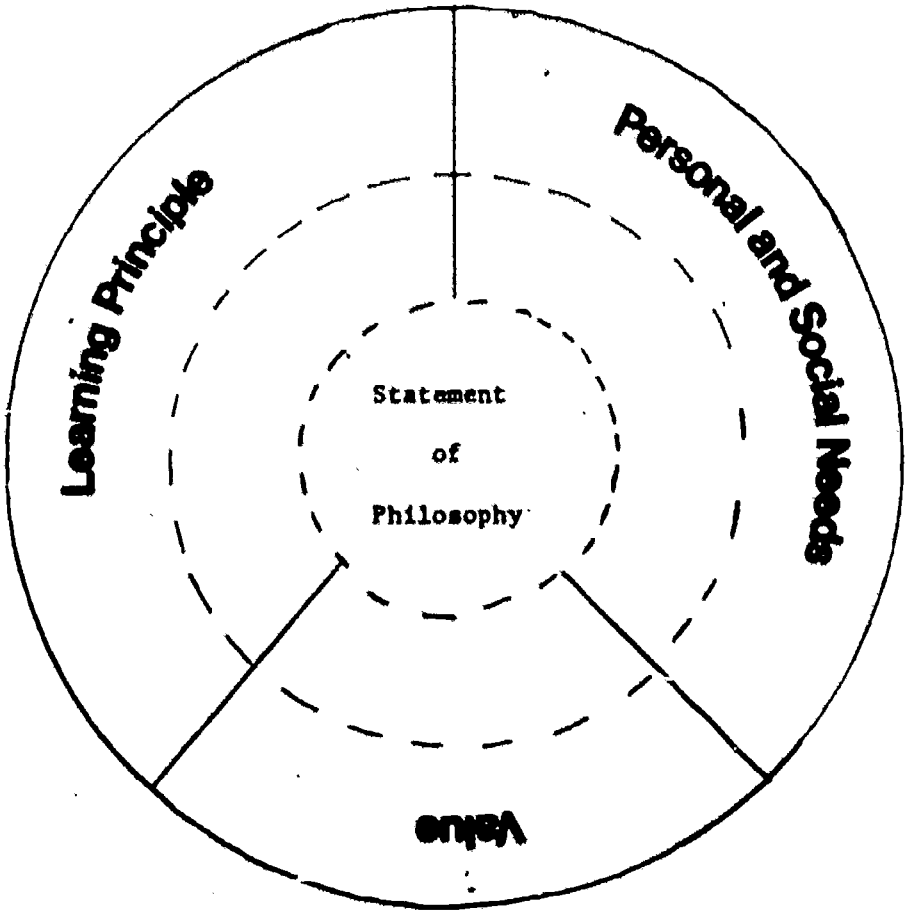
Directions: A statement of
is the result of integrating valu
principles, and personal and soc
Use the wheel as a guide to outl
ingredients for a statement of p
Now formulate these into a compre
statement of philosophy.





WORKSHEET — DEFINING PHILOSOPHY STATEMENTS

Directions: A statement of philosophy is the result of integrating values, learning principles, and personal and social needs. Use the wheel as a guide to outline the basic ingredients for a statement of philosophy. Now formulate these into a comprehensive statement of philosophy.



The public schools of Cleveland are committed to an educational program that recognizes the unique value, needs, and talents of the individual student. The Major Work-Honors Program for academically gifted students is an integral part of this commitment.

This program is designed to challenge the Major Work-Honors student through a multidimensional teaching approach involving special curricula, enrichment, and the acceleration of course content.

The ultimate goal of the program is to develop within the student a desire for excellence and a sense of individual responsibility to the school community and to a changing society (29).

Grand Island acknowledges that able students require stimulation that is unique from that received from their age peers, but it is our contention that these students cannot be isolated from their peers. Our programs are designed to provide appropriate stimulation to these students while requiring them to function with their age peers during a majority of the school week.

Able students can become able adults and possess the ability to be leaders in the community. If not challenged, however, their ability can become stale and their creative thinking regimented. The Able Student Program will exercise and develop this natural resource (7).

A fundamental premise underlying our democratic way of life is a belief in the intrinsic worth of every individual. It is generally conceded that education is a vehicle by which every individual may advance toward his fullest potential. For the minority of children at the upper end of the mental ability continuum the regular educational program is inappropriate. The needs, interests, and readiness of these pupils combine to form a mismatch with programs which are relevant for their more average age-mates. They require special educational consideration but, because many people mistakenly believe the gifted are "so good they can take care of themselves," the plight of the highly able pupil is often ignored and left unchallenged (6).

The guiding characteristic of the Enhanced Learning Program is to provide the gifted with extensions for learning which afford them open circuits for exploring, experiencing, and expressing. Enhancing the "self" as a learner and a producer is the paramount concern. Activities and opportunities are thus structured to assist the student in assessing and capitalizing upon the unique abilities, talents, interest, and needs which represent him as a "self" (57).

Stylized learning is reinforced by materials and tasks which are differentiated in content and intent. These are geared toward developing self-directedness as it relates to independent study and individualized instruction and self-expression as it relates to fostering divergent thinking. The emphasis of the program is on learning processes which will propel the student on a life-long career of learning (57).

Representative Program Goals

To identify at every level and in every school those children who are gifted

To understand the abilities and needs of each gifted child

To provide the educational program which will enable each gifted child to develop his abilities to the fullest potential

To prepare mentally gifted minors for responsible and productive adult roles

To help each participating gifted child gain a realistic and healthy concept of himself--his strengths, weaknesses, areas of needed improvement, and potentialities

To develop gifted children into intellectually and creatively capable, productive, and compassionate human beings (56).

To unleash the student's rate of learning and level of achievement

To provide learning alternatives which are appropriately styled to encourage individual growth at varying levels of abilities, interests, and needs

To expose the student to wider and farther intellectual horizons which can be pursued throughout his learning career

To develop each student's ability to recognize, integrate, and utilize his potential in order to become a self-actualizing individual

To encourage the becoming of an individual while developing responsibility for self and society

To emphasize individual success and excellence in academic, social, and physical realms (57).

Academic Achievement and Related Skills

Each gifted student will demonstrate growth in academic achievement and skills commensurate with his anticipated achievement in each subject area.

Each student identified as underachieving in either reading or math will demonstrate growth which is sufficient to reduce the deficit between anticipated and actual achievement in each subject area by 40% each year (26).

Given an enriched curriculum opportunity in the areas of mathematics, social science, language arts, and science, 95% of the students will be able:

... To achieve a composite percentile ranking in these subjects at the 95th percentile or above as measured by standardized achievement tests administered in the regular testing program of the Orange Unified School District and

... To achieve a percentile ranking at the 98th percentile in one or more of the subjects above as measured by standardized achievement tests administered in the regular testing program of the Orange Unified School District or

...To demonstrate progress toward these two objectives as measured by comparison of test results (63).

Each student will demonstrate growth in critical thinking by writing statements illustrative of his critical thinking skills and by improving 20% per year in performance on an appropriate test of critical thinking (26).

Each child will increase in his ability to summarize by distinguishing the significant from the insignificant, distinguishing the relevant from the irrelevant, drawing conclusions or making estimates or predictions from information.

The gifted learner will increase his ability to solve problems through analytic reasoning as measured by teacher observation and/or structured situational tests applicable to his maturation level (64).

Independence and Study Skills

The student will demonstrate his ability to plan logically and carry out independently an in-depth study which is relevant to him as measured by teacher observation and judgment (56).

Given opportunities in an enriched program to explore his own individuality, the student will be able:

Part 1. To identify accurately, in self-appraisal essays and ratings evaluated by teachers and counselors, areas of personal strengths and weaknesses, improvements made, and major interests and talents.

Part 2. To demonstrate a positive attitude toward self as judged by teachers and counselors in yearly evaluations of pupils (63).

Upon completion of an independent or group-studied topic or activity, the student will improve in his ability to demonstrate ability in at least two of the areas relative to his level or need:

... identifying, acquiring, recalling information
... interpreting, translating information
... organizing, classifying, analyzing information
... comparing, contrasting information
... judging, validating, assessing information ... evidenced by:

District-constructed pre-and post-survey of skills

Evaluation of student's independent study log

Assessment of products according to a district criteria checklist (57).

Given time during the day to plan and work independently, each child will develop a contract stating what he wishes to study, what materials he needs, how much time he needs, and how he will report what he has learned as evidenced by teacher judgment (64).

Learner Objectives

Self Awareness and Understanding

Each student will demonstrate increased awareness of his own abilities and potentials through written and oral communications gathered over a two-year period. Evidence of each student's growth in self awareness will be based on the increased mention of specific abilities and potentials tabulated from pertinent writings of each student.

Each fourth-, fifth-, and sixth-grade student will cite the special abilities, characteristics, and accomplishments of at least two persons who have been recognized for their unique contributions to society and who are assumed to be gifted (26).

Leadership Characteristics

Given encouragement and opportunities for leadership and service to school, community, and society, the student will be able, at the completion of special class activities:

. . To cite five examples from the following list as evidence he has voluntarily assumed or been elected to roles of leadership and service:

a. Student body officer, representative, council member, or class officer
b. Committee chairmanship, committee participation, volunteer service activities
c. Club leadership, club participation, selection for honorary groups or clubs.

... To formulate his own statement concerning the qualities of positive leadership, citing specific examples of people and/or talents he admires to illustrate major points (63).

As a result of pursuing an independent- or group-studied topic or activity, the student will make gains in exhibiting at least one leadership characteristic appropriate to his age, level, interests, and/or needs as evidenced by:

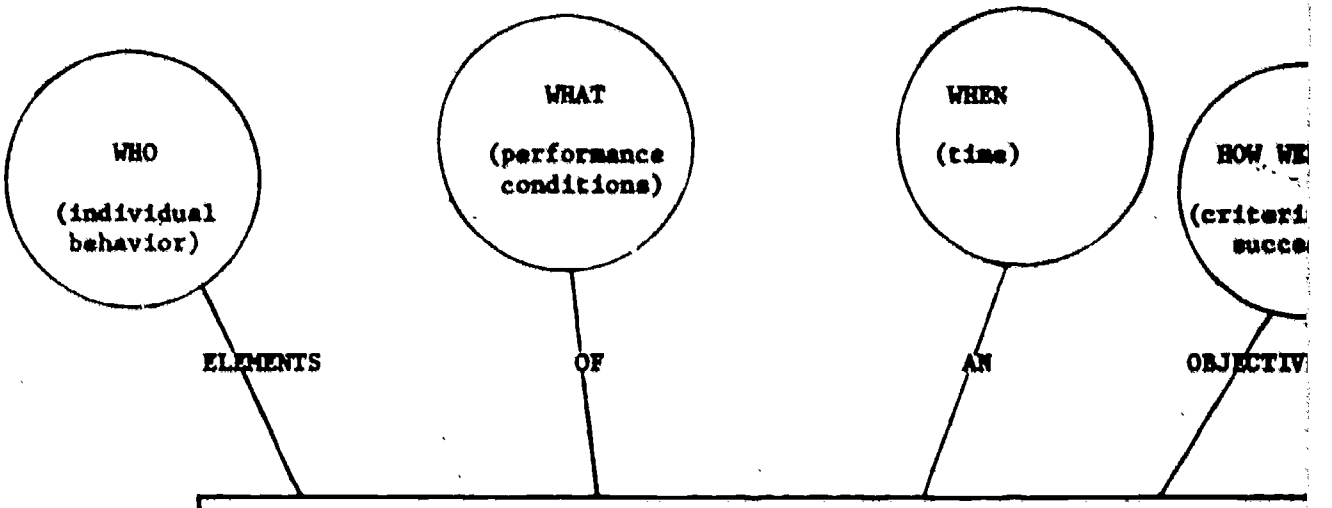
... assuming some position of responsibility for oneself or others within or outside the classroom

... demonstrating capacity to contribute

... providing an overt and/or covert social or academic influence (57).

WORKSHEET--WRITING OBJECTIVES

Directions: Identify the area to be stressed in the development of an objective. Identify each element of an objective in relationship to the area to be stressed. Combine the ele to give comprehensive meaning to the objective.



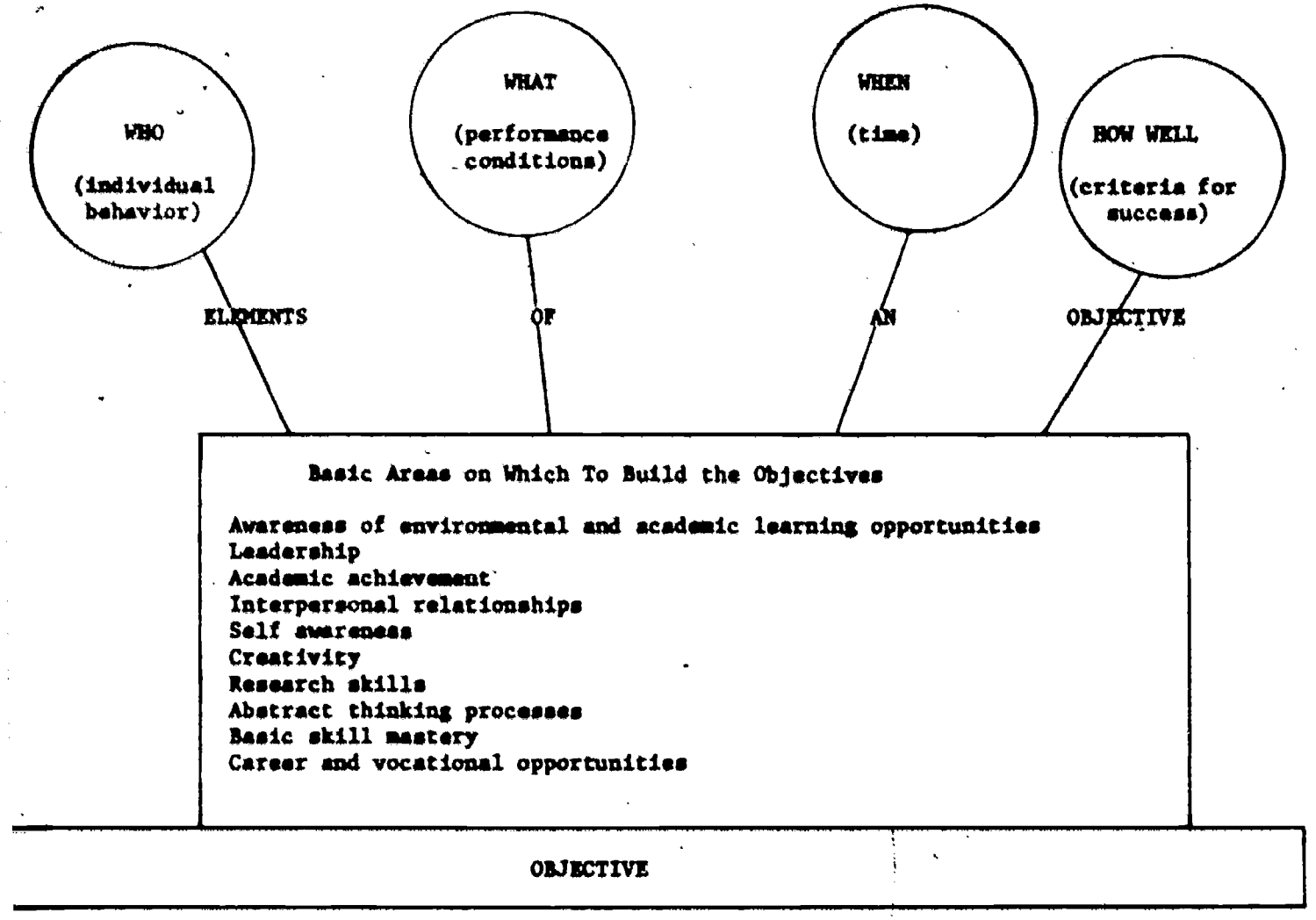
Basic Areas on Which To Build the Objectives

Awareness of environmental and academic learning opportunities
Leadership
Academic achievement
Interpersonal relationships
Self awareness
Creativity
Research skills
Abstract thinking processes
Basic skill mastery
Career and vocational opportunities

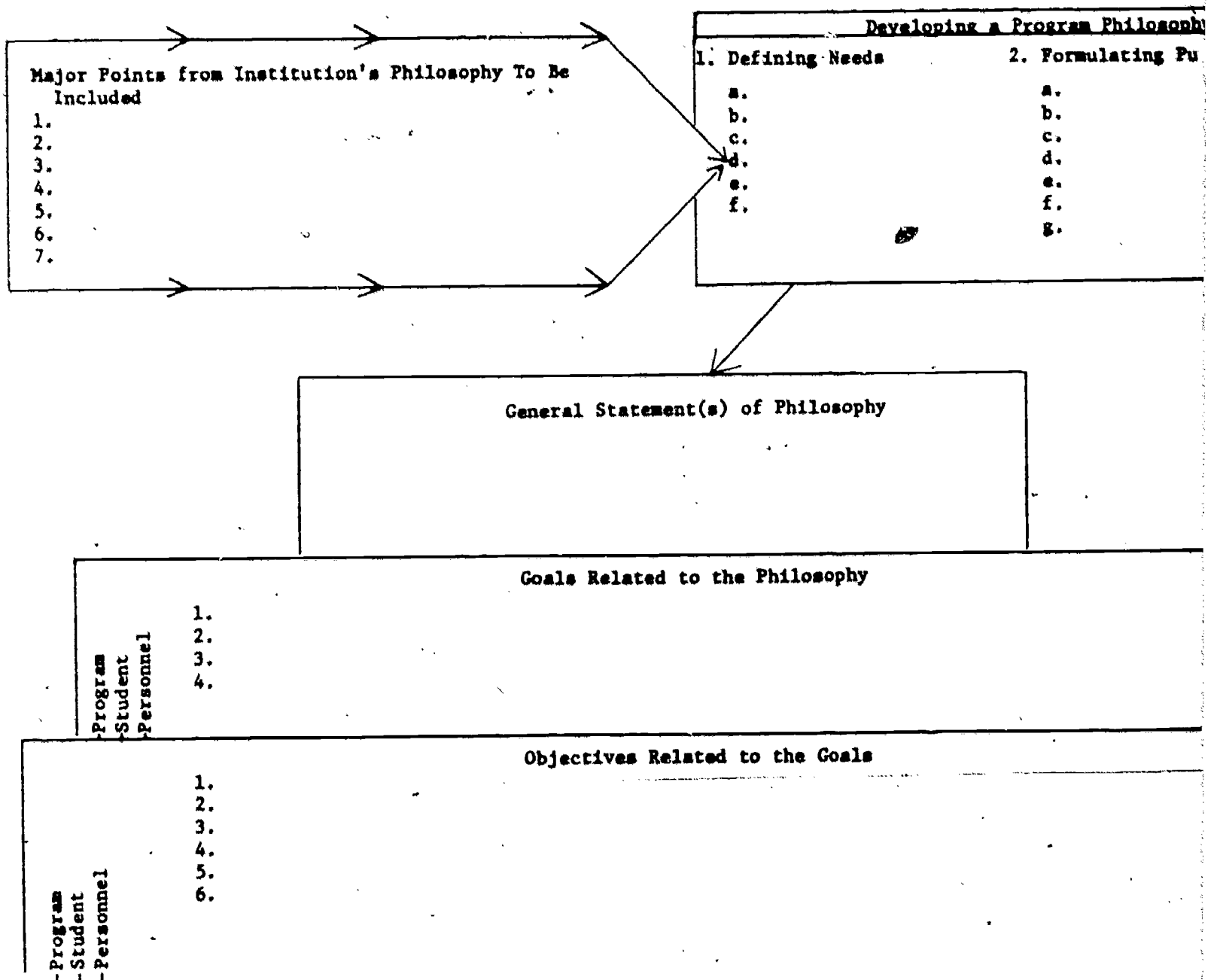
OBJECTIVE

WORKSHEET--WRITING OBJECTIVES

Purpose: Identify the area to be stressed in the development of an objective. Identify each element of an objective in relationship to the area to be stressed. Combine the elements to give comprehensive meaning to the objective.



WORKSHEET--OUTLINING PROGRAM PHILOSOPHY, GOALS, AND OBJECTIVES



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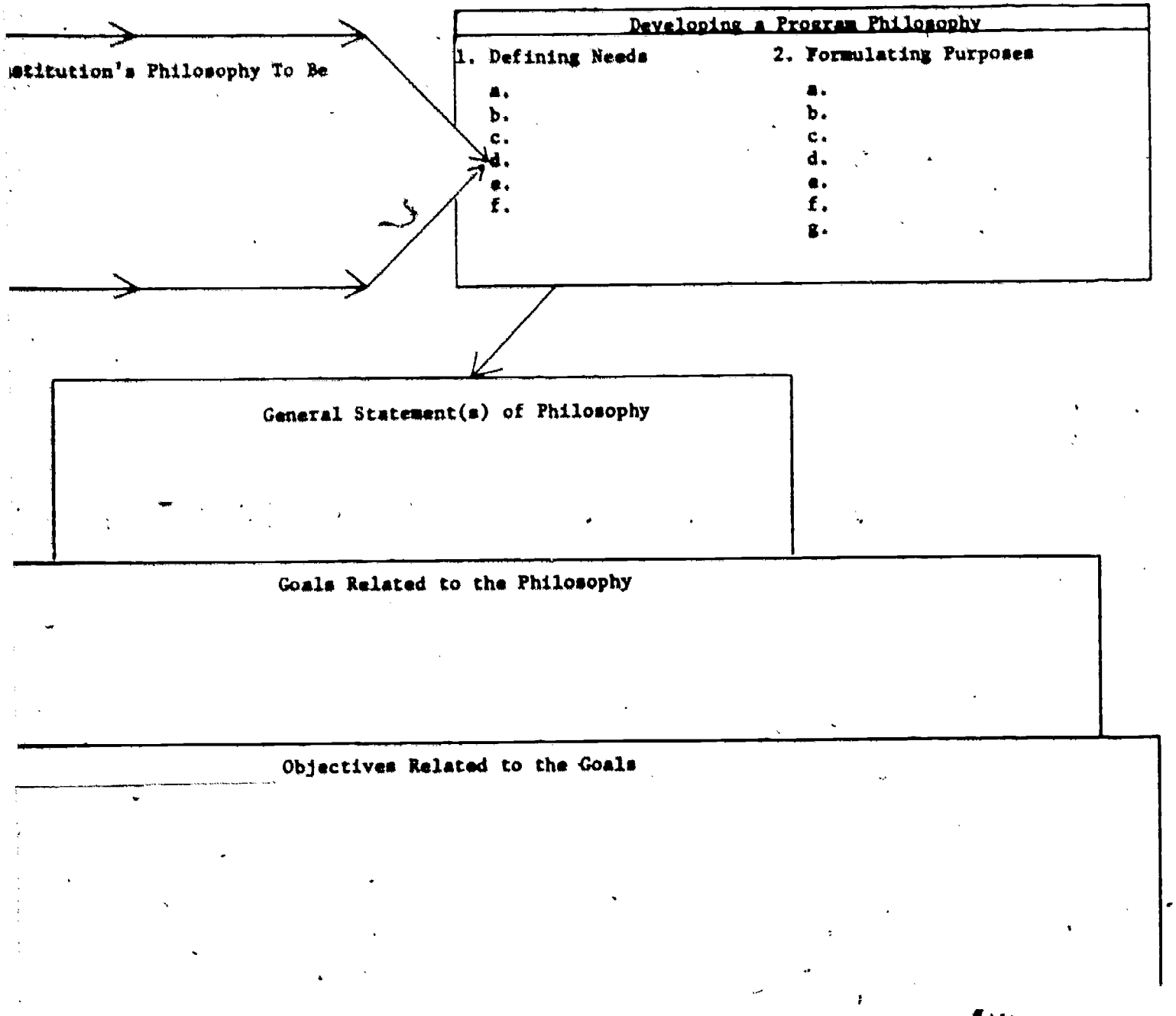


Program prototypes

PROGRAM PROTOTYPES

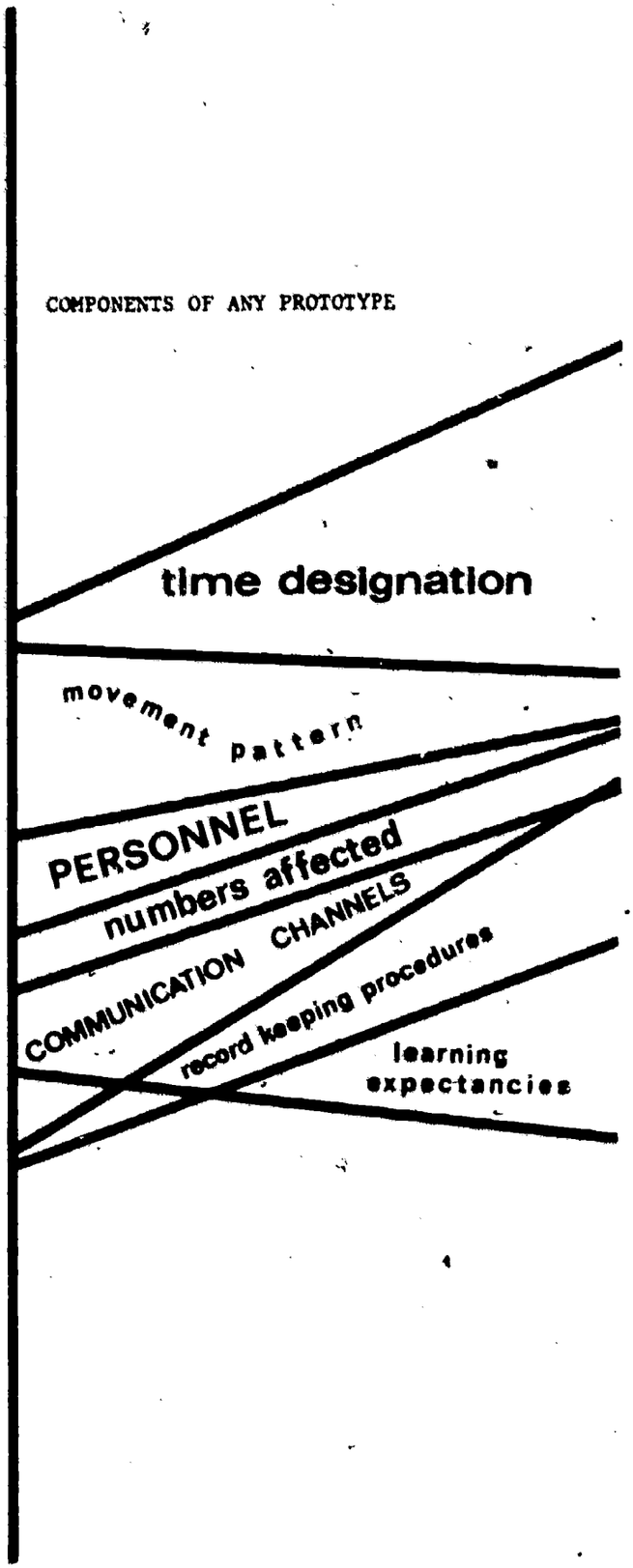
Program prototypes are organizational patterns which become the setting for the learning environment that accommodates the needs of the gifted and talented. The adoption and subsequent development of any organizational pattern is not the ending point. Rather, it is the starting point for providing learning opportunities appropriate for these students.

The decision to utilize one prototype over another is based on a careful examination of the degree to which each fits into the institution and matches the objectives developed for the program. The real question is not which prototype to select but how the selection of any affects the students.

A special program for the gifted and talented usually focuses on the use of several prototypes. The literature must be used as a model for identifying and recognizing the potential of these program prototypes. Putting any of these into practice revolves around its workability in a particular situation.

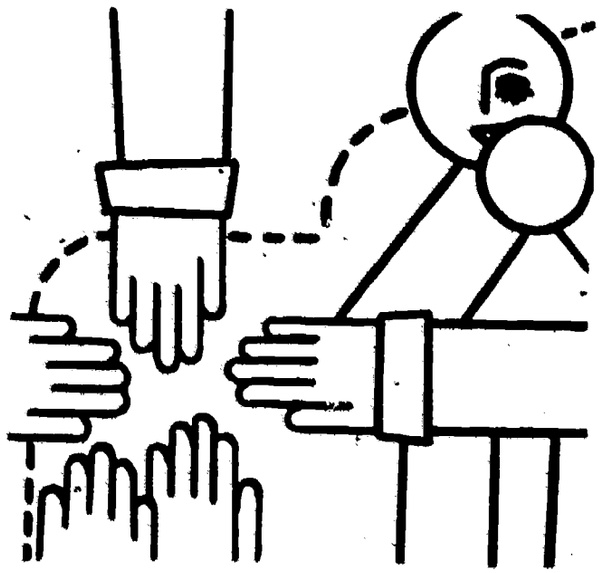
No one prototype will do everything. Each prototype should be reviewed in relationship to how it can be molded and varied to the advantage of the students and the total program. A program can be a composite of several prototypes which combine and adapt what is possible with what is practical and feasible.

COMPONENTS OF ANY PROTOTYPE



ELEMENTS AND KINDS OF PROTOTYPES

There are many classifications of prototypes applicable to a program for the gifted and talented. The basis for developing any program prototype is found in using some form of enrichment, grouping, acceleration, and guidance. Each alternative can become an element to be employed within the design of a prototype, or it can become a separate kind of program prototype. The degree to which each element is developed ultimately determines the kind of prototype. Thus, the variations between prototypes are a result of how these components are put together and how and when they are made available to students. A prototype may be identified by the predominant use of one element over another. It is less a matter of definition than it is a matter of recognizing the elements which direct the building of a prototype to accommodate the needs of gifted and talented students.



ENRICHMENT

ENRICHMENT is. . .
experiences which replace, supplement, or extend learnings as the basis for each type of prototype. Enrichment is the reason for the development or adoption of any prototype.

GROUPING	ACCELERATION	GUIDANCE
Provisions which facilitate the student's access to learning opportunities	Activities which promote learning beyond regularly prescribed curriculum	Experiences which promote understanding of the self and others and explore opportunities for careers
--Cluster grouping within the regular class --Special regular classes --Part-time groups before, during, after school or Saturdays --Seminars --Minicourses --Team teaching --Alternative schools --Resource room or demonstration classroom --Intinerant or resource teacher --Field trip and cultural events --Special summer	--Early entrance or preschool classes --Double grade promotion --Advanced placement classes --Ungraded classes --Multi-age classes --Tutoring --Correspondence courses --Extra classes for extra credit --Credit by examination --Independent study --Continuous progress curriculum --Year-round school --Flexible scheduling --Block or back to back classes	--Individual conferences --Group meetings --Career and vocational counseling --Educational counseling --Community programs and sponsorship --Scholarship societies --Study groups --Special education classes --Tutoring

The following pages provide a more comprehensive description of these program prototypes.

The assignment of gifted students into the regular classroom has been a traditional and popular approach to the needs of the gifted and talented. Cluster grouping has also been a prototype which is most often with regard to how well it accomplishes the goals for educating the gifted and talented. That some grou necessary within the context of the regular class is important; the question is how to make the grouping effectively.

Prototype	Necessities	Options	Checkp
Cluster Grouping within the regular classroom	Developing criteria for the selection and placement of students	Scheduling individual conferences	Are there opportun gifted and talente identify themselve as well as to ident member of the tota
	Involving staff in the decision-making process for determining the qualifications and nominations for teacher participants		Is isolation of the talented minimized opportunities for t exchange, and relat
	Determining the total class composite in relationship to such variables as class size, range of abilities, age-and grade-level inclusion, proportion of gifted and talented students to other students	Having small group meetings	learning experienc class?
			Do the gifted and stand why opportun able to them that or available to oth the class?
	Defining teacher responsibilities for attending to the gifted and talented as a separate group and integral part of the classroom	Contracting for independent study and learning activities	Do the learning ex for the gifted and late learning rathe the students for th
	Planning for classroom organization, materials, and procedures which differentiate the educational experiences for the gifted and talented cluster	Scheduling special events through the use of auxillary personnel or experiences	Does the teacher h and support of reso adequately assist with the gifted an cluster as part of assignment?

GROUPING

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of the gifted and talented. Cluster grouping has also been a prototype which is most often questioned
to how well it accomplishes the goals for educating the gifted and talented. That some grouping is
hin the context of the regular class is important; the question is how to make the grouping process work

	Necessities	Options	Checkpoints
ıg ılar	Developing criteria for the selection and placement of students	Scheduling individual conferences	Are there opportunities for the gifted and talented cluster to identify themselves as individuals as well as to identify as a group member of the total class?
	Involving staff in the decision-making process for determining the qualifications and nominations for teacher participants		Is isolation of the gifted and talented minimized by providing opportunities for them to share, exchange, and relate their unique learning experiences to the total class?
	Determining the total class composite in relationship to such variables as class size, range of abilities, age-and grade-level inclusion, proportion of gifted and talented students to other students	Having small group meetings	Do the gifted and talented understand why opportunities are available to them that are not required or available to other students in the class?
	Defining teacher responsibilities for attending to the gifted and talented as a separate group and integral part of the classroom	Contracting for independent study and learning activities	Do the learning experiences planned for the gifted and talented stimulate learning rather than penalize the students for their giftedness?
	Planning for classroom organization, materials, and procedures which differentiate the educational experiences for the gifted and talented cluster	Scheduling special events through the use of auxillary personnel or experiences	Does the teacher have access to and support of resources which adequately assist him in working with the gifted and talented cluster as part of his class assignment?

GROUPING

Prototype	Necessities	Options	Checkpo
	Designing channels of communication for informing parents, students, and educators of the purpose and scope of the classroom experiences Outlining evaluation and reporting practices	Placing and organizing materials within the classroom such as learning centers and learning kits	Are there adequ evaluating the successes of th and talented cl rest of the cla Is the class or a way as to mak the teacher to additional resp placed upon him burdening him students, or th class? Is there a bala teacher time, i activity, and g pation for all class without n the learning or process for any class? Is there adequa evaluating the of the cluster integral and se of the classroo

GROUPING

Necessities	Options	Checkpoints
Designing channels of communication for informing parents, students, and educators of the purpose and scope of the classroom experiences Outlining evaluation and reporting practices	Placing and organizing materials within the classroom such as learning centers and learning kits	Are there adequate means of evaluating the needs and successes of the teacher, gifted and talented cluster, and the rest of the class members? Is the class organized in such a way as to make it easier for the teacher to discharge the additional responsibilities placed upon him without overburdening him, the gifted students, or the rest of the class? Is there a balance between teacher time, independent activity, and group participation for all students in the class without neglecting either the learning or instructional process for any member of the class? Is there adequate means of evaluating the effectiveness of the cluster as both an integral and separate part of the classroom program?

GROUPING

Prototype	Descriptions	Illustrations and Options
Special regular classes	Assignment of all gifted students within a given grade or age level or range to a specific class or team	Ungraded classes Multi-age classes Alternative school or school within a school concept Summer school programs Team teaching Saturday classes Back-to-back or block class scheduling Advanced placement classes Honors classes Mini-courses which are of limited duration and are flexibly scheduled into the school calendar
Part-time groups which meet before, during, or after schools or Saturdays	Development of special experiences which function as adjuncts to the regular school program in order to accommodate the special needs of the gifted and talented	Itinerant or resource teacher Community experts or sponsored experiences Visitations or field trips Individual conferences to facilitate a study or provide academic or personal guidance Work with special equipment or materials not otherwise available (high school lab for elementary class on physics) Seminars on particular subjects, themes Speakers forum Peer dialogue, idea exchange, and/or discussion groups Extra class for extra credit Special interest clubs

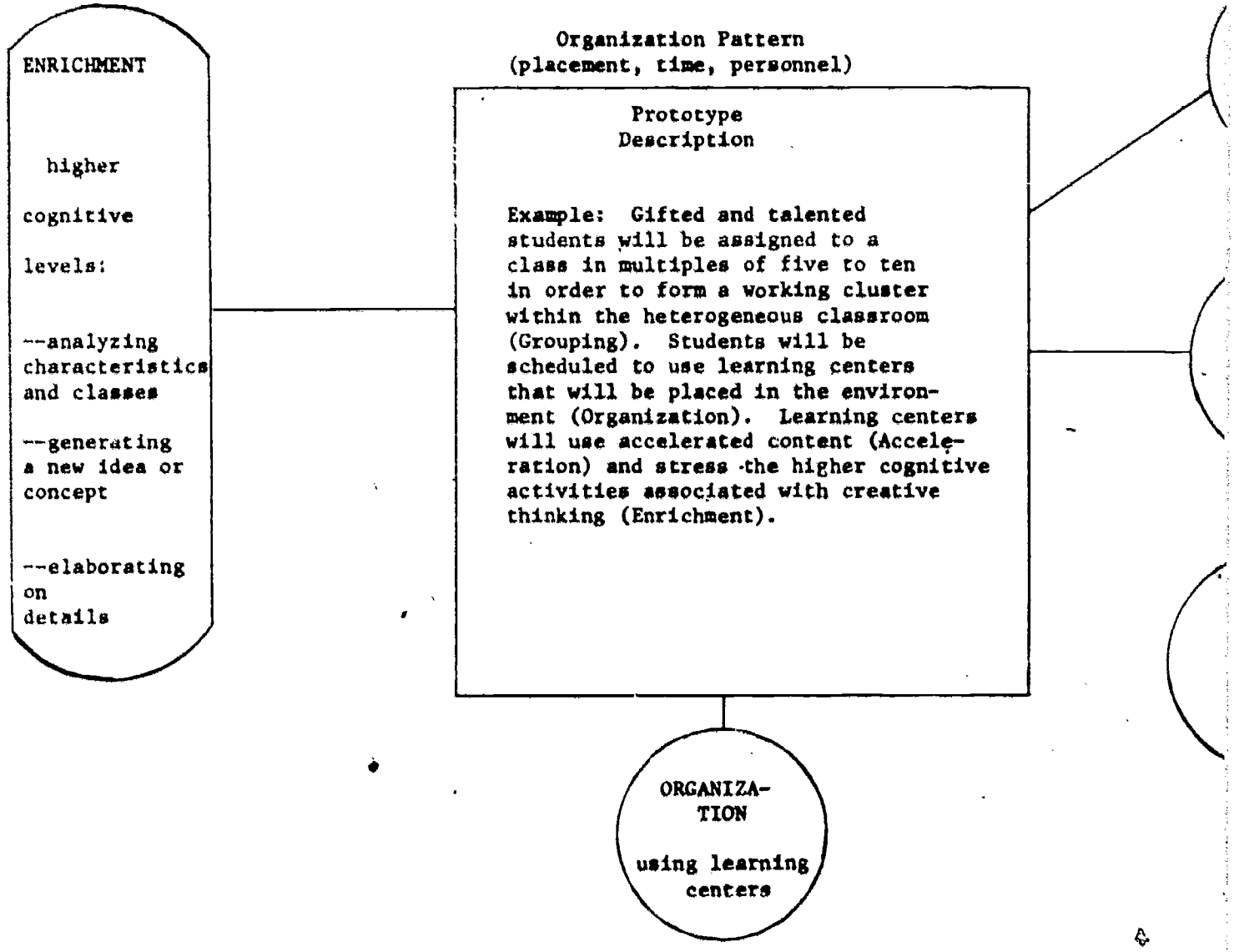
Prototype	Descriptions	Illustrations and Options
Resource rooms or demonstration centers	Designated area which provides a learning environment specifically tailored to the needs and objectives for educating the gifted and talented	Scheduling of students to an extra classroom or space within the school from their regular classroom Home-based classrooms from which students leave to participate in other classrooms for specific purposes at specific times Transporting of students on a predetermined basis to a center operating for the school district, county, or region Center for the development and dissemination of materials to be used by teachers and students in other learning settings Center for teacher training, in-service, and parent education which operates as an exemplary model of educational experiences for the gifted and talented Magnet classroom concept to facilitate the needs of a community or region by attracting students for regular attendance from different locales within a given area

ACCELERATION

Prototype	Descriptions	Illustrations and Options
Correspondence courses	Establishment of course outlines delineated into specific assignments which are related to the learner on a regular basis of teacher-learner exchange, via the mail or telephone, for within a predetermined length of time	Interaction with teacher and professional experts within and outside the local school, district, or region Facilitates rural gifted and talented with access to enrichment learning opportunities Early and part-time entrance into college Enrichment within the context of the regular classroom Independent study Summer school
Ungraded or multi-age classroom	Organization of classrooms which assigns students according to a range in chronological and/or mental ages in order to eradicate the traditional concept of lock-step age-grade-level learning	Individualized learning Content jumping and/or accelerated learning Early entry of preschool age students into school Cluster grouping
Continuous progress curriculum	Development of curriculum which presents multilevel and multimodal activities that teach, reinforce, and extend what is to be learned in a sequential manner (Through diagnostic and evaluative measures which indicate need and alternative learning experiences, students are able to progress in accord with their own learning style, ability, and interests.)	Ungraded classrooms Multi-age grouping Year-round schools Grade and content acceleration Early graduation from school Scheduled group meetings Tutoring Credit by examination Independent study Elective special interest courses Contractual learning agreements

WORKSHEET--DESIGNING A PROTOTYPE

Directions: A prototype is designed by incorporating elements recognized as necessary into an operational pattern which provides students with an environment for learning. Identify the elements to be included in the prototype. Define the elements as they apply to the prototype. Combine these elements into an organizational pattern.



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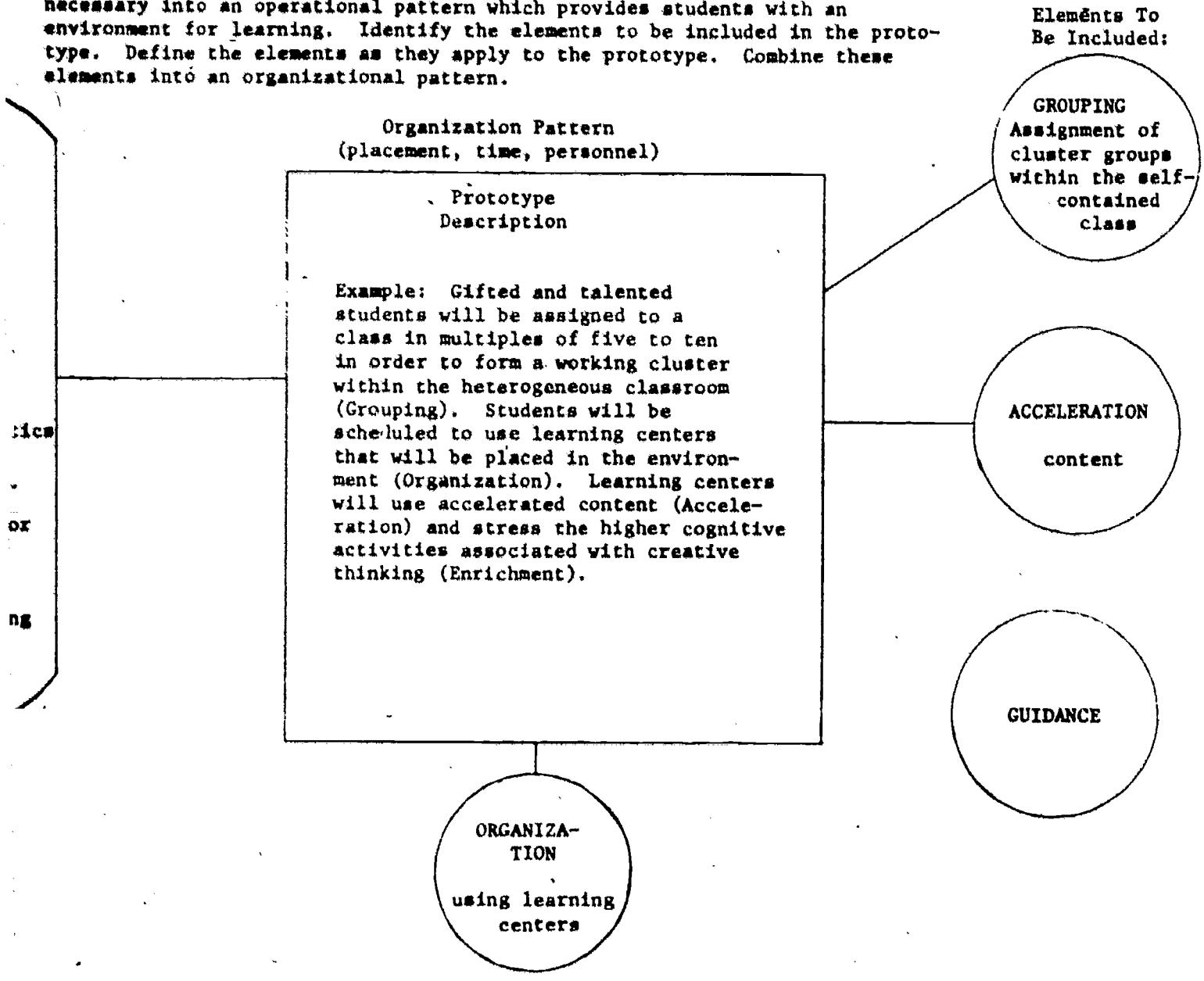
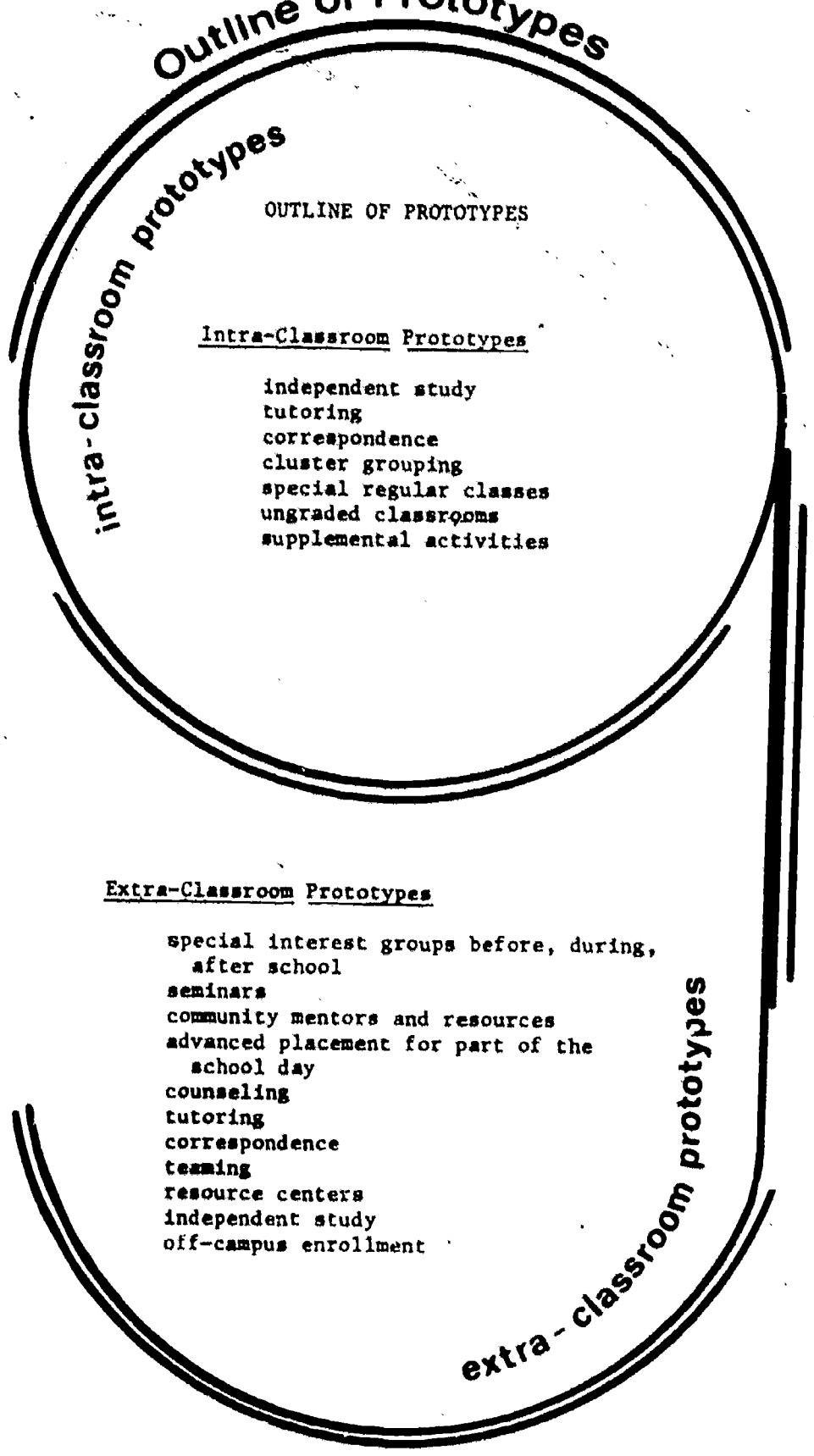
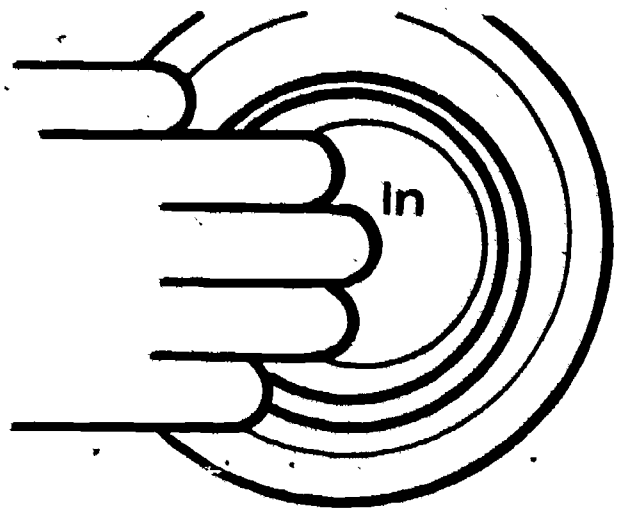



Outline of Prototypes
intra-classroom prototypes
OUTLINE OF PROTOTYPES
Intra-Classroom Prototypes
independent study
tutoring
correspondence
cluster grouping
special regular classes
ungraded classrooms
supplemental activities
Extra-Classroom Prototypes
special interest groups before, during, after school
seminars
community mentors and resources
advanced placement for part of the school day
counseling
tutoring
correspondence
teaming
resource centers
independent study
off-campus enrollment
extra-classroom prototypes

INTRA-CLASSROOM PROTOTYPES



The placement of a prototype within the context of the regular classroom program is predicated on understanding and attending to the attitudes and procedures which can promote or impede success. Directly related to the quality of intra-classroom programs is the teacher's acceptance of responsibility as the prime source for their operation. Accessibility of the teacher to the students for a given period of time within the context of the classroom program is needed. This necessitates devising a pattern which facilitates freedom for interaction, direction, and consultation between the teacher and the student. The availability of materials and supportive services must also be incorporated within intra-classroom prototypes in order to make them workable.

Allowances for sharing and exchange within the classroom increase a prototype's chances for success. Students must be made aware of the expectations held for them. Ways in which students can communicate and deal with the feelings and problems that arise from doing something different within the classroom must be included as a part of the program.

Perhaps the greatest problem in effecting an intra-classroom program is determining how the teacher can accommodate the special provisions for gifted and talented students without neglecting other responsibilities or becoming overburdened with more responsibility. Where teachers cannot see how they can do the job, they cannot be expected to do it.

WHEN IT CAN BE OFFERED	HOW IT CAN BE ORGANIZED
... in lieu of a regular class or group assignment	... grouping to meet regularly for input, production, evaluation
... in addition to an assignment	... individually designated teacher/ student conferences
... follow-up for an experience	... utilization of parent volunteer or paid aides
... independent study	... regrouping with another class for specific time and purpose
... self-selected, interest- or need-based task	... team teaching with other teachers
	... students teaching other students from the same or different classes
	... contracting with students for specific tasks
	... block class scheduling

Elementary

Although the instructional program in the special day class is highly individualized, the gifted pupils are encouraged to work in small groups to solve community or school problems. For example, in the study of the ocean, the class contacts various civic organizations and manufacturers to suggest ways to reduce water pollution. They plan an original dramatic presentation of "What Are We Doing to Our Water Supply?" With the help of a parent volunteer, the pupils photograph a short film to show examples of water pollution in the San Pedro Harbor. Special instructional material including individualized reading kits, programmed work books, puzzles, games in mathematics, and photography and science equipment have been purchased.

The teacher of the special day class meets with the pupil to plan his special interest projects, develop scope and sequence, evaluate progress, and arrange for him to share the completed project with his own or other classes. She also meets with the grade-level teachers at regularly scheduled times to familiarize them with the curriculum pursued in the special day class to encourage their contributions to the program (skills, materials, and other resources) and to arrange for student presentations to other classes (59).

Team Teaching and Continuous Progress Curriculum

To accomplish the school-within-a-school concept, differentiated staffing is used for both professional and nonprofessional personnel. Nonprofessional: clerks, instructional aides, and parent volunteers. Professional and semiprofessional: practice teachers (more than ten were utilized during the 1970-'71 school year), part-time teachers (those working less than eight hours per day, most on a four-hour-per-day schedule), full-time instructors, specialized personnel to include librarians, reading improvement specialists, music teachers, and art and physical education coordinators. Each team had a team leader who was responsible for directing the instructional program for 100-150 pupils. The teachers are teamed horizontally. In each module, the double room with folding doors is used by a team as an open classroom. This allows two or more teachers, aides, and practice teachers to work with both large and small groups according to the sophistication of the material being presented.

The K-6 curriculum at Berkeley Manor is divided into eleven sequential phases of learning with each phase having as many as five different levels, to include the Alpha (slow), Alpha-Beta, Beta, Beta-Gamma, and the Gamma (advanced). The Gamma students are often gifted and thus permitted to move far above normal grade-level expectations. Through pretesting and other information, we assess a child's base in relation to the vertical continuum of learning upon which he is placed. Specifically, homogeneous grouping with subgrouping for skills development in needed areas is utilized in the multileveled math and reading programs. Use of multiple adoption of math and reading materials enables the program to be incorporated in such a way as to insure availability of sufficient materials at each level of learning (43).

Seminars (Secondary)

Very capable senior students are enrolled, at their option and with consent of their parents, in a seminar in humanities which offers enrichment, acceleration, and greater depth of study than is normally available to high school students. It provides opportunities for intensive and critical evaluation of significant ideas in such areas as ethics and morality, philosophy, fine arts, major world problems, theories of history, and economics. It provides opportunities to sharpen and develop skills in critical thinking, critical reading, discussion techniques, research, oral and written communication of ideas, and interpretation of history. Students develop an understanding of the humanities in relation to other fields of learning. It eases the transition between high school and the university. An important aspect of this course is the concluding three-day symposium held at a school camp in the mountains (56).

Honors

Honors classes are designed for intellectually gifted students and may be initiated as a required academic subject or as advanced elective classes at any grade level. The classes convene a minimum of one period each day, five days each week for a full semester or full year. Such classes may engage in in-depth study, accelerated study, enrichment, an innovative approach to a subject or subjects, or any combination thereof.

An example would be the Engineering Concepts Seminar within which gifted students develop concepts of mathematics and physics as applied in the hardware of engineering and as utilized in the study of technological problems such as pollution, traffic flow, or epidemics. Considerable laboratory work is involved which necessitates specialized equipment, such as the Analog Computer, which performs certain mathematical operations on signals which are fed into it simulating a dynamic population model which will predict future population changes. This Honors class, while available to a single school during the regular school year, is also scheduled as part of the summer honors program as a shared resource for students city-wide. In the summer, the class convenes four hours each day for six weeks.

Advanced Placement

The Advanced Placement program provides for college-level academic classes taught on the high school campus by highly qualified high school teachers. Participating eleventh and twelfth-grade students may achieve high school graduation credit for successful completion of the courses. Advanced standing credit and/or advanced college placement may be achieved by students who elect to take and are successful in the Advanced Placement examinations administered through the Educational Testing Bureau at the high schools which have the program (58).

One Teacher and Five Grade Levels

The teacher's schedule will indicate this:

8:30 - 10:30	Eleventh-grade block for English, American literature, American history
10:30 - 12:30	Tenth-grade block for English, world literature, world history
2:00 - 3:00	Minicourses in grades six through nine First six weeks - Preparation Second six weeks - Ninth-grade "Interdependence" Third six weeks - Eighth-grade "Humor" Fourth six weeks - Seventh-grade "Drama" Fifth six weeks - Sixth-grade "What Is Worth Knowing" Sixth six weeks - Evaluation

The eleventh-grade course is divided into two sections. First semester the literature and history texts are covered simultaneously. The students react favorably to this arrangement because they better understand a period in history when they are exposed to the literature of that time. They can achieve an understanding of the feelings and moods of the people while gaining insights into the major concepts forming in American history. Novels read this semester include ANDERSONVILLE, HUCKLEBERRY FINN, and THE GRAPES OF WRATH. Second semester will include independent study for six to twelve weeks.

The tenth-grade class is using a thematic approach to the subject matter. The advantage to this is a correlation of history, literature, and grammar. First semester the class covered War in the Twentieth Century, Economy in the Twentieth Century, the Possibilities of the Twenty-First Century, and Great Civilizations of the Past. In the war unit, in addition to analyzing the actual wars that have and are taking place, the students study war literature and theoretical basic concepts concerning all war. The novel used with this unit is EXODUS. The twentieth-century economy study gives an opportunity to become familiar with major magazines, newspapers, and other media as well as acquainted with various major reporters and columnists writing today (43).

Back-to-Back Class Scheduling or Block Scheduling

The seventh-grade level students are enrolled in Language Arts-Social Studies block. In the academically talented classes (about 70 students in both blocks), emphasis is on developing and improving learning skills and developing creativity through individual talents.

Block I is scheduled for Language Arts-Social Studies from 8:30 - 12:30 (including lunch); the Math-Science block meets from 12:30 - 3:00 the first semester. The second semester this schedule is reversed. Both teachers and students agree that this is a good aspect of the scheduling.

Both instructors work together to enrich the program and not accelerate it. Pupils learn to construct problems for study and to develop them in both small groups and independently. The emphasis is on inquiry, research, experimentation, organization, and drawing conclusions through relationships.

A differentiated program of learning is planned by instructors and students through varied techniques. Some which have proven effective and interesting are independent study, research, workshops in the mechanics of English, discussions, social studies and spelling contracts, creative writing, debates, dramatic skits, individual and group projects, morning talks, teaching values, games (patterned after TV programs for review and evaluation), plays, programmed learning, field trips, individual reading program, conversational Spanish, experiments, art work, circle within a circle (for evaluation and discussion), etc.

Summer Honors Program

We are testing the students and doing a good deal of research. We have many questions about selecting students on the basis of performance only, particularly so far as our program is concerned because there is an academic phase to the program.

Each student spends part of his morning three days a week in the area in which he was nominated, from 9:00 to 12:30. This is the area of major concentration, which includes the arts, such as art, music, drama, or academic areas such as math and science.

Independent study activities is the time of day set aside every afternoon from 1:30 to 3:30 for students to study in any area in which they want to study. This means that if they are music students and have an interest in biochemistry, they can go over to biochemistry; if they are chemistry students and want to go over to music or art or drama or wherever they want to go, they can go--every afternoon for five days a week. The program is a five and a half day week with Saturday afternoon a free day.

The fourth phase of the program is a physical education program. We are providing individual instruction in golf, archery, badminton, volleyball, tennis--any number of activities that could be leisure activities for these students as adults.

The fifth phase of the program we call our special events. We are attempting to bring to the students well known people who are considered gifted and who are successful in their life's work. We've had Ralph McGill; the Governor; Lamar Dodge, the artist from the University of Georgia; Edward White, one of the astronauts; Dr. David from Bell Laboratories discuss the role of science in the humanities.

Summer Honors Program (continued)

In mathematics, we are working with the students in the structure of mathematics, probability theories, set theory, and computing.

In science, we are offering a three-pronged program: original research in chemistry, physics program, and ecology program rather than biology.

In the foreign languages, we are offering five foreign languages. The largest number of students are in Latin and French; one student in Russian; three in German and five in Spanish and they are working individually. We are working with comparative literature in the various languages.

In the social sciences, we are offering philosophy, anthropology, and political and economic institutions of America.

In the art areas, the music students are getting music theory and the real discipline of music, plus majoring in either chorus or instrumental. The drama students are getting real techniques of acting. They are not doing a major production but short productions so the students can try several different techniques of acting. Since we do not have a single drama teacher in the state in the high schools, the students nominated came to us without much background in drama. They are getting background from professional people.

Art is the same way. They are going into the history of art, into the cultural application of art, cultural enjoyment of art, and into the strengthening of their own skills (35).

INTRA-CLASSROOM PROTYTYPES

Enrichment -- Cluster Grouping

FOCUS

... Acquiring knowledge through environmentally placed Learning Centers, which encompass a collection of materials and delineation of activities that cover the range of difficulty and the scope of complexity as they relate to a particular area or skill
... Self-determined matching of learning style and learner interest and ability to appropriate materials and activities within the Learning Center
... Stimulating individualized independent study through self-selection and programming of the what, how, and when of the expressing and learning processes
... Encouraging and allowing for individual success through provisions which correlate students' ability and interest

PRAGMATIC DESIGN

Organizational Pattern

Placed for accessibility for student use as
- Learning Centers within the context of the regular classroom program
- Learning Centers as a total individualized instruction (open-structure) classroom
- Learning Centers within the structure of the school's library or resource center

Time Stipulation

Within the regular classroom--dependent on teacher scheduling to determine student accessibility
Within the Open-Structure classroom--dependent on student scheduling, but continually accessible
Within the library or resource center--dependent on library scheduling and classroom/student compatibility to such a schedule

Materials

Learning Center Kits (Mentally Gifted Minors produced)
Teacher-created Centers
Guides--Resource Guide, Individualizing Reading at Oak Street School Guide

ELEMENTS

Input

Exposure to subject matter outside prescribed curriculum framework

Process and Output

Self-pacing allowing for increase of input and output
Integration of subject matter as a derivative of a particular area or topic being studied
Stress on the differentiation of task complexity
Emphasis on elaboration, originality, and fluency as components of creativity
Problem solving approach to assimilation and production of concepts

Expectancies

Development of self-directedness
Individual expression
Understanding and ability to make decisions relative to personal and academic growth and performance (57).

INTRA-CLASSROOM PROTOTYPES

Cluster Groups

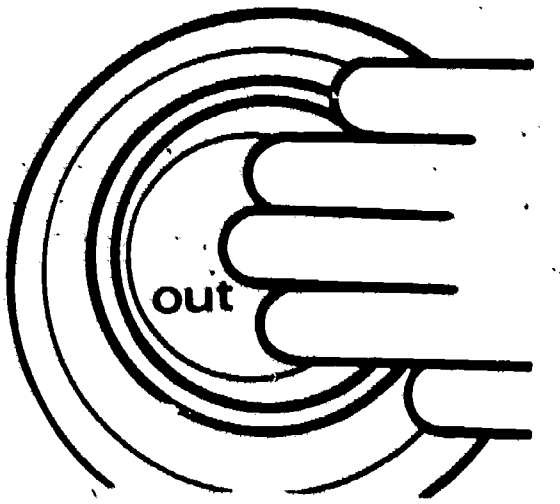
All six State-identified mentally gifted minors in our schools are in grades three and four. These pupils are clustered in a combination grade three/four classroom with 23 other pupils selected by teachers, the counselor, and administrators on the basis of high achievement and/or high group or individual test scores.

This year, the gifted pupils are producing a school magazine. They select and edit contributions from other pupils, write editorials and current events stories, plan the copy layout, and help prepare the copy for reproduction. They extend their study of a classroom newspaper to a review of the local newspapers for authenticity or bias. They analyze new, ambiguous words and the various propaganda devices such as innuendo, name-call, guilt by association.

In another six-week ministudy, the pupils explore some of the problems accompanying urbanization of the city such as food, housing, and transportation. They design a model city; decide where the highways will go, who should be moved, and why.

The six gifted pupils are released every day on a planned basis to participate in educational activities with an upper-grade class in the subject area in which they are most skilled or advanced. Three pupils work with upper-grade mathematics classes and three are in upper-grade social studies classes (59).

EXTRA-CLASSROOM PROTOTYPES



Extra-classroom prototypes are programs which function outside the boundaries of the regular classroom. They are the learning opportunities which exist as a supplemental unit to the regular classroom program. To their advantage, these prototypes allow for the matching of specific teacher abilities and talents with the type of program. Administratively, their separateness from the classroom makes them more easily controlled and visible as a district program for the gifted and talented. These prototypes are more conducive toward facilitating student identity and peer interaction. However, it must be recognized that each of these prototypes is dependent on the cooperation of staff members to release students for participation. Their success can also be related to reporting procedures which keep staff members informed about what the students are doing and how well they are progressing.

Because extra-classroom prototypes are often perceived as an addendum to the institution in which they function, they are sometimes ignored with regard to total district or school events and/or schedules. These prototypes can arouse speculation about their purposes, personnel, or activities by those who are not directly involved with them. Teachers as well as students who participate in these programs must assume the responsibility for planning methods to familiarize others with the programs. Planning for staff visitations, sharing accomplishments, and exchanging ideas, materials, and techniques with the staff can combat lack of understanding and indifference about the program. Methods which help students comprehend the purpose for their participation and relate their experiences to their peers are important. Scheduling a time when students can bring a buddy with them to share their extra-classroom experience eradicates the mystiism created when students leave their regular classroom. The regular classroom teacher needs to identify procedures for the student to share and use learnings obtained from extra-classroom program participation.

WHEN IT CAN BE OFFERED	HOW IT CAN BE ORGANIZED
Before, during, or after regular school time	1. Organizing special classes or clubs which meet on a regular basis during the school day
Saturday classes	2. Offering short-term minicourses, seminars
Special or altered schedules	3. Transporting students to another locale
	4. Providing a special center or room
	5. Offering special events such as field trips, speakers, etc.
	6. Providing for off-campus experiences at another school or within the community
	7. Regrouping students for team teaching
	8. Offering special programs during holidays and/or weekends
	9. Assigning members for independent study

EXTRA-CLASSROOM PROTOTYPES

Independent Study

The independent study phase enables gifted pupils to establish purpose and direction for pursuit of study interests or needs under the direction of special teacher advisors. This phase embodies flexible programming and utilization of community resources. It may be highly individualized or combined with peer group experiences. It may include multigrade levels and several subject fields. It may take advantage of learning centers or resource rooms. In order to provide for the variety of interests demonstrated by pupils in these situations, a vast amount of resource material is provided as well as basic equipment. Specially purchased tapes and transparencies are provided as well as materials and equipment for creative development of such items by both pupils and teachers. An example would be a program in a junior high school in a disadvantaged area. With careful preplanning in the seventh grade, selected gifted pupils were programmed into a combination of experiences in English, art, and music. English was emphasized five days per week; art, three days; and music, two days per week. Flexible time scheduling was utilized, a three-teacher team-teaching plan used, and qualitatively different, creative curriculum was developed.

At the ninth-grade level, a two-period block of time each day with a two-teacher team developed the same plan in a combination of English and world history and geography. Support and assistance in resources were arranged with the University of Southern California and a graduate student served as liaison between the school program and the university. Although each pupil experienced total class and small group experiences, emphasis was upon the individual pupil goal and area of independent study (60).

Ninth Grade Seminar

... Gifted pupils in ninth grade may elect to be enrolled in a special seminar class.

... Instruction is centered around either of two subject areas, according to the strengths of the instructors: creative writing or cultural anthropology.

... Classes meet either two or three times each week, usually one half of the class at a time, and occasionally the entire class meets together for the presentation of a student's research.

... Field trips and outside speakers are of unusual value in this course (58).

EXTRA-CLASSROOM PROTOTYPES

Independent Study

FOCUS

... Engaging students in independent study which places emphasis on the assimilation of content, the acquisition of information, and the processing of learned material
... Utilizing questions as the basic structure for progressing the student's study through the various levels of a thinking hierarchy
... Allowing for the concrete expression of learned ideas through products which are representative of the study and the student and which are creative in design and intent
... Capitalizing on individual interests by encouraging the student to self-select a topic to be studied

PRAGMATIC DESIGN

Organizational Pattern

... Enrichment facilitated outside the regular classroom through special class participation in the school's library under the jurisdiction of the reading resource teacher and follow through by the involvement of the classroom teacher

Time Stipulation

... Determined by school organizational pattern and scheduling of mentally gifted minors in the library
... Reinforced by time allocated within the classroom by the teacher

Materials

... District-developed independent study outlines
... Library resources and facilities
... Materials specifically purchased to augment the student's study (models, books, raw materials)

ELEMENTS

Process and Output

Locating and synthesizing information from multiple and varied references
Integrating acquired information into unique products which organize, synthesize, compare facts and concepts through the use of raw materials
Developing "new" ideas and/or solutions to aspects of the studied topic (divergent thinking)

Expectancies

Developing self-directedness in the ability to obtain and process information
Developing ability to pursue a study in-depth individually and individualistically (57).

SECONDARY

Learning Centers may be interdisciplinary or directed toward a given subject field. They are sometimes developed as a resource room for individualized study and research. Some schools have designed them to provide an innovative approach to study. Such centers are provided with special instructional materials and equipment necessary to realize the teaching objectives. Such provision must be made on a long-range planning basis. Some schools have been able to provide paraprofessional assistance in the learning centers. Others must use a portion of their gifted teacher time allocation.

An example of the development of learning centers on a long-range basis is the Audio-Tutorial Science Center Program, which is in process of development at four schools--one in each zone. These science centers will provide the setting for highly individualized approach to science learning and research wherein pupils can progress at independent rates of speed and are never forced to remain captive audiences for demonstrations and explanations they do not need. Scientific explanations and laboratory instructions are prepared on a multimedia basis for individual student use. This frees the teacher for individualized work with students.

ENRICHMENT CENTERS

The enrichment centers provide a learning environment in a laboratory situation conducive to exploration and originality based on the recognition of individual abilities, interest, and talents. Children are bussed or are brought by parents to the center once a week for learning experiences in many subjects. The centers are staffed by two teachers aided at times by parent volunteers or aides.

The teachers provide guidelines and special materials for the pupils and home school teachers to extend and reinforce the learning experiences of the center (60).

EXTRA-CLASSROOM PROTOTYPES

Special Groupings

Elementary

... Offering a variety of experiences outside of the regular classroom which have as their purpose to provide additional and "new" alternatives for the students' cognitive and affective knowledge from which future areas of interest, appreciations, and values can be stimulated for study and/or involvement
... Providing activities which touch, tap, and spark the multidimensions of giftedness
... Stimulating awareness and appreciation for the possibilities for lifelong learning and personal growth
... Providing peer-group stimulation and interaction through collective associations of students within the same intellectual strata
... Capitalizing on opportunities for input at a level commensurate with the group homogeneity of giftedness
... Serving as an adjunct to the Enhanced Learning Program on an intermittent rather than permanent basis throughout the year

Organizational Patterns

... Activities to be centrally organized for the district's program
... Involvement of students and schools to be dependent on facilities, type of activity, population needs, transportation, and economic conditions
... Forms may vary and will include
- Student conferences, workshops, and discussion groups
- Seminars
- Field trips
- Teaching mentors
- Community resources
- Junior Great Books discussion groups.

Time Stipulation

... Variable according to scheduling and type of experience offered (57).

EXTRA-CLASSROOM PROTOTYPES

Minicourses, Seminars, and Workshops

FOCUS

... Provide for learning impact through comprehensive coverage of content in an abbreviated period of time.
... Allow for stimulation of social and learning interaction through peer group interaction.
... Stress on high cognitive processes through the association of what is to be learned with who is learning it.
... Provide new channels for independent learning and interest development.
... Widen the horizons of learning possibilities and topical areas which are available for individual or group future and further study.
... Provide new learning forms and skills, which elicit new thinking and producing responses from the learner.

PRAGMATIC DESIGN

Organization Pattern

... Outside the regular classroom experiences to be held before, during, or after school
... Employment of specialists and/or professionals to direct, lead, or teach the group
... Attendance encouraged by school staff, but final selection left to each student
... Financing from current district Enhanced Learning Program funds

Time Stipulations

... Experiences to be held for periods of no less than 60 minutes per session and at least four weeks in duration.

EXEMPLARY ACTIVITIES

... Mini-experiences will be topical, thematic, and skill-oriented as they are developed in relationship to various subject areas and specialists.
... Examples in each of the categories might include

Topical

... Ecology
... Urban affairs
... Economic urgencies
... Local and federal governmental actions

Thematic

... Man's inhumanity to man
... Materialism *versus* philosophy
... Individual needs and social psychologies

Skill Oriented

... College preparation in notetaking, outlining
... Developing creative talent and skills
... Preparing a research paper (57).

EXTRA-CLASSROOM PROTOTYPES

Extended Day Program

FOCUS

... Provide after-school classes which emphasize the divergent and open system of assimilation which extend beyond and/or capitalize upon those subjects and opportunities regularly provided within the context of the school day and age-grade span.
... Gear toward an atmosphere in content and design which fosters experimentation, exploration, and expression which will broaden the learner's horizons and enrich his learnings.
... Allow students the opportunity to determine their participation according to individual interests, talents, and abilities.
... Afford students with opportunities for peer group stimulation and exchange at a level of interaction structured to meet the characteristics of the gifted.

PRAGMATIC DESIGN

Organizational Pattern
... Class offerings to be determined by teacher recruitment based on the identification of teacher interest, proficiency, philosophy, and pedagogy
... Class composite primarily determined by pupil interest and cutting across grade levels
... Participation determined by teacher, principal, and counselor recommendations and parent-child approval according to stipulated criteria
... Utilization of one central facility
... Transportation provided by parents

Time Stipulation
... One hour and fifteen minutes for approximately 18 to 20 weeks during the school year

Materials
... Dependent on the needs of teachers and classes offered (example: slide rules, plays, etc.)

EXEMPLARY ACTIVITIES

... Course content and activities reflect the philosophy and design of the program
... Examples of courses included and related activities:

Biology
... Dissecting worms
... Bees
... Visiting the Health Museum
Humanities
... Experimenting with various historical and geographic techniques within different eras of man's development
Graphic Arts
... Making projects related to various media: silk-screening, printing, lithography, photography (57).

Itinerant Resource Teacher

Woodlawn Middle School was designed and constructed for an ungraded organization and utilization of team teaching and individualized instruction. The school is divided into three "houses" with two teams in each house. Students identified as academically talented are placed with all teams and receive additional instruction from the itinerant resource teacher who moves from house to house. The resource teacher works with team members in planning for both large- and small-group instruction. The instructional program for the academically talented is designed to allow these students to explore in depth areas of English, social studies, and reading. The English curriculum deals chiefly with the creative aspect, and students are given many opportunities for writing. A supplement to the regular social studies program provides an opportunity for students to deal with a narrow topic in depth. "Mini" units are also developed by the resource teacher and her pupils. Various literary forms and techniques are studied in reading. Work on particular skills is individualized.

The three houses of the school are located around a Learning Media Center so that students have many opportunities for exploring various materials in research and individual study. Learning Activities Packages have been developed which allow academically talented students to work on more advanced levels.

The itinerant resource teacher moves from house to house scheduling her work with that of teacher team members. She usually sees each student on an average of every other day. There are approximately fifty students in the program, and instruction by the resource teacher is usually in small groups of eight to twelve (43).

EXTRA-CLASSROOM PROTOTYPES

Special Counseling (Elementary)

FOCUS

Elementary
... Attend to translating test data into practical class teaching/learning strategies.
... Develop and apply techniques to modify behavior in relationship to academic, social, emotional performance.
... Consult and confer with parents, teachers, students concerning school progress and success.
... Determine proper student placements.

Secondary
... Assist in program planning and suggest alternatives for student academic and social development.
... Provide opportunities for student advancement for scholarship.
... Conference with students and parents concerning college and career choices.
... Attend to individual growth needs.

PRAGMATIC DESIGN

Organizational Patterns
... Student's decision to make an appointment for assistance
... Counselor's decision to "call in" the students
... Regularly scheduled appointments or group participation

Time Stipulations
... Varying according to type of need and/or reason for seeking counselor's assistance

EXEMPLARY ACTIVITY

Underachieving Gifted
... Involvement in individually prescribed behavior modification program
... Appropriate class placement to stimulate academic success and social or emotional maturity (i.e., educationally handicapped, facilitative regrouping)
... Opportunities to function as a tutor in the Tutorial Program in order to develop leadership and self-concepts, perceptions about one's ability
... Adapting classroom opportunities through special activities and materials

Group Interaction
... Formulation of groups to provide peer-group identity and interaction (i.e., Leadership Groups, Problem-Centered Groups, Task-Oriented Groups)(33).

Counseling-Instructional Program

Introduction

1. Problem. The counseling-instructional program in California Project Talent was an attempt to weave together the goals and processes of counseling and instruction in a mutually reinforcing and optimal manner. While the project demonstration involved only mentally gifted minors in grades 7-9, the program as conceived is applicable at other grade levels as well. Experiences planned and carried out in group counseling situations and in English and social science classes were based on case-study data such as motivational structure, interest patterns, and special abilities of gifted children. This program was "a tri-dimensional approach to learning," as outlined by Paul Plowman (1963).

2. Major Emphases. Major emphases included improving communication skills, encouraging the development of personal sets of values and philosophy of life, and promoting more effective learning in social sciences and in English in grades 7-9.

Instructional and counseling experiences were planned which would develop higher intellectual skills and specific factors of creativity outlined in research studies of J. P. Guilford and R. Hoepfner and E. Paul Torrance--for example, associational fluency, sensitivity to problems, and adaptive flexibility.

3. Anticipated Benefits

a. Improved motivation to learn important concepts and skills in the social sciences and English

b. Realistic guided self-appraisal of abilities, goals, and values

c. Greater sensitivity and awareness

d. A dynamic and positive concept of self and of relationships with other persons, institutions, and environment

4. Relationships of Counseling to Instruction

a. Relating classroom experiences to personal philosophy

b. Developing relationships with peers

c. Becoming more creative in doing assignments

Counseling-Instructional Program

Topics of Small-Group Counseling Sessions

The following small group topics are examples of interest and concerns which were discussed by the groups. Although most of the groups enjoyed the independence of proposing their own topics, some preferred to rely on the counselor to suggest an idea.

1. Divergent thinking
   a. What would life be like if we closed all of our schools for 20 years?
   b. What if the battle of Gettysburg had turned the other way?
2. Social concerns
   a. Teenage drinking
   b. Should mothers work?
   c. Capital punishment
   d. Welfare: eligibility and needs
   e. What age for dating?
   f. Will a woman ever be president of the United States?
   g. Causes of high taxes
   h. Problems involved in eliminating slums
   i. Problems of the American Indian
   j. Should a young person be punished for the rest of his life for one foolish act?
3. Scientific explorations
   a. Progress in medical science
   b. Space race

Counseling-Instructional Program

4. Governmental issues
   a. The image of America abroad and the role of America in world leadership
   b. Candidates for governor; the governor's function
   c. Governmental control versus individual rights
   d. Comparison between policies of Republicans and Democrats
5. Religious man
   a. Predestination and free will
   b. Astrology
6. Psychological issues
   a. What is "being normal"?
   b. Problems related to being youngest, oldest, or in the middle of a family of children
   c. Brainwashing
   d. Parents who are teachers
   e. Causes of unusual behavior
   f. Individual differences
   g. Meaning of group test scores, i.e. I.Q.
   h. What is love?
   i. Controlling behavior through reward rather than punishment
   j. Mass hysteria -- its influence on history
   k. Why tests?
   l. What is intelligence?
7. Educational issues
   a. Racial integration of schools through bussing students
   b. Adjustment to junior high school setting

Counseling-Instructional Program

8. Moral concerns

   Gambling

9. Philosophical concerns

   a. Is man born human?

   b. Conscience: what is it?

   c. Existentialism

   d. Relationship of time to human experience

   e. Does the man make history or does history make the man?

   f. Luck -- is there such a thing?

   g. What is patriotism?

   h. What is freedom and what is privilege?

10. Miscellaneous topics

   a. Controversial issues related to causes of the Civil War

   b. The French and Indian War (14).

EXTRA-CLASSROOM SPECIAL GROUPING

Culturally Different

Educationally Disadvantaged Developmental Pilot Program

A program of one hour three times per week is being offered to clusters of pupils enrolled in grades five and six who qualified as "culturally disadvantaged, under-achieving, mentally gifted minors." While providing a wide variety of enrichment and remediation activities, the teachers and the school counselor are able to observe these pupils in a "situational testing" environment. This approach combines curriculum modifications designed to meet the pupil's individual needs with an extensive on-going evaluation of the pupil's progress and potential.

In addition, three times per week, the 25 selected students meet for two hours of specialized enrichment, provided by each of the team of teachers on a rotational basis. At that time the "enriching" teacher's other pupils are taught by the other two team members. This three-teacher model has stimulated a sharing of activities, interest, and enthusiasm.

A project room is available for the specialized work three times per week. The advantage of the additional space is a tremendous aid to the organizing of materials, projects, and interaction of the pupils.

Learner objectives include the following:

Cognitive Domain

- To demonstrate predicted competence in reading
- To demonstrate predicted competence in mathematics
- To demonstrate predicted competence in language arts

Affective Domain

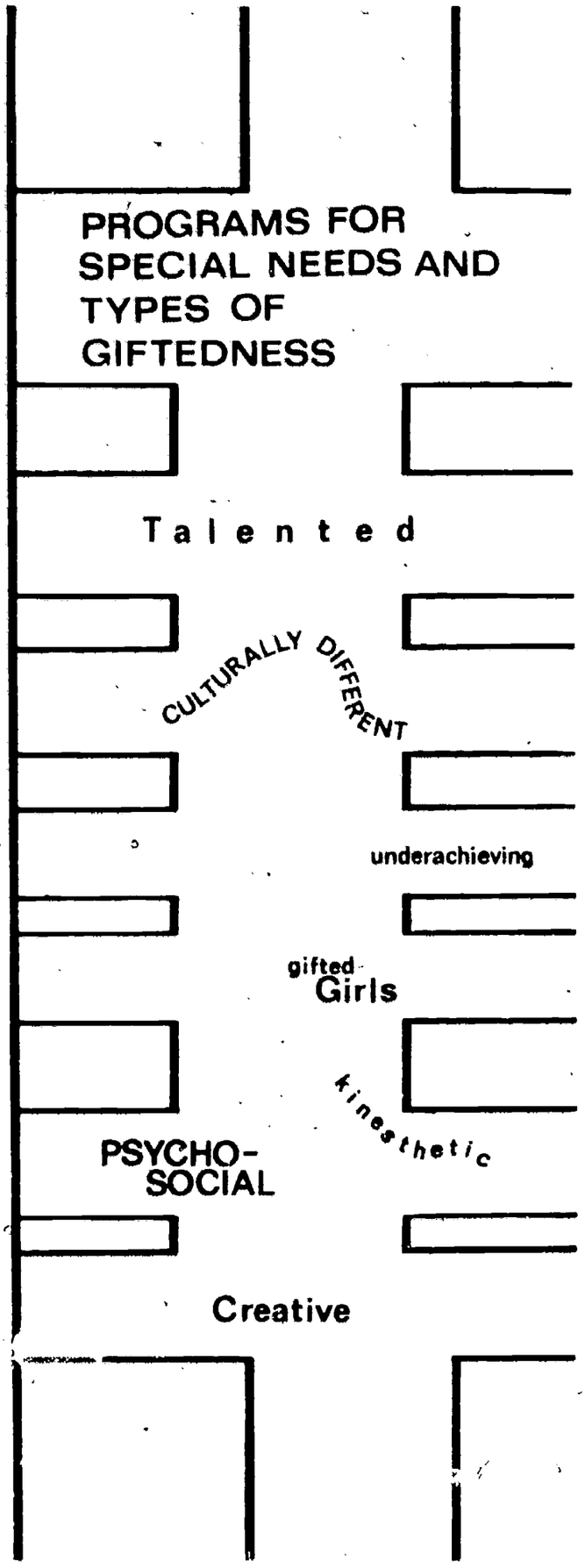
- To develop a positive attitude toward self
- To develop social behavior that shows responsibility toward others and independence toward self
- To search for "whys" and for meanings--to become intellectually curious
- To develop appropriate creative problem solving techniques
- To work toward self-generated activities rather than teacher-directed activities (30).

SPECIAL TYPES OF GIFTEDNESS AND TALENT

The assumption that the gifted and talented are identical is erroneous. Although the gifted and talented share some fundamental characteristics, the level of development and the manifestations of these characteristics can differ significantly among individuals within the group of gifted and talented. Personal interests, motivation, values, and self awareness also interfere with the degree to which these students are alike.

The older concept of giftedness is related to academic potential or achievement which has been assessed by standardized measures. The new trend of understanding giftedness proposes that giftedness is also the display of specific aptitudes or skills related to many areas of knowledge or human undertaking. Besides the academically gifted, there can be the talented, the creatively gifted, the psychosocially gifted, and the kinesthetically gifted. Emphasis has also been placed on recognizing the gifted and talented in the context of their own culture using the knowledge and understanding of that culture as a background for identifying the culturally different gifted and talented students.

Any program for the gifted and talented should consider the many rather than the singular aspects of giftedness. The program must provide for the distinguishable needs of the particular types of giftedness and talent while simultaneously attending to those needs which are similarly held by all gifted and talented students. The articulation of a separate program should be anchored to the elements of a general program in order to insure continuity for a total program for the gifted and talented.



PROTOTYPES AND CURRICULAR EXPERIENCES
FOR SPECIAL TYPES OF GIFTEDNESS

SPECIAL TYPE	ELEMENTS TO CONSIDER	EXEMPLARY PRACTICES
Underachieving	Establishing an adequate frame of reference and criteria for determining and defining the underachieving gifted or talented	Intervention team which evaluates, plans, and provides necessary techniques and materials to work with the student on a consultation basis to the regular classroom teacher or as a facilitator in an extra-classroom setting with individuals or in small group sessions
	Employing motivationally intervention and preventative techniques	Tutoring assistance through remedial specialists, student or parent tutors in an intra- or extra-classroom setting
	Stressing affective evaluation and growth as a correlate to intellectual and performance growth	Buddy, big brother or sister, or mentor organizations to meet with students on a regular basis before, during, or after school or on Saturdays to act as support personnel to the student, to stimulate interest through excursions and discussions, and to assist in working academically with the student
	Developing a multilevel and team approach for diagnosing and prescribing	Contract system to stipulate requirements, expectancies, responsibilities, and consequences in a formal agreement among the student, the teacher, counselor, administrator, or parent
	Including the student, teacher, and parents in assessing, planning, and implementing a program	Special group meetings to foster academic, personal, and social growth which are facilitated by an itinerant teacher, team teaching, or a counselor
		Study groups which meet to discuss, learn, and practice skills and habits
		Special regular classes for underachieving students which adopt specific techniques and curricular activities to satisfy the needs of students on an all-day or integrated-day schedule

SPECIAL TYPE	ELEMENTS TO CONSIDER	EXEMPLARY PRACTICES
Culturally Different	Identifying the students with appropriate and multiple criteria Understanding the patterns and values of the students' culture Recognizing the characteristics unique to the gifted or talented within the subculture and the similarity of traits which are shared with the gifted and talented within the dominant culture Planning and providing educational opportunities for the culturally different child which match and support his culture rather than attempt to make him give up his culture to become a member of the dominant culture	Counseling sessions on individual or group basis for discussing and exploring giftedness, vocational and career possibilities, school, and personal related topics Field trips to expose, enrich, and extend awareness of "the world" and alternatives for learning and participating Special intra- and extra-group experiences which stress development of skills and processes relative to academic achievement and gifted performance Buddy, tutorial, and mentorship programs on and off campus to facilitate learning, interaction, and stimulation Parent-student meetings or classes to provide opportunities for learning as a joint enterprise between the family and the school Interest clubs which meet during, before, or after school Cultural exchange programs within the region, State, etc., to expand learning opportunities and appreciation of other peoples' cultural patterns and values Advanced placement off campus for encouragement and for acquainting students with other learning environments and possibilities

SPECIAL TYPE	ELEMENTS TO CONSIDER	EXEMPLARY PRACTICES
Talented	Determing the criteria and process for measuring and verifying talent potential Differentiating between technical skill and creative potential and the relationship between the student's capabilities and performance now and the student's future potential for talent development Assessing the student's own interest and enthusiasm for nurturing his talent Interviewing parents to assess their recognition and support of their student's talent and to involve them in the educational opportunities provided for their child	Mentors and sponsors to support and/or teach the student within the community Extra-classroom programs during, before, after school and on Saturdays facilitated by professionals and/or experts Apprenticeship assignments in off-campus situations Flexible programming to take elective courses beyond grade-age level expectancies and waiving of some requirements so that interesting electives can be programmed for the students Off-campus participation in professional schools while still receiving credit toward graduation for such attendance at the regular school Special classes and seminars in aesthetics, performing, publishing, etc. Independent study in subjects related to areas of talent, facilitated by contracts, mentors, correspondence, or tutoring Organized field trips and attendance at professional performances and meetings Counseling sessions dealing with affective areas relating to talent possession and development, and profession and career possibilities Allocating funds to students from school revenue received or raised to be spent for individual lessons Alternative schools and/or summer sessions which attend exclusively to talent development

SPECIAL TYPE	ELEMENTS TO CONSIDER	EXEMPLARY PRACTICES
Psychosocially gifted	Identifying the collective personal and behavioral abilities and traits which are indicative of the psychosocially gifted student Discriminating between the teacher's perceptions of who is psychosocially gifted and standardized or accepted criteria for identifying the psychosocially gifted Differentiating between the characteristics of social popularity and the characteristics of social development, adjustment, and ability Understanding the responsibility of educators to explain the nature of giftedness to the student and his family Allowing the psychosocially gifted to accept or reject opportunities for developing his talent, with full cognizance that his "gift" can be held as a personal rather than a societally shared talent Identifying opportunities for the psychosocially gifted that allow for the student to experience being a leader as well as a follower, an independent worker as well as a group member, and a winner as well as a "loser"	Opportunities for school-community service Independent or group biographical studies Teaching/tutoring, counseling programs Leadership classes Individual and/or group counseling concerning values Analyzing and interpreting results of various types of interest and personality tests in individual and group settings Opportunities for competitive participation Role-exchange programs within the school and community Classes in psychology, sociology, philosophy, etc. Opportunities to learn, participate, and gain feedback in groups in order to learn group dynamics Opportunities for self-assessment and-awareness in sessions or courses led by school or professional leaders Independent problem-centered school or community study

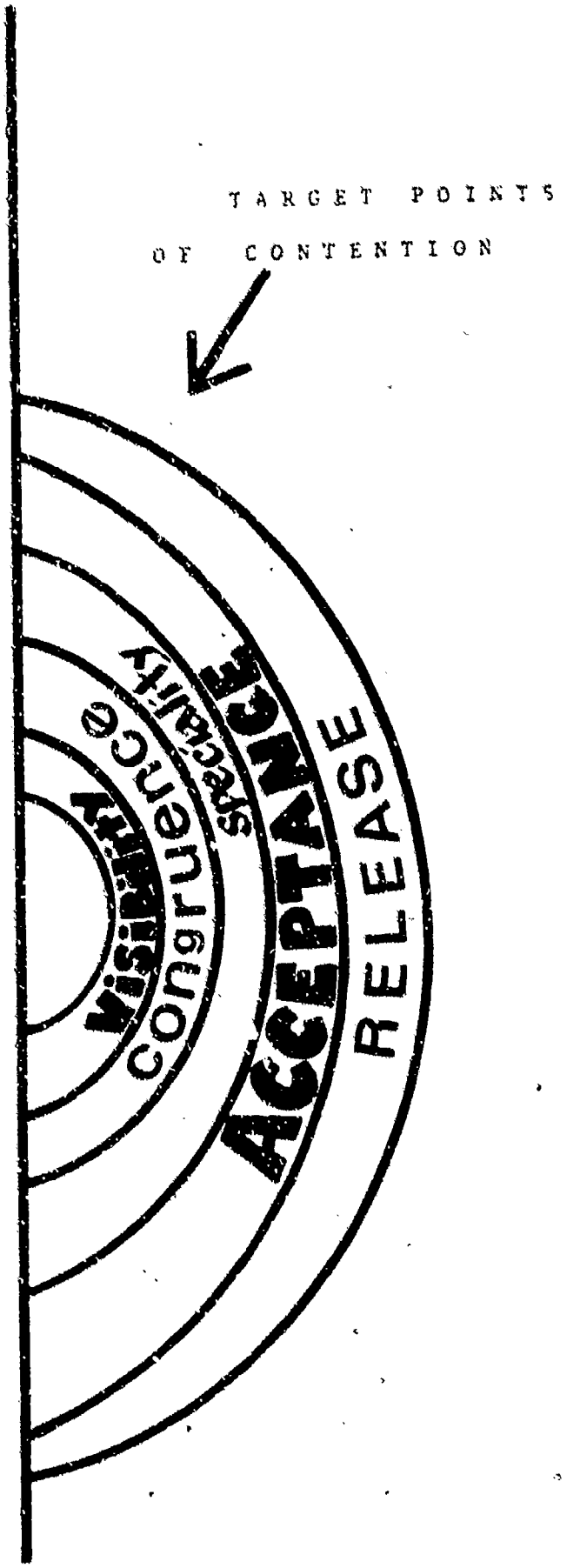
SPECIAL TYPE	ELEMENTS TO CONSIDER	EXEMPLARY PRACTICES
Creatively gifted and talented	Implementing a valid process for screening and identifying creativity as both a characteristic feature of the gifted and talented and as a separate category of giftedness and/or talent development Differentiating between non-conforming behavior and the factors relative to a reliable measurement of creative giftedness Emphasizing the recognition that the creative process is the ability to generate new ideas for familar things and situations as well as to generate something completely original Understanding that the creative process cannot be isolated from curricular experiences, and that those learning opportunities which require a discovery approach to learning are also stimulating for the creatively gifted and talented	Independent study under the direct supervision of a teacher who sets individual expectancies and provides individual consultation Independent study with professionals or experts, on or off campus Independent or group study on creative personalities Sharing and exchanging opportunities among peers, professionals, and experts in order to obtain feedback and evaluative reactions about ideas, products, or performances Individual and/or group counseling to develop self-awareness and to understand others with similar characteristic problems, concerns, etc.
Kinesthetically Gifted and Talented	Developing procedures for identification Widening teacher awareness of the characteristics and areas of psychomotor behaviors which can be labeled as gifted or talented Developing an appreciation for this dimension of talent among educators and the community which is commensurate with the appreciation given to other areas of giftedness and talent	Awarding scholarships and stipends for off-campus apprenticeship Field trips and cultural events to further individual horizons and to expose individuals to other possibilities Allowing for extra-class participation in specific areas related to the type of giftedness or talent

DETERMINING WHICH PROTOTYPE

A concomitant of the selection process is evaluating the features of each prototype in terms of its advantages and disadvantages. Attempts to equate a program prototype for the gifted and talented with other special education prototypes can dilute the features which may make it unique to the gifted. Selecting a prototype because it neutralizes or minimizes the learning for the gifted is not sound reasoning. Similarly, choosing a prototype under the banner that "it is good for all children" or that it can be most easily hidden does not justify its selection.

The qualities of a prototype cannot be assessed without considering their operational effects, nor can the theoretical implications of a prototype be separated from their practical implementations. Organizational patterns which penalize or reward participants need to be reevaluated. Acceptance of a prototype which places too much pressure on its participants in order to serve them is as dangerous as one which tends to exonerate participants and other institutional members. Another point to consider is recognizing the level of comfort participants and other staff members will have in releasing students, facilities, and materials for the operation of the prototype.

Prototype selection is not an isolated process. The prototype which finally becomes part of the program must be congruent with those facets in the institution which will support and perpetuate it. Without the acceptance of students, teachers, and parents, the prototypes rest on a shaky foundation.



GUIDELINES FOR DEVELOPING A PROTOTYPE

Flexibility of program . . . so students can

... regulate their own attendance according to self-determined needs and interests
... schedule their own learning time
... work independently
... have experiences with large and small group dynamics
... have individual contact with peers, teachers, and mentors to develop interpersonal relationships.

Accessibility to unique and multiple resources . . . so students can

... make use of adjunct facilities within the community
... develop research skills
... utilize the environment for firsthand experiences and real-life learnings
... be exposed to new and different careers, technology, and opinions
... make use of experts and professionals in various fields
... practice a variety of learning strategies.

Provisions for feedback and knowledge of progress . . . so students can

... share and exchange ideas with their peers as a means of intellectual stimulation and self-development
... develop and practice dialogue and discussion skills

so the program can
... be continuously examined for improvement.

Attending to individual needs . . . so students can

... pace and select their own learning experiences through individualized instruction, independent study, or an ungraded program
... have time to pursue and master learning to their own satisfaction.

PROTOTYPE ASSESSMENT CONTINUUM
WORKSHEET

1. The prototype evidences a balance between segregation and integration of students within the school program.

/ / / / / /
most least

2. The prototype provides for the heterogeneity of the gifted and talented through varied provisions within its context.

/ / / / / /
most least

3. The prototype can operate for the greatest number of students on a continuous basis.

/ / / / / /
most least

4. The prototype coordinates with the institution in which it will operate: schedules, transportation, etc.

/ / / / / /
most least

5. The operational costs of the prototype are in accord with budgetary allowances without depleting or overburdening the total program reserve.

/ / / / / /
most least

6. The prototype allows for student (and staff) participation without penalizing those who will be involved.

/ / / / / /
most least

7. The prototype allows for spontaneity and flexibility in its functioning.

/ / / / / /
most least

8. The prototype has growth possibilities in relationship to population expansion, institution changes, and new information.

/ / / / / /
most least

WORKSHEET: Prototype Adoption

DESCRIPTIVE SUMMARY	FEATURES	ADAPTABILITY (What can be used)	ADJUSTMENTS (What needs to be changed)	(
	Objectives			
	Facilities			
	Personnel			
	Schedule			
	Materials			
	(other)			
	(other)			

ORGANIZATION	CONT
Who:	Activities:
When:	Processes:
Where:	Materials:
How:	

WORKSHEET: Prototype Adoption

TIVE SUMMARY	FEATURES	ADAPTABILITY (What can be used)	ADJUSTMENTS (What needs to be changed)	ADDITIONS (What needs to be added)
	Objectives			
	Facilities			
	Personnel			
	Schedule			
	Materials			
	(other)			
	(other)			

ORGANIZATION	CONTENT
Who:	Activities:
When:	Processes:
Where:	Materials:
How:	

Designing curriculum

CURRICULUM

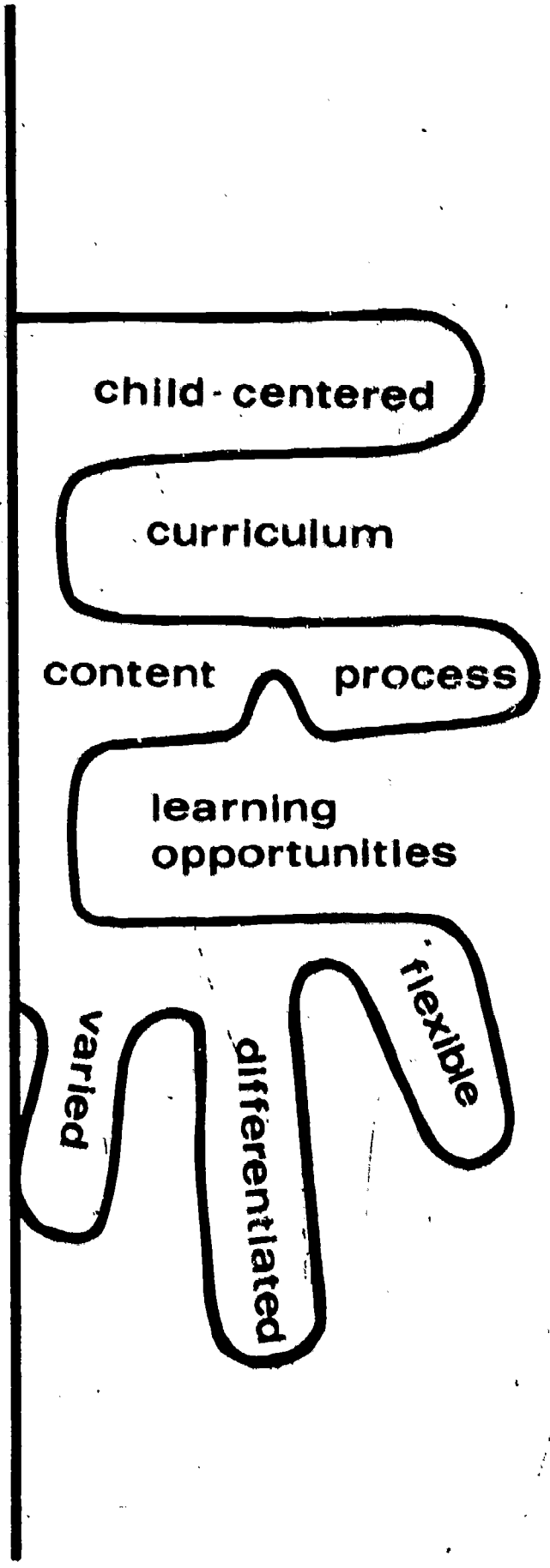
In its traditional context, curriculum consists of the content to be learned and the processes which make learning possible. It is the curriculum which gives substance to the program prototype. Whereas the prototype determines the setting and organization in which learning will take place, the curriculum defines the learning and guides instruction through a variety of learning experiences. The curriculum thus becomes a method for organizing teaching/learning activities to effect specific cognitive and affective growth.

The curriculum is not intended to be a prescribed route which all students must follow. It should be considered a framework of learning alternatives serving as a resource for ideas or as a departure point for further study and activity. Neither the student nor the teacher should be expected to use it in its entirety or in one specific sequence.

Current curriculum development theory places emphasis on the flexible usage of curriculum as it relates to teacher and student needs. The concept of a fixed curriculum which has been written by teachers is giving way to the idea of curriculum which suggests a variety of ways to achieve learning objectives.

What is the purpose of this learning? What is the anticipated outcome of the activity? These questions form the basis for curriculum development which is consonant with predetermined objectives. The student as well as the professional staff can be responsible for determining the curriculum. Consideration should be given to the idea of allowing students to formulate curriculum for themselves as an outgrowth of their own learning endeavors.

Child-centered curriculum takes precedence over subject curriculum. The starting point for curriculum building is the child's world and the end-result of a learning experience is progress in self understanding as well as an increase in academic ability.

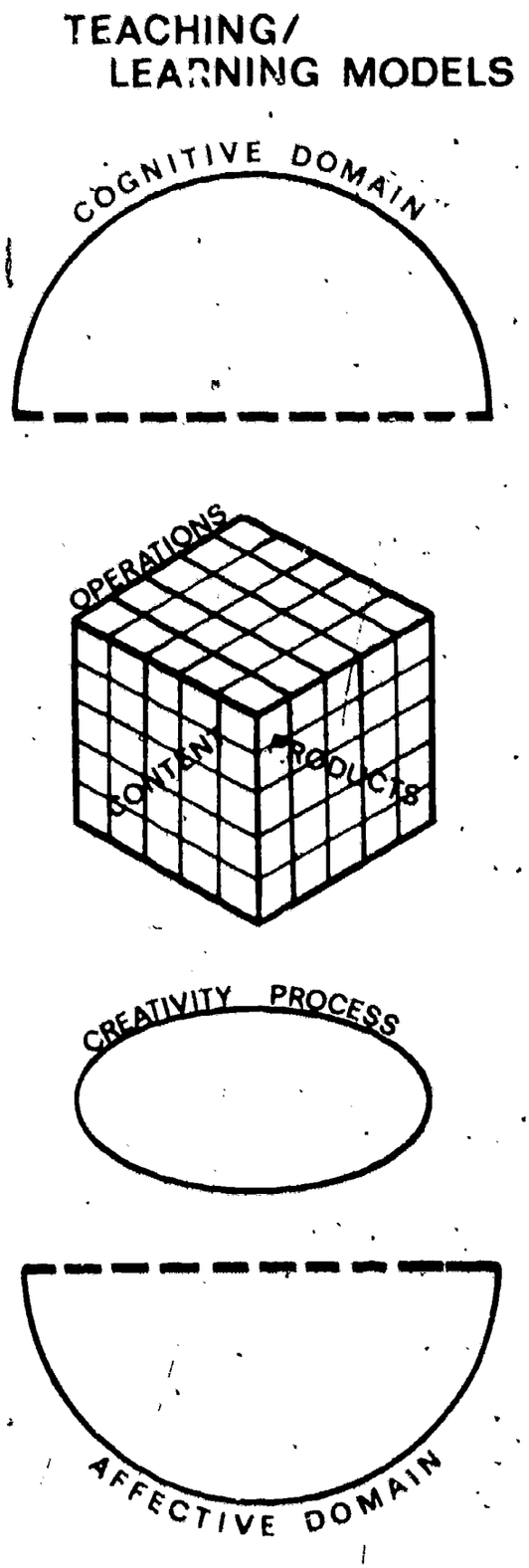


Teaching/Learning Models

Although the primary emphasis for educating the gifted and talented is to allow them to become independent learners, this does not lessen the importance of the teacher's role. The features of the teaching process change with regard to the gifted and talented in that the processes of learning and thinking are often a higher priority than the content of a subject. It becomes vital that the teacher know and use various teaching-learning models. As a teacher understands the basic tenets of the teaching-learning models, he is more able to interact comfortably and successfully with the gifted and talented students. The utilization of the models also enables the teacher to relinquish the traditional approach to learning and to deviate from the expected and known procedures of curriculum in order to satisfy and stimulate the gifted and talented in a differentiated manner.

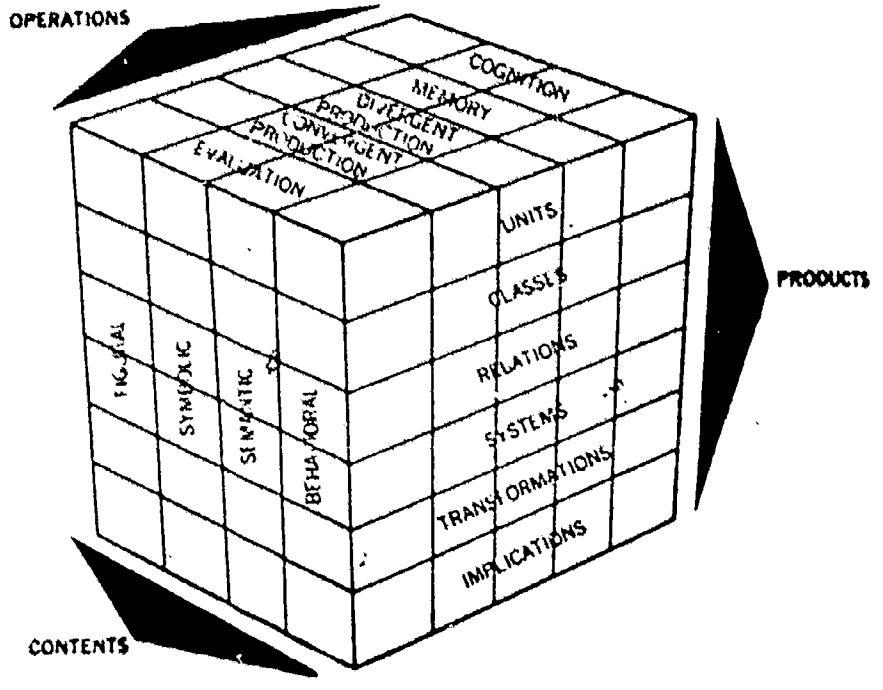
"How do you teach the gifted and talented?"

The teaching/learning models provide a structure which presents a scheme and elements for either developing or presenting a learning experience. The models should be utilized as tools for learning in much the same way as books and blackboards are considered tools. They are not intended to replace the teacher but to facilitate the teacher's ability to recognize what is needed for the teaching/learning process and how it can be achieved. No one model needs to be used to the exclusion of all others. The idea is to adapt, modify, and combine those elements from the models which best exemplify a means to reach the end result of working with the gifted and talented.



TEACHING/LEARNING MODEL

Guilford's
Structure of the Intellect



Purpose: This structure presents the various components and classification of the intellectual factors. It indicates that an ability is a combination of an operation or process, a content, and a product.

Implications	Applications
Analysis of teaching strategies	Individualizing instruction, classroom discussions, questioning, in-service training
Evaluation of student performance abilities	Developing strengths, correcting weakness, parent-teacher discussions, student placement, setting goals and objectives
Assigning of appropriate learning activities to the gifted	Emphasizing divergent and evaluative thinking operations
Applying to learning experiences	Differentiating the curriculum, developing curriculum

Products

Units--Items of information
Classes--Items of informatio
mon properties
Relations--Connections betwe
Systems--Organized or struct
of information
Transformations--Changes of
ing or known information
Implications--Extrapolation
form of expectancies, pre
suspected antecedents, co
quences

Operations:

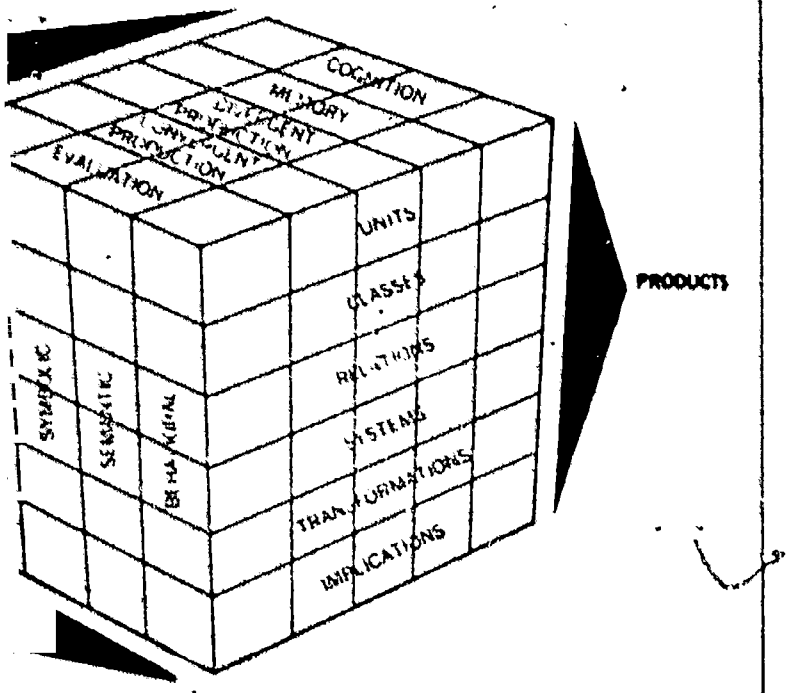
Cognition--Recognizing prob.
Acquiring knowle
Memory--Recalling facts
Convergent Production--Find
and/or correct answer
Divergent Production--Produ
unexpected response
Evaluation--Reaching decisi

Contents:

Figure content--Information
as perceived or as recal
Symbolic content--Informati
such as letters, numbers,
other "code" elements
Semantic content--Informati
meanings to which words c
Behavioral content--Informa
nonverbal, involved in hu

TEACHING /LEARNING MODEL

Guilford's
Structure of the Intellect



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eaching	Individualizing instruction, classroom discussions, questioning, in-service training
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Products

Units--Items of information having "thing" character
Classes--Items of information grouped for their common properties
Relations--Connections between units of information
Systems--Organized or structured aggregates of items of information
Transformations--Changes of various kinds in existing or known information or in its use
Implications--Extrapolations of information, in the form of expectancies, predictions, known or suspected antecedents, concommitants, or consequences

Operations:

Cognition--Recognizing problems, needs
Acquiring knowledge
Memory--Recalling facts
Convergent Production--Finding an anticipated and/or correct answer
Divergent Production--Producing an original, unexpected response
Evaluation--Reaching decisions; making judgements

Contents:

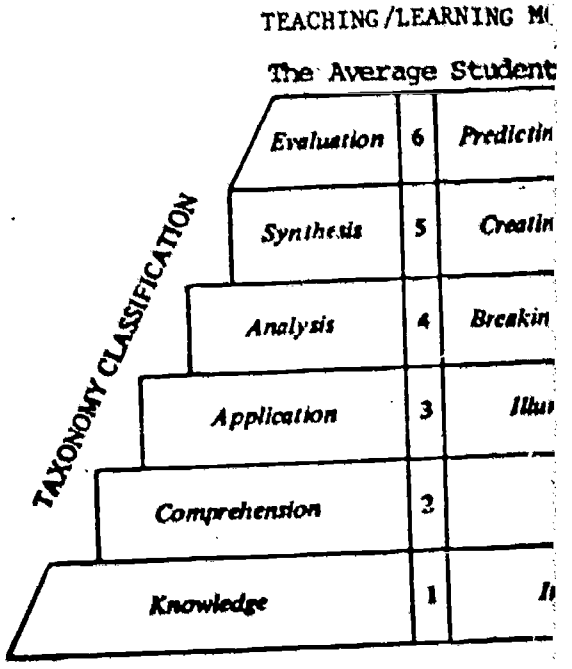
Figure content--Information in concrete forms, as perceived or as recalled in the form of images
Symbolic content--Information in form of signs, such as letters, numbers, musical notations, and other "code" elements
Semantic content--Information in the form of meanings to which words commonly become attached
Behavioral content--Information, essentially nonverbal, involved in human interactions (22).

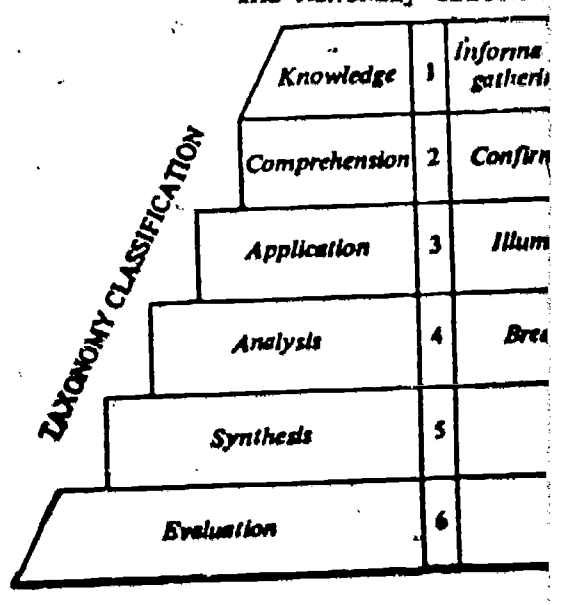
Variables Involved in Bloom's Taxonomy of the Cognitive Domain

Purpose: Presents a hierachy of learning which recognizes that different skills are required of different levels of thinking. Indicates a means of advancing students along a continuum of cognitive behavior.

Classroom Emphasis: Implication and application: The emphasis for using the taxonomy is on adapting it to curriculum and the teaching process to focus particular attention on the categories related to abstract concepts and creative and critical thinking.

Types of Learning	What Students Do	What Teachers Do
Mastery of subject matter (knowledge) (memory)	Responds, absorbs, remembers, rehearses, covers, recognizes	Directs, tells, leads, shows, delineates, enlarges, examines
Comprehension (cognition)	Explains, extends, demonstrates, translates, interprets	Demonstrates, listens, reflects, questions, compares, contrasts, examines
Application (convergent and divergent production)	Solves novel problems, demonstrates use of knowledge, constructs	Shows, facilitates, observes, criticizes
Analysis	Discusses, details, uncovers, lists, dissects	Probes, guides, observes, acts as a resource
Synthesis	Discusses, generalizes, relates, compares, contrasts, abstracts	Reflects, evaluates, extends, analyzes
Evaluation	Engages in commitment, judges, disputes	Accepts, lays bare to criteria, harmonizes (15).





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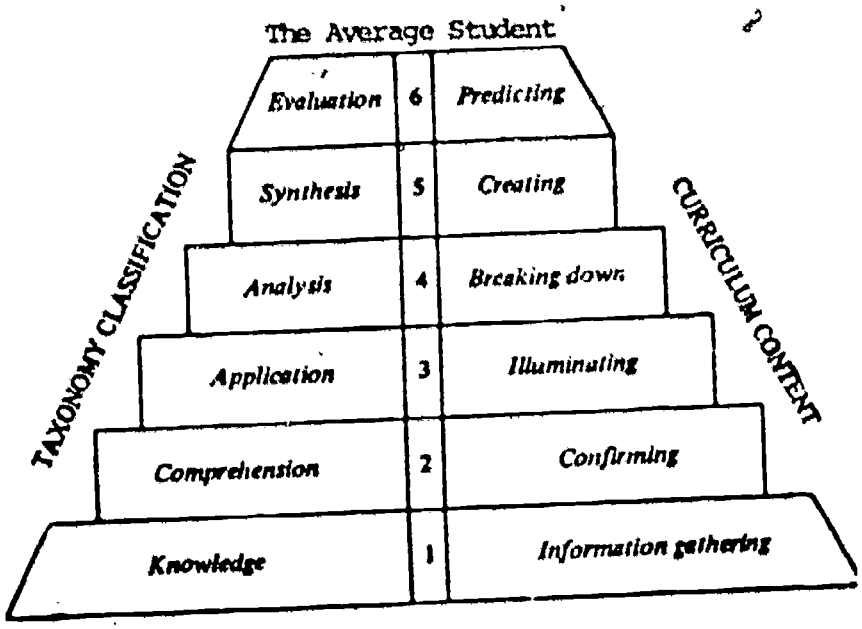
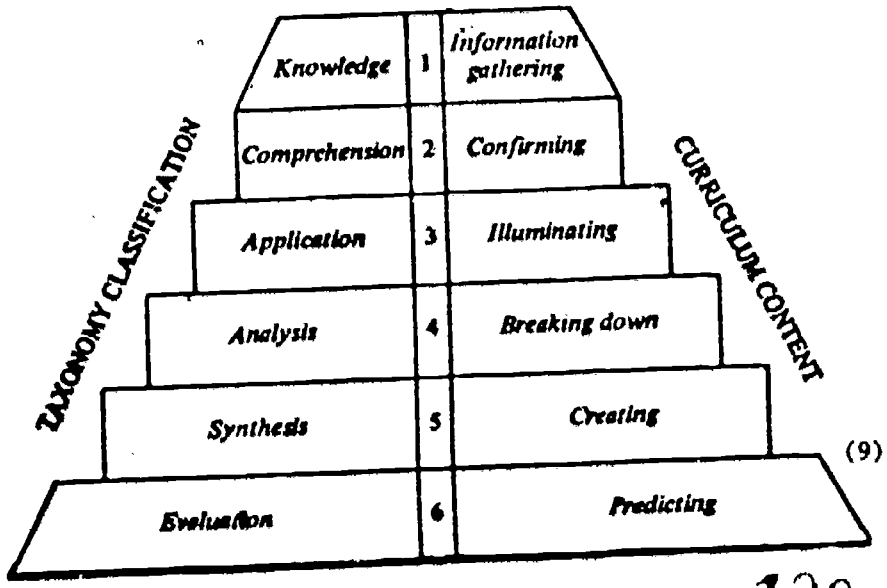
TEACHING/LEARNING MODELS

The Average Student



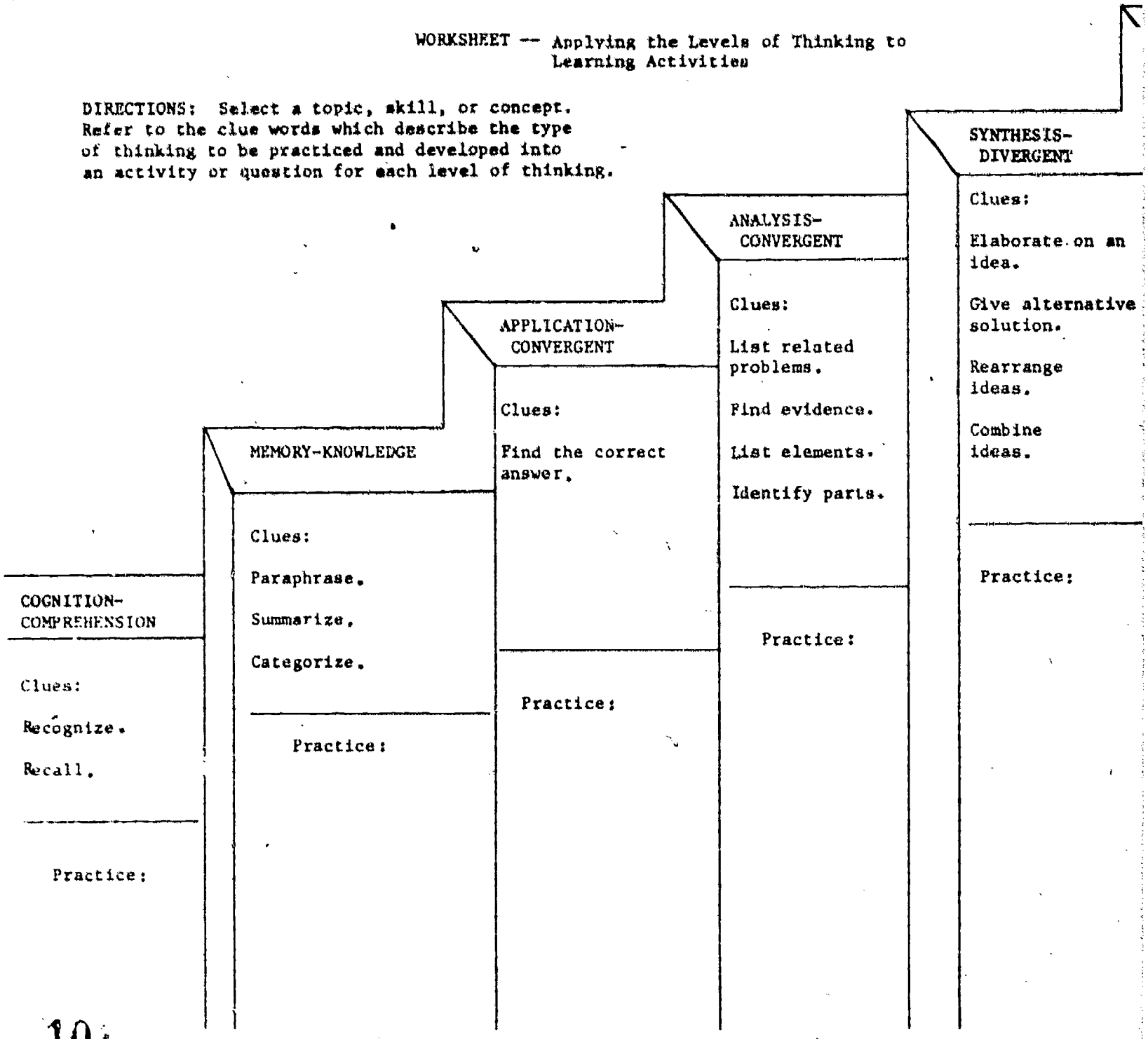
The Mentally Gifted Student



(9)

WORKSHEET -- Applying the Levels of Thinking to Learning Activities

DIRECTIONS: Select a topic, skill, or concept. Refer to the clue words which describe the type of thinking to be practiced and developed into an activity or question for each level of thinking.



WORKSHEET -- Applying the Levels of Thinking to Learning Activities

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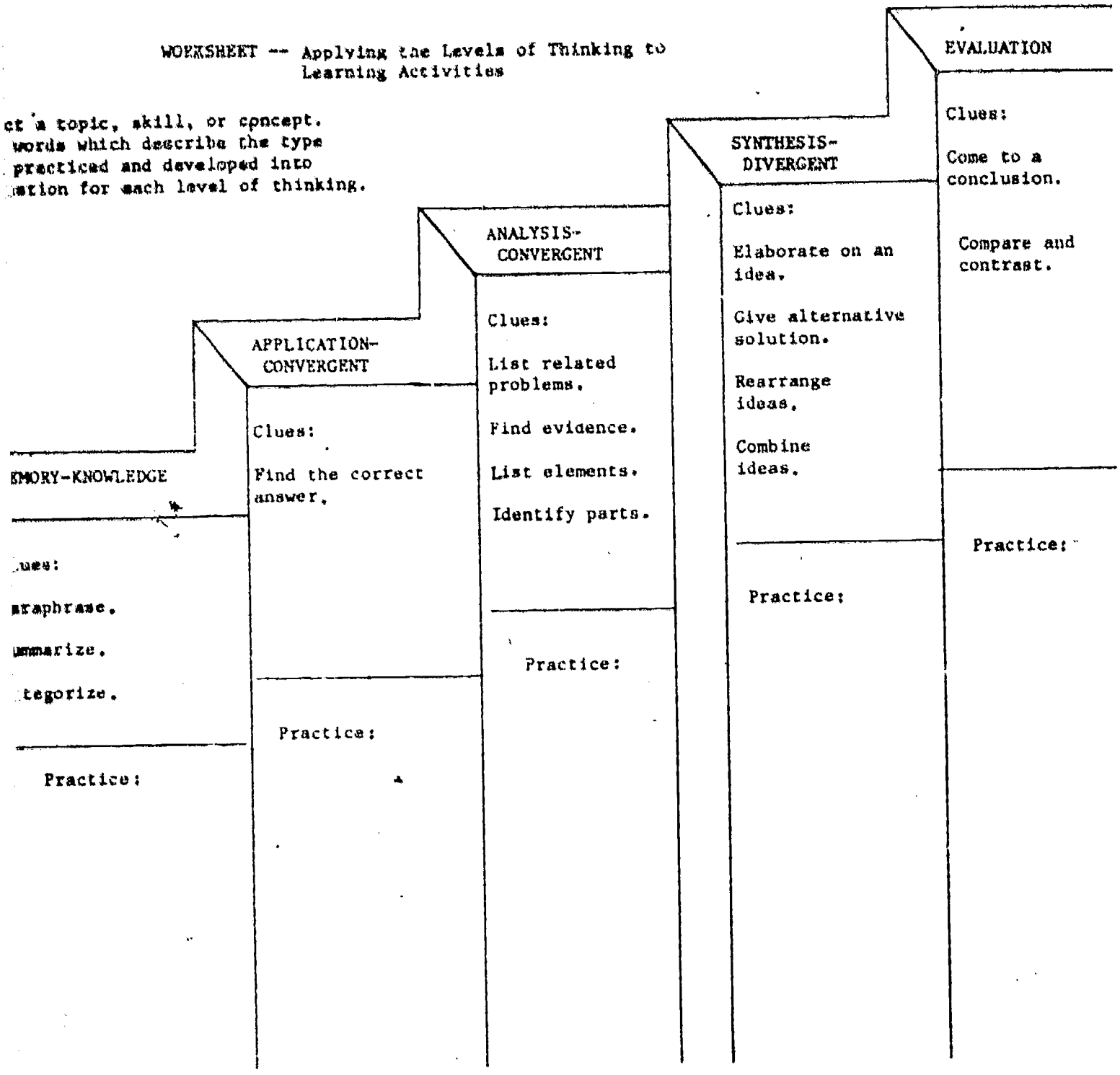
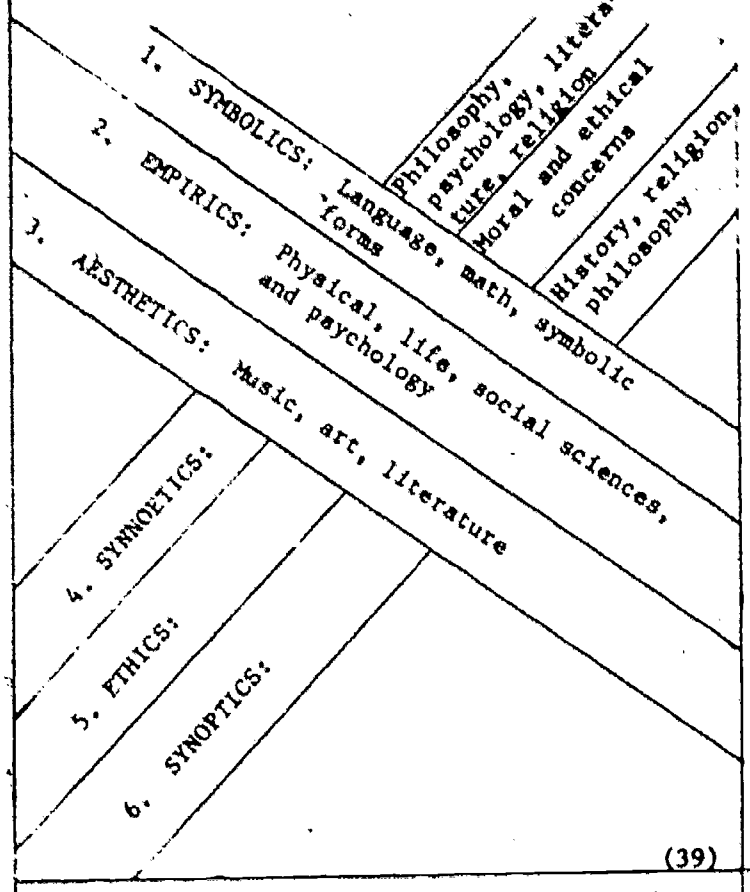


CATEGORIES OF DISCIPLINES



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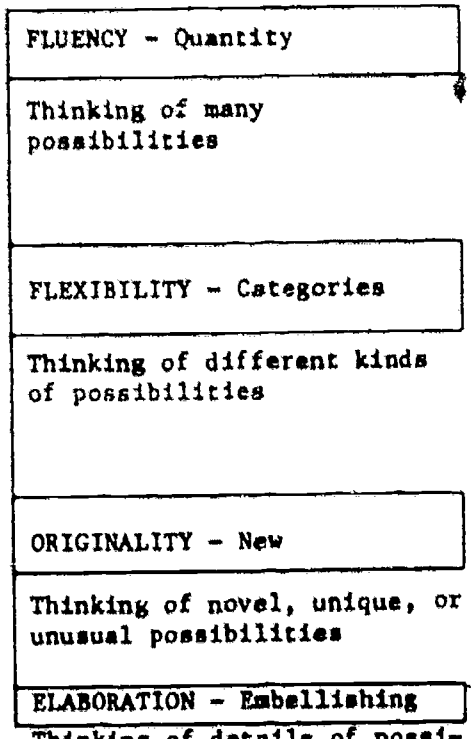
PURPOSE: Presents classes that give meaning and determine the interrelatedness of disciplines

Implications	Applications
Providing for the relationships of learning areas	Developing a comprehensive and integrated curriculum of learning activities

COMPONENTS OF CREATIVE THINKING



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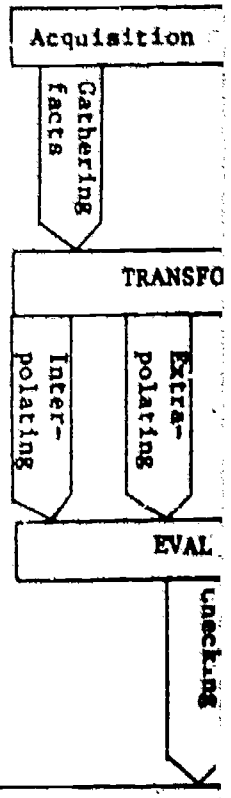
PURPOSE: Presents the elements which elicit creative responses

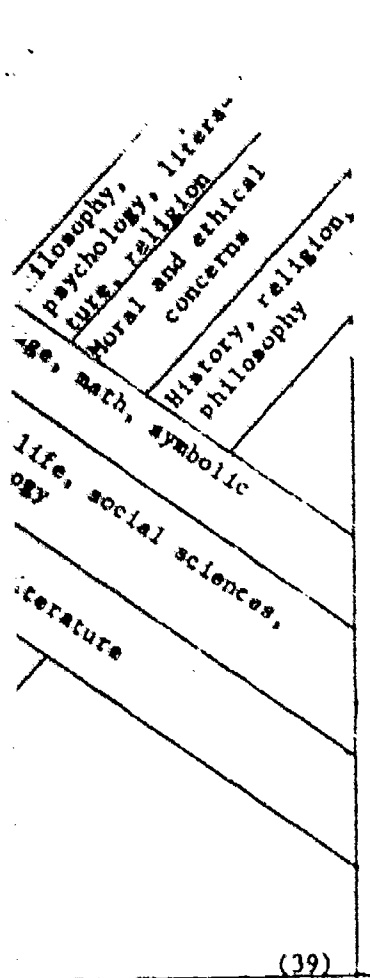
Implications	Applications
Providing for self-actualization of creative potential	Exercising the innate characteristics of the gifted and talented
Practicing creative thinking	Developing learning opportunities
Assessing individual needs	Providing teaching strategies

TEACHING/LEARNIN PROCESSES OF



PURPOSE: Presents for describing a what the student learn a given co or principle

Implications
Presenting and/or validating cognitive activity
Designing learning experiences



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that give meaning
he interrelatedness

COMPONENTS OF CREATIVE THINKING

FLUENCY - Quantity

Thinking of many possibilities

FLEXIBILITY - Categories

Thinking of different kinds of possibilities

ORIGINALITY - New

Thinking of novel, unique, or unusual possibilities

ELABORATION - Embellishing

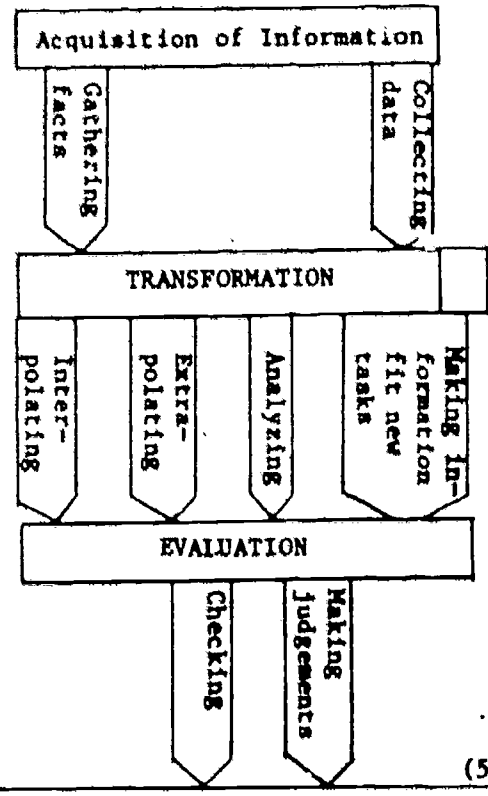
Thinking of details of possibilities

(22)

PURPOSE: Presents the elements which elicit creative responses

Applications	Implications	Applications
eveloping a comprehensive and integrated urriculum of learning ctivities	Providing for self-actualization of creative potential	Exercising the innate characteristics of the gifted and talented
	Practicing creative thinking	Developing learning opportunities
	Assessing individual needs	Providing teaching strategies

TEACHING/LEARNING MODEL
PROCESSES OF LEARNING



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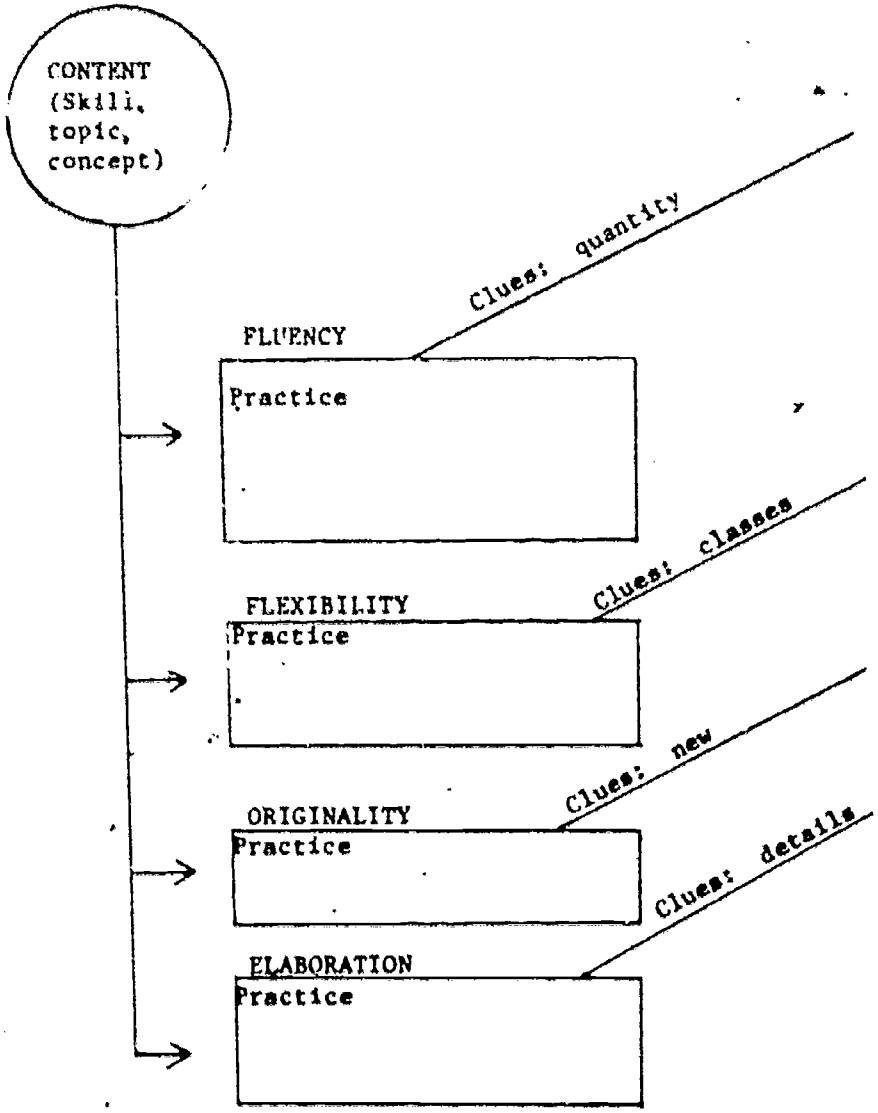
PURPOSE: Presents a basic sequence for describing and providing for what the student must do in order to learn a given concept, idea, theory, or principle

Implications	Applications
Presenting and/or validating cognitive activity	Organizing for a learning experience
Designing learning experiences	Developing curriculum
	Guiding independent study

WORKSHEET--Applying the Creative Process

DIRECTIONS: Identify the content, skill, topic, concept, or principle around which the creative process will be structured. Develop an activity with this content for each of the components of the creative thinking process. Use the clues to assist in defining each component.



DIRECTIONS: Identify the content area, the content with learning activities acco various levels of thinking. Extend each developing a creative thinking activity f category of the creative processes.

LEVEL OF THINKING	FLUENCY	FLEXIBILITY
Comprehension		
Application		
Analysis		
Synthesis		
Evaluation		

WORKSHEET--Applying the Creative Process

ify the content, skill, topic, concept,
which the creative process will be
op an activity with this content for
ents of the creative thinking process.
ssist in defining each component.

Clues: quantity

NCY

ice

Clues: classes

IBILITY

ice

Clues: new

INALITY

ice

Clues: details

ORATION

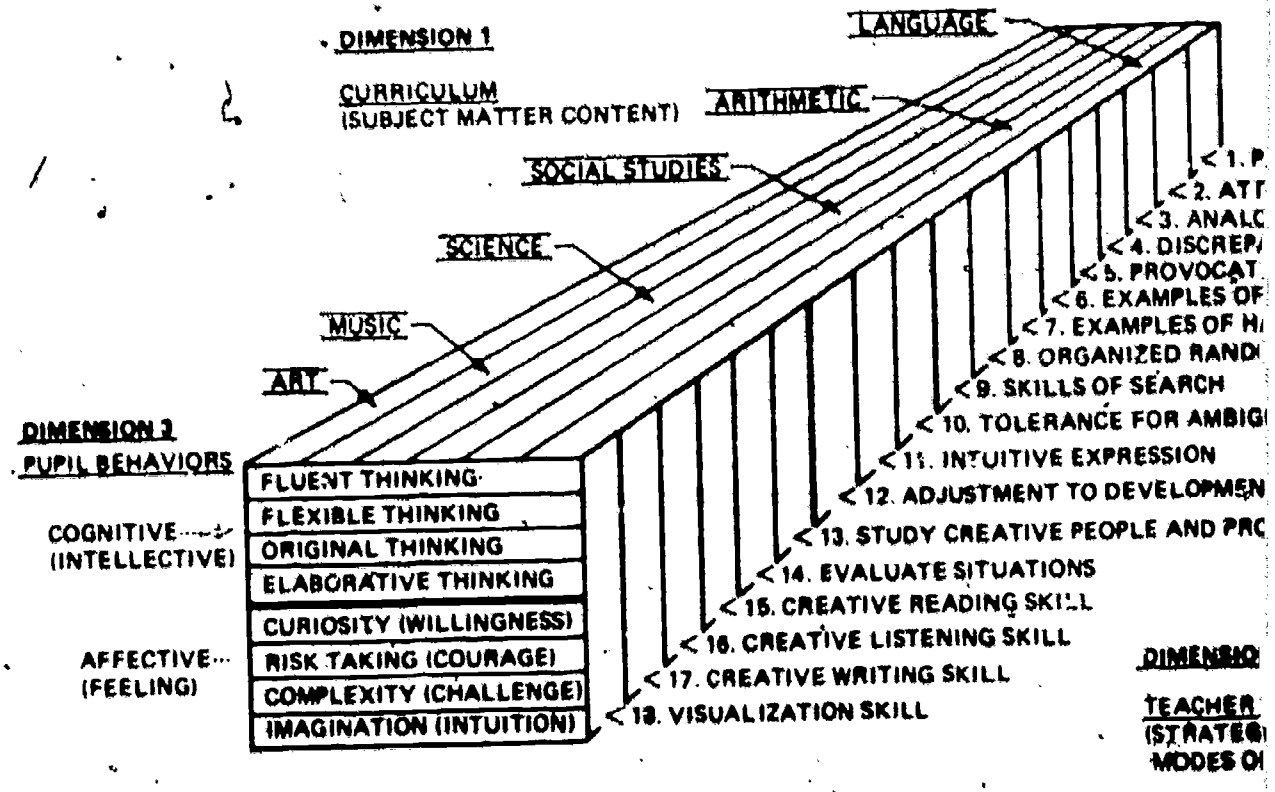
ice

DIRECTIONS: Identify the content area. Differentiate the content with learning activities according to the various levels of thinking. Extend each activity by developing a creative thinking activity for it in each category of the creative processes.

LEVEL OF THINKING	FLUENCY →	FLEXIBILITY →	ORIGINALITY →	ELABORATION
Comprehension				
Application				
Analysis				
Synthesis				
Evaluation				

A Model for Implementing Cognitive-Affective Behaviors in the Classroom

D1=D2→D3

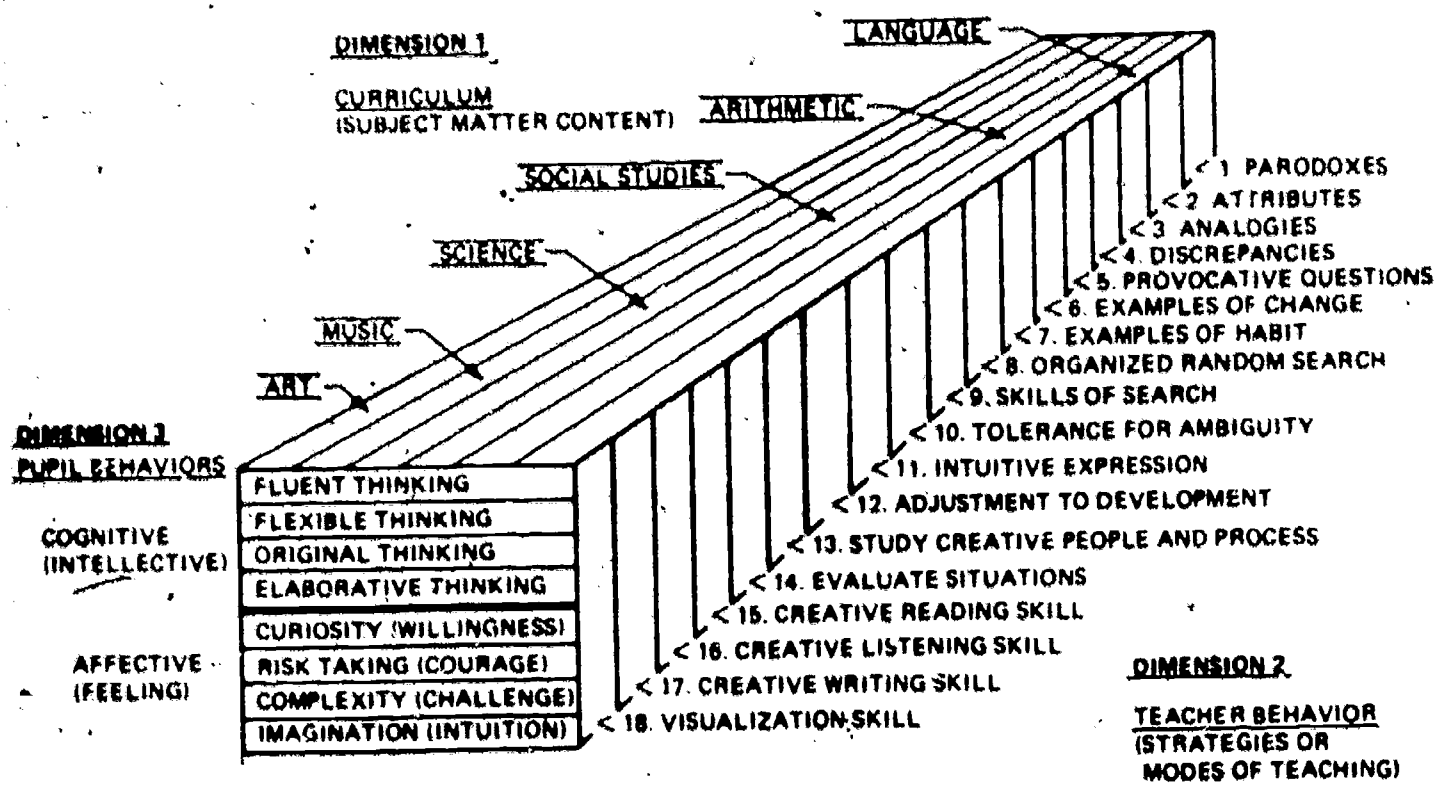


Purpose: Presents the dimensions of content-teaching processes and student behavior to emph possibilities within each dimension. Provides a vehicle for intersecting a given subject ar strategy. Extends the breadth of cognitive learning (53).

IMPLICATIONS	APPLICATION
Realizing the scope of thinking processes	Extending or developing curricu

A Model for Implementing Cognitive-Affective Behaviors in the Classroom

D1=D2→D3

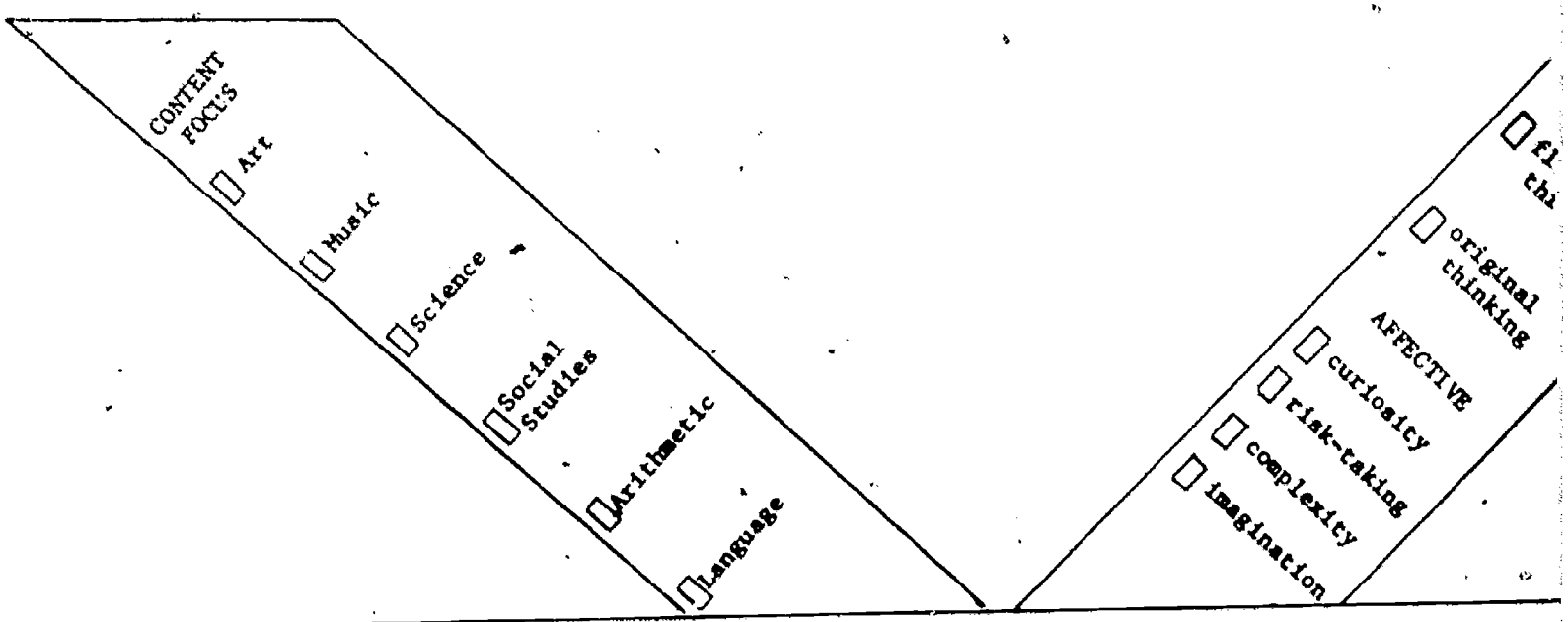


Presents the dimensions of content-teaching processes and student behavior to emphasize the strands of ...ies within each dimension. Provides a vehicle for intersecting a given subject area with any teaching ... Extends the breadth of cognitive learning (53).

IMPLICATIONS	APPLICATION
...ing the scope of thinking processes	Extending or developing curriculum

WORKSHEET -- Applying Teaching Strategies

DIRECTIONS: Check the area of content around which the teaching and learning process will be built. cognitive and affective behaviors that will be reinforced through the teaching and learning process. strategy which will be employed in order to teach or learn the content and reinforce the anticipate behavior. Write an activity or question for the strategy selected by using the clues or definition to explain it.



Strategy Examples	Clues (Definitions)	Practice
1. Paradoxes	1. Something in opposition to common ideas	1.
2. Attributes	2. Listing the qualities of something	2.
3. Analogies	3. Distinguishing similarities	3.
4. Discrepancies	4. Locating gaps in information	4.
5. Provocative questions	5. Discovering new meanings	5.
6. Examples of change	6. Making alterations	6.
7. Examples of habit	7. Locating habit-bound reactions	7.
8. Organized random search	8. Using familiar to lead to a new structure	8.
9. Skills of research	9. Utilizing historical research techniques	9.
10. Tolerance for ambiguity	10. Working in open-ended situations	10.
11. Intuitive expression	11. Using own hunches about information	11.

WORKSHEET — Applying Teaching Strategies

the area of content around which the teaching and learning process will be built. Check the
ctive behaviors that will be reinforced through the teaching and learning process. Check the
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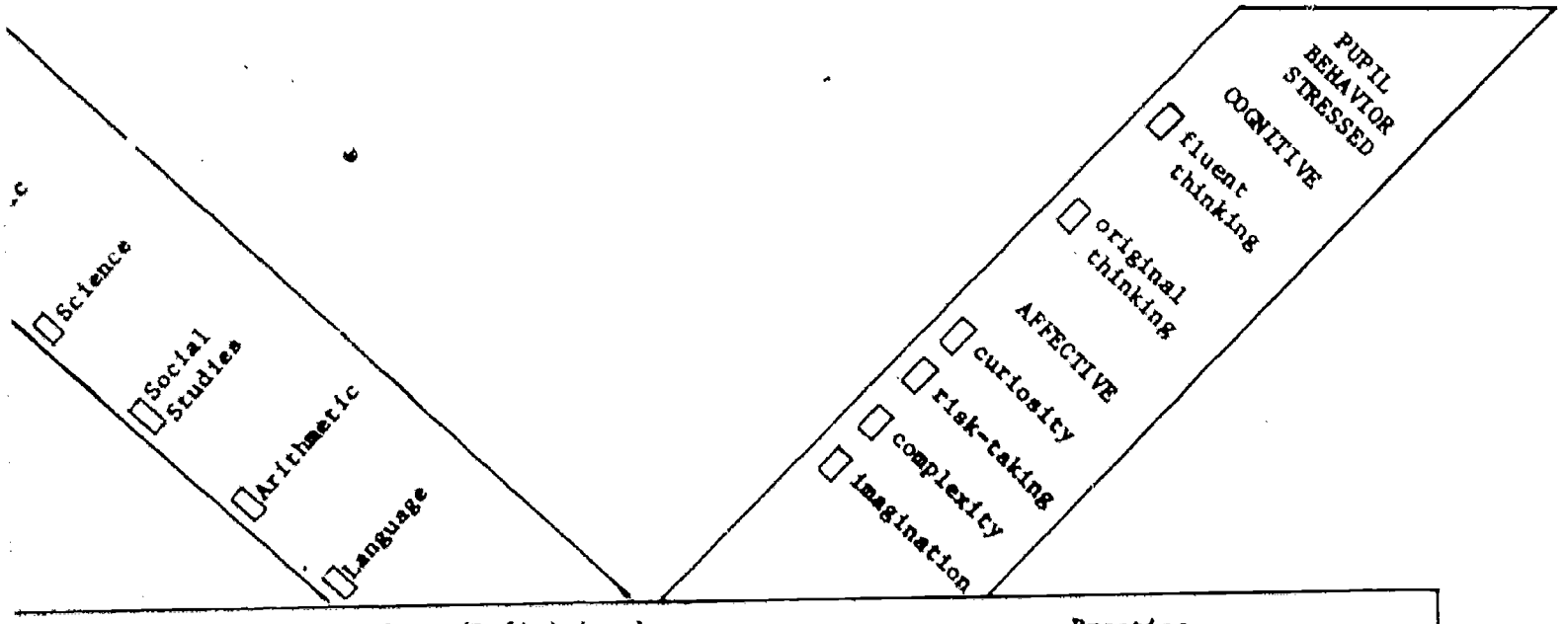
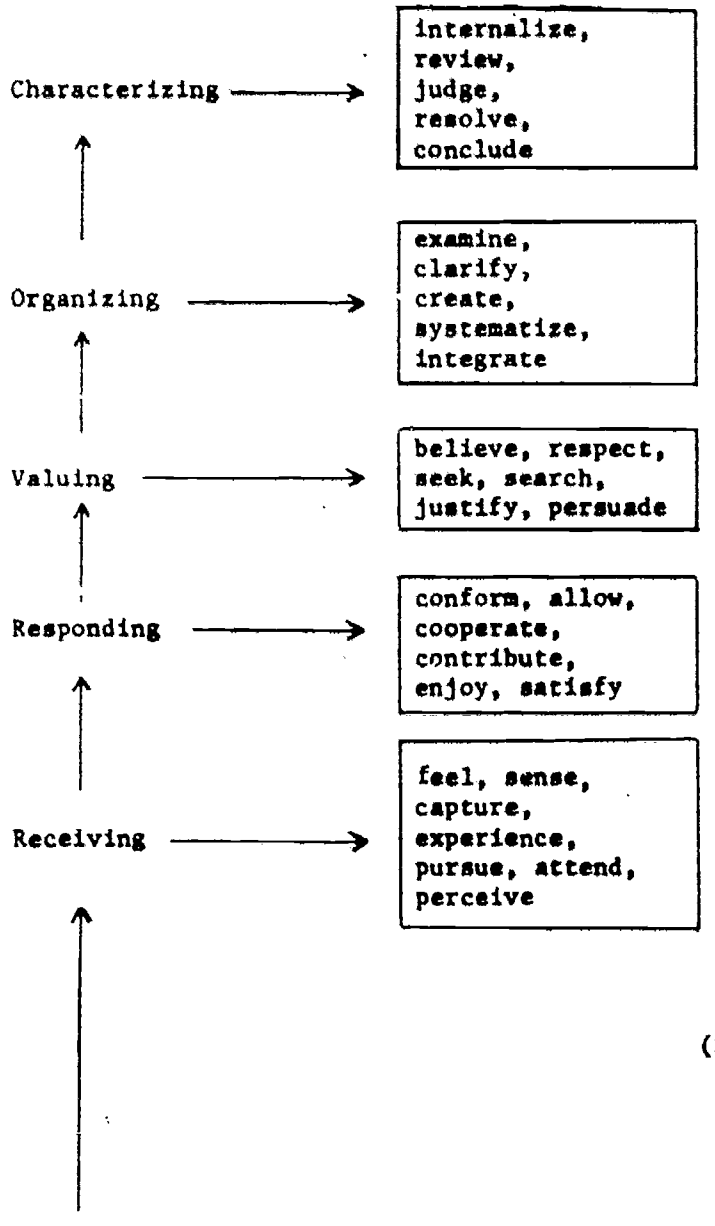


les	Clues (Definitions)	Practice
	1. Something in opposition to common ideas	1. _____
	2. Listing the qualities of something	2. _____
	3. Distinguishing similarities	3. _____
	4. Locating gaps in information	4. _____
questions	5. Discovering new meanings	5. _____
change	6. Making alterations	6. _____
habit	7. Locating habit-bound reactions	7. _____
dom search	8. Using familiar to lead to a new structure	8. _____
earch	9. Utilizing historical research techniques	9. _____
ambiguity	10. Working in open-ended situations	10. _____
pression	11. Using own hunches about information	11. _____

Taxonomy of the Affective Domain



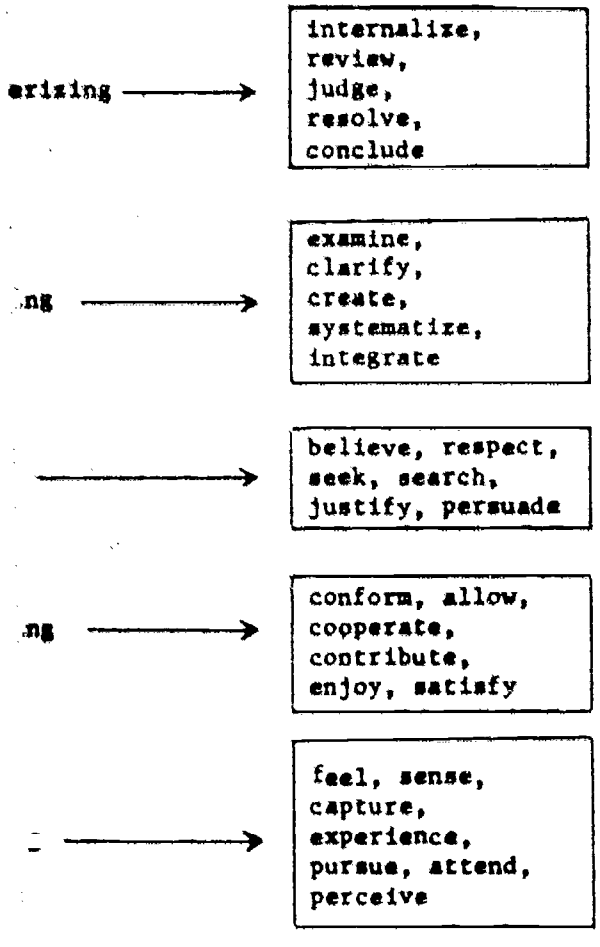
(28)

Purpose

Presents a system to classify emotio
appreciation into a hierachy which s
fies each stage of the affective lea

Implications	App
Formalizing the teaching and learning of feeling and valuing	Providing various l developme
Integrating discovery of the self with cognitive learning	Developin stresses learning knowing
Differentiating higher affective skills and reactions	Stressing valuing, character and talen

the Affective Domain



(28)

Purpose

Presents a system to classify emotions, acceptance, and appreciation into a hierachy which sequentially identifies each stage of the affective learning process

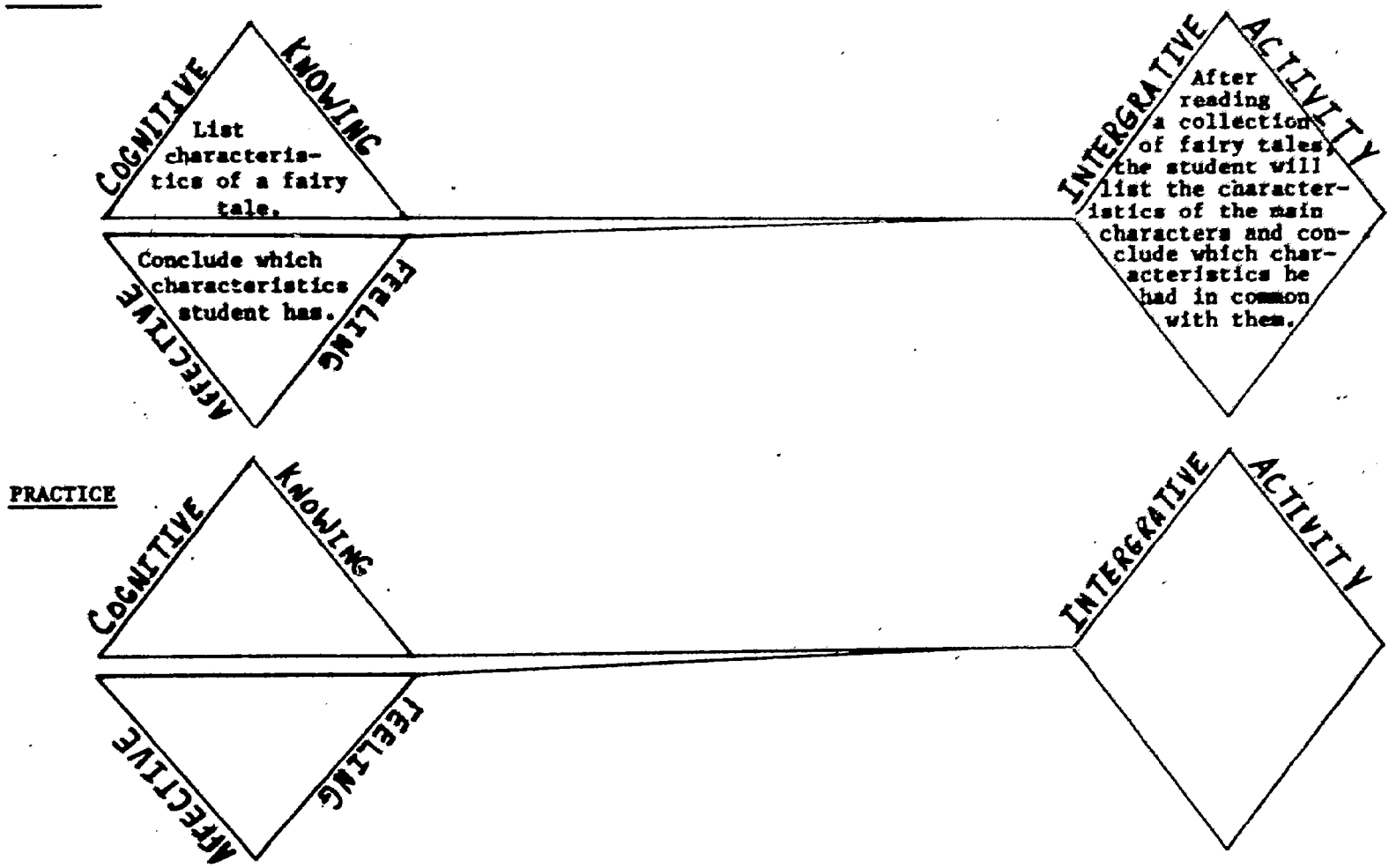
Implications	Applications
Formalizing the teaching and learning of feeling and valuing	Providing activities at the various levels of affective development
Integrating discovery of the self with cognitive learning	Developing curriculum which stresses the concomitant learning of feeling with knowing
Differentiating higher affective skills and reactions	Stressing the areas of valuing, organizing, and characterizing for the gifted and talented

ERIC

WORKSHEET--INTEGRATING COGNITIVE AND AFFECTIVE LEARNING PROCESSES

DIRECTIONS: Identify the focus of cognitive learning to be taught in terms of content and process. Identify the focus of affective learning to be experienced by the student. Integrate the cognitive activity and the affective activity into a total learning experience for the student.

EXAMPLE:



PRACTICE

The gifted pupil

Highly advanced achievement; advanced general language skills

Multiple, specialized, unique interests

Intense long-range concentration on topic of interest

Pleasure in learning

Curiosity, interest in the unusual

Independence in learning

Intense, long-range concentration on a given topic

Interest in application of concepts

Ability to conceptualize, develop relationships

Independence

Idealism

AND

His curriculum

Open access to content; grade-level materials often irrelevant, at any age

Need for freedom to learn apart from usual curriculum (Special interests may enhance class learnings in a given curriculum field.)

Specialization for indeterminate period, independent of age

Interesting activities not seen as "work"

Interest which may produce choice of topic ordinarily seen as irrelevant, but legitimate to pupil

Individual pursuits which may produce more satisfaction than a committee-based task

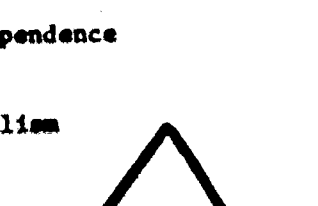
Anticipated schedules which may need alteration for student needs

Use of learning in analysis and debate on societal problems and issues

Key questions and issues as focus

Teacher as facilitator of access to needed learning opportunities; contacts spaced and used for communication and challenge rather than for direct supervision

High interest in search for truth; incisive examination of issues (33).



PRINCIPLES OF CURRICULUM

The curriculum which mobilizes the student into satisfying intellectual and personal action is one which translates the basic principles of learning into practical activities for learning. Each principle represents a component to be included in the development of curriculum for the gifted and talented.

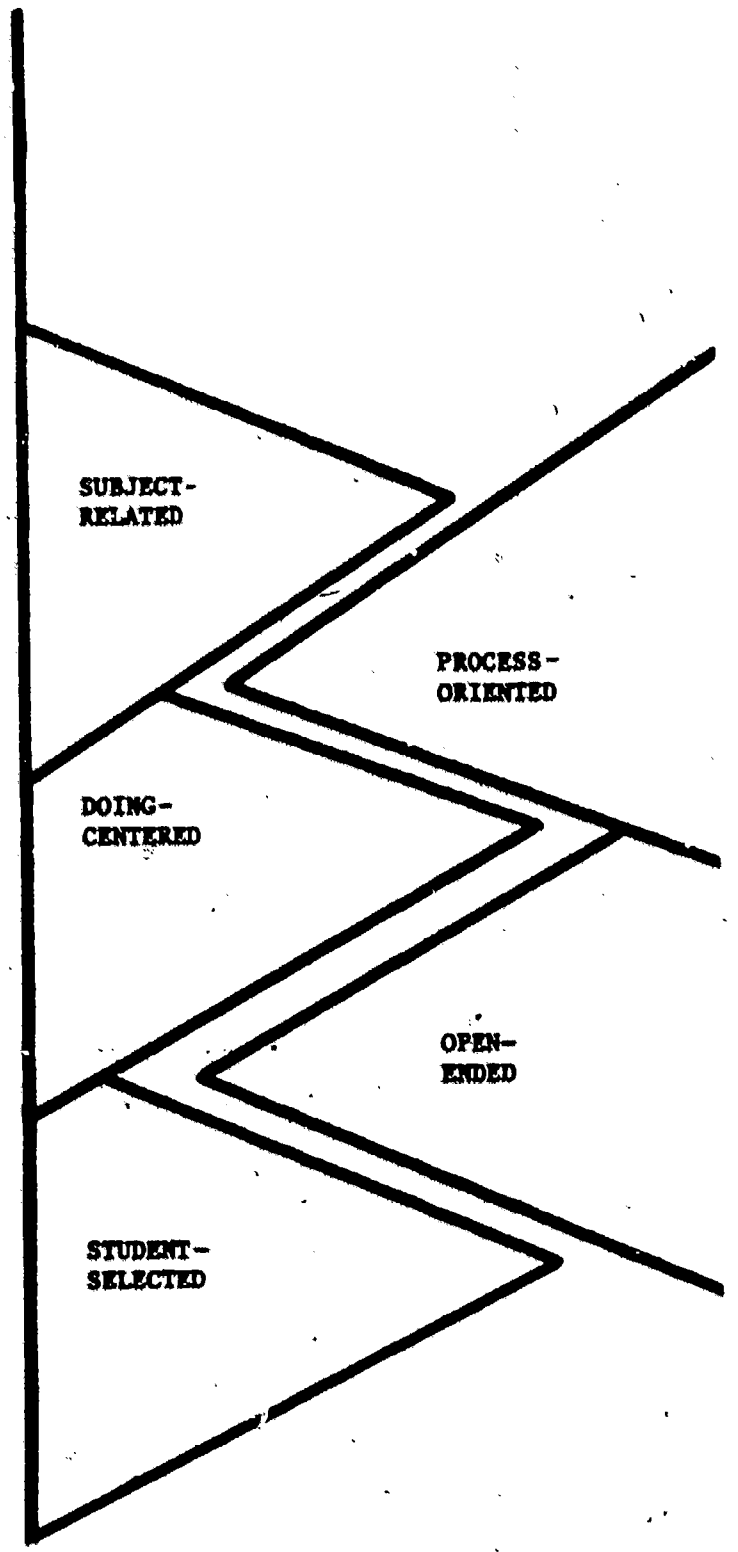
Subject-Related
Learning activities must be related to something from which thinking and doing can be initiated.
Example: Compare the parts of any insect to the parts of any vehicle.
Note: The subject of insects and vehicles stimulates the thinking skill of comparing.

Process-Oriented
Learning activities should emphasize the development of thinking skills and processes rather than the mere acquisition of information.
Example: Compare the parts of any insect to the parts of any vehicle.
Note: The process of comparing is stressed as a skill of thinking.

Doing-Centered
Learning activities should focus on tasks which produce active involvement from the learner.
Example: Compare the parts of any insect to the parts of any vehicle by making a diagram or model.
Note: Making a diagram or model stimulates learning through doing.

Open-Ended Application
Learning activities should allow for varied and personalized responses.
Example: Compare the parts of any insect to the parts of any vehicle.
Note: There is no stipulation as to how the comparing is to be done or the points that are to be included. In this way, the thinking can be transferred and applied to other learning experiences.

Student-Selected
Learning activities should provide options for individual differences in need, preference, and capabilities. Example: Compare the parts of any insect to the parts of any vehicle by making a diagram or model.
Note: The lack of specifications by which to compare the insect or vehicle and the type of materials to use allows for individual diffierences and selection.



ELEMENTS OF CURRICULUM

The curriculum is a product of integrating content with process. The linking of content with process generates a learning activity.

Content refers to the body of knowledge which is to be presented to the student. Emphasis is placed on the assimilation of concepts and generalizations within the body of knowledge rather than on the specific facts of the subject. The intrarelationships of information within a content area and the interrelationships between disciplines should be reinforced in the development of curriculum.

The content can be either the means for learning or the end result of a learning experience. As the means for learning, the content becomes the vehicle for the student to acquire and/or develop specific skills. As the end result of learning, the understanding and absorption of content becomes the prime objective for the learning experience.

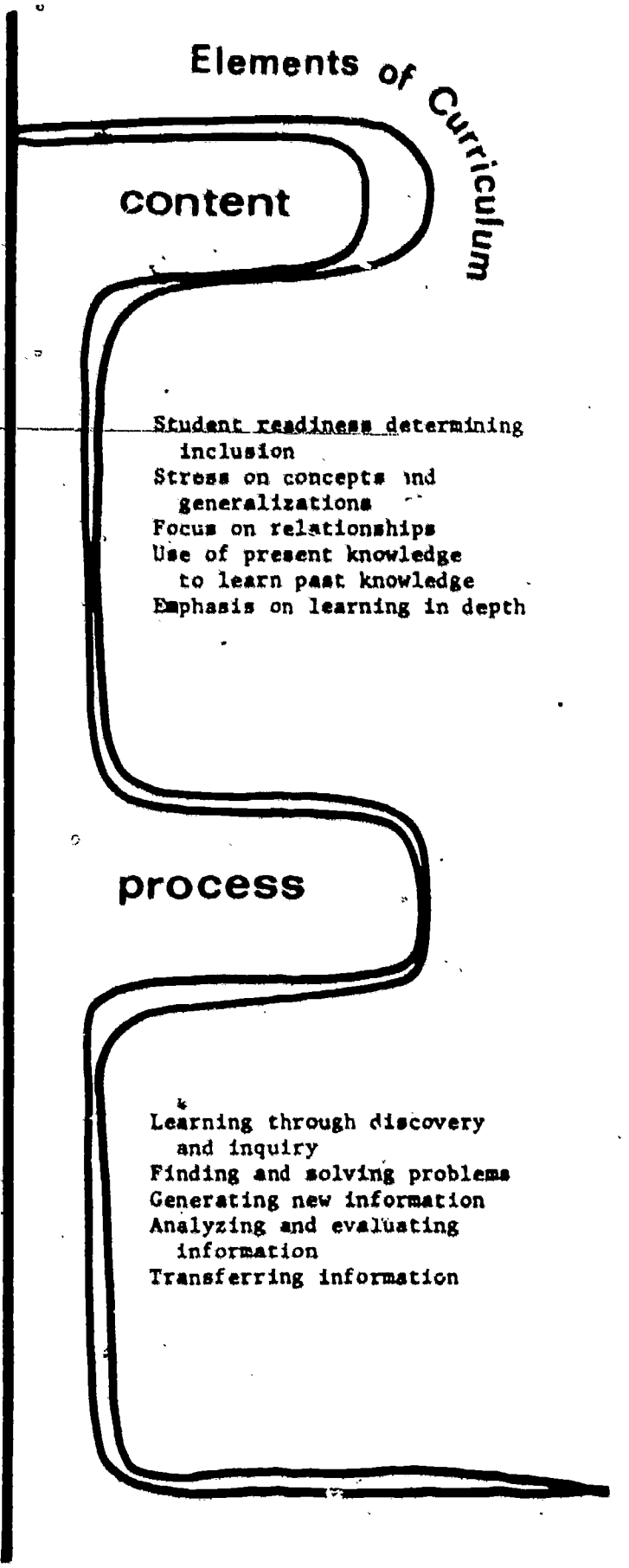
Process refers to the methods of thinking which are emphasized. Thinking skills can be classified according to the teaching/learning strategies of problem solving, creativity, inquiry, and higher levels of cognitive operations. Each strategy incorporates specific skills and operations which can be taught and practiced. However, they cannot be isolated in application from content.

Inquiry
- -observing
- -experimenting
- -criticizing
- -evaluating

Creativity
- -producing many responses
- -producing varied responses
- -producing new or original responses
- -elaborating on a response

Problem Solving
- -defining the problem
- -locating evidence
- -hypothesizing
- -validating
- -evaluating

Higher Cognitive Operations
- -analyzing
- -synthesizing
- -evaluating



Verbs for Curriculum Development

Explanation: These verbs, randomly arranged beside the teaching/learning models, are representative o the processes exemplified by the corresponding teaching/learning model.

IDENTIFICATION	PROCESSES			
MODELS	VERB DELINEATION			
Taxonomy Knowledge Comprehension Application Analysis Synthesis Evaluation	explain show list observe demonstrate uncover recognize discover experiment	organize group collect apply summarize order classify model construct relate code	take apart fill in analyze take away put together combine	imagine suppose compare/ contrast add to predict assume translate extend hypothesize design
Creativity fluency flexibility originality elaboration	redesign rearrange maximize, minimize symbolize project combine		improve rename describe expand predict	
Problem Solving problem identification research hypothesizing validation evaluation	define predict search relate		fill in group describe	

Verbs for Curriculum Development

hese verbs, randomly arranged beside the teaching/learning models, are representative of he processes exemplified by the corresponding teaching/learning model.

ION	PROCESSES				
	VERB DELINEATION				
'edge :ehension ication 'sis esis uation	explain show list observe demonstrate uncover recognize discover experiment	organize group collect apply summarize order classify model construct relate code	take apart fill in analyze take away put together combine	imagine suppose compare/ contrast add to predict assume translate extend hypothesize design	interpret judge justify criticize solve decide (which...)
ncy .bility :nality oration	redesign rearrange maximize, minimize symbolize project combine		improve rename describe expand predict		
ring :em identification arch :hesizing :ation uation	define predict search relate		fill in group describe		

WORKSHEET -- A FORMULA FOR DEVELOPING LEARNING ACTIVITIES

Introduction: Instructional materials which stress the use of verbs that characterize the higher operations are most apt to be appropriate for the gifted and talented. Included verbs are: to compare, to design, to analyze, to combine (to name but a few).

Formula:

method of input: thinking process	+	content	+	mode of expression or application	=	Lear acti

Example:

method of input: after collecting and studying bones	+	by making a model using bones from various sources	=	Des skel for usin you for
design a new	+	animal skeletal system		

Instructions:

Describe Method of Input	Identify Process To Be Taught or Practiced	Delimit Concepts and Generalizations from Subject Area To Be Stressed	Apply the Form Create Learning
			——— + ———
			——— + ———
			——— + ———

ERIC

WORKSHEET — A FORMULA FOR DEVELOPING LEARNING ACTIVITIES

ional materials which stress the use of verbs that characterize the higher levels of cognitive
s are most apt to be appropriate for the gifted and talented. Included on the list of such
s: to compare, to design, to analyze, to combine (to name but a few).

method of input						
nking cess	+	content	+	mode of expression or application	=	Learning activity
er collecting and dying bones			+	by making a model using bones from various sources	=	Design a new skeletal system for an animal using the bones you've collected for your study.
ign ew	+	animal skeletal system				

entify Process Be Taught or acticed	Delimit Concepts and Generalizations from Subject Area To Be Stressed	Apply the Formula To Create Learning Activities
		____ + ____ = ☐ ____ + ____ = ☐ ____ + ____ = ☐

Curriculum Development Using Grids

EXPERIENCE
PROCESSES

This section identifies the processes to be learned. These are expressed in verb form; they illustrate thinking/learning models or strategies.

EXPOSURE
CONTENT

This section identifies and delineates concepts to be learned within a given subject area. The content can be expressed in either question or phrase form.

man's interdependence on man	Apply	Analyze	Design	Predict	Criticize	
						Make a diagram.
						Create a game.
				Example: Write an editorial to predict the way man will be dependent on man in settling a society on the moon.		Write an editorial.
						Teach a lesson.

The purpose of the grid is to provide a vehicle for curriculum development either to be used by the teacher or student. An intersection is made by combining content with process with product in order to formulate a learning activity to fill in one section of the grid. A single concept may be extended by developing it horizontally with each process and a varying product. Various concepts can also be structured into activities in a scattered pattern within the grid by matching a concept to the process selected to correlate best the objective to the teacher.

EXPRESSION
PRODUCTS

This section represents the products which illustrate the learning that has taken place.

ERIC

WORKSHEET--CURRICULUM GRID (with Processes of Taxonomy Filled in)

EXPERIENCE

EXPOSURE Subject Concepts	Process: understand	use	show parts	create	judge

EXPRESSION

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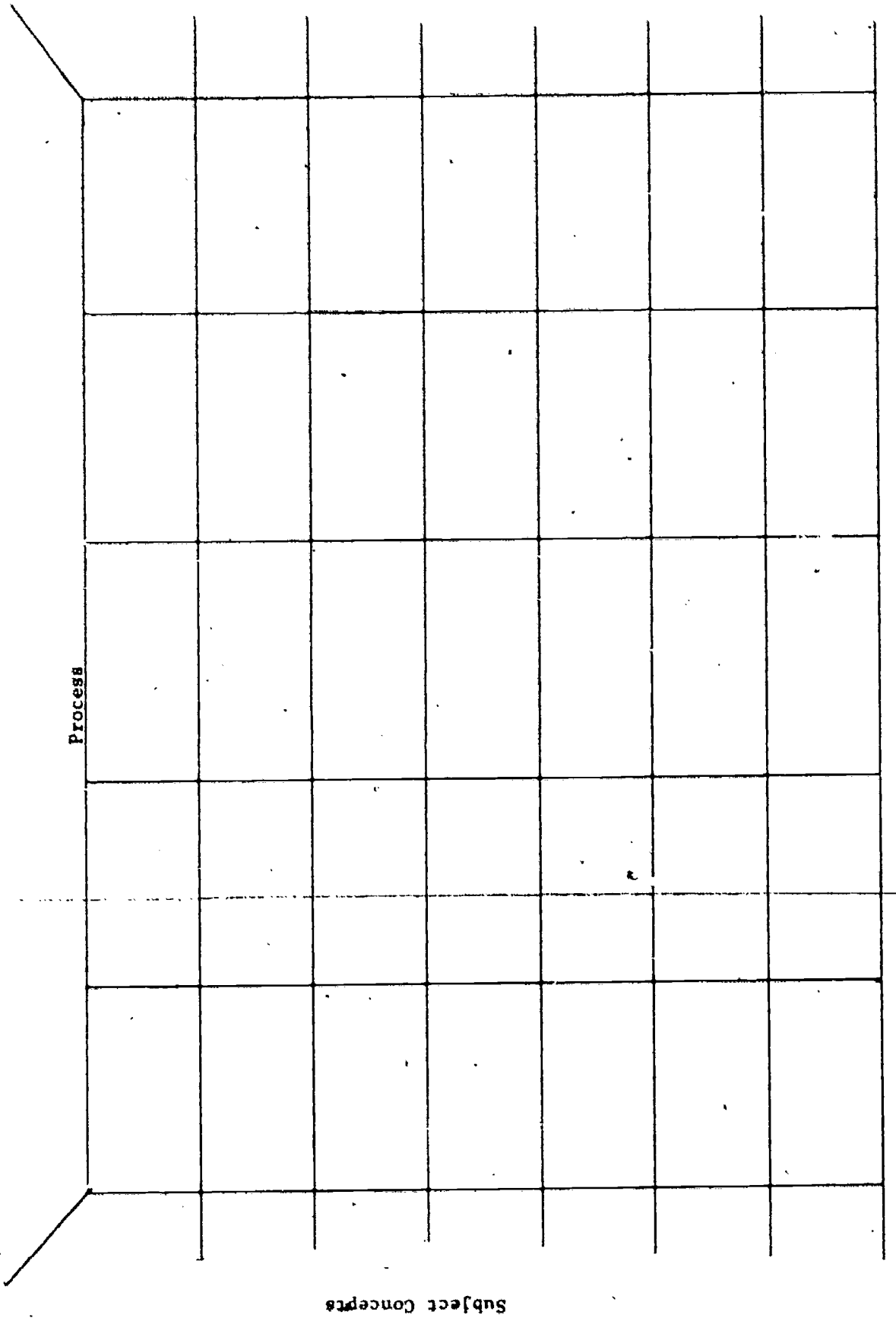
WORKSHEET—CURRICULUM GRID (All Aspects of the Grid Must Be Defined.)

EXPERIENCE

Process

EXPRESSION



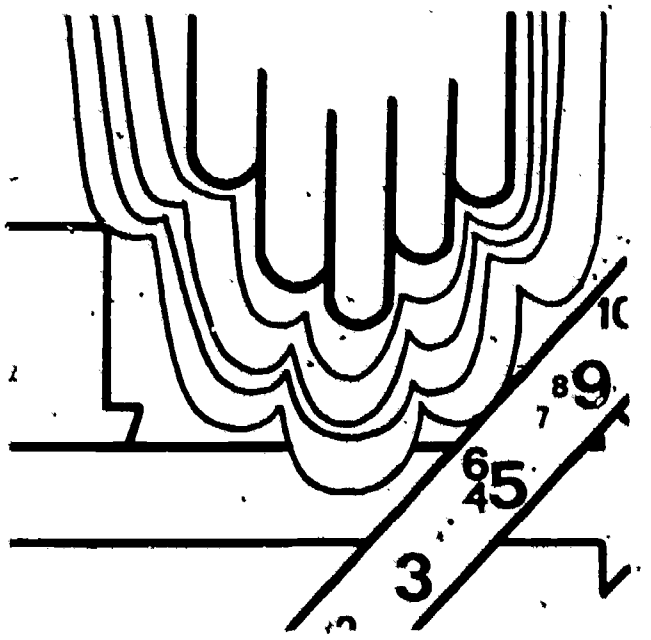
EXPOSURE

Subject Concepts

123

DIFFERENTIATING CURRICULUM FOR THE GIFTED AND TALENTED

Curriculum for the gifted and talented can only be marked as such if it encompasses elements which distinguish it from being suitable for the education of all children. Curriculum for gifted students must be congruent with the characteristics that identify them as a distinct population. The answer to the question of why a student is gifted or talented is also the answer to the question of what type of curricular provisions should be developed for this child.



Differentiation of curricular activities for the gifted and talented relies on the elaboration of certain variables: procedures for presenting learning opportunities, nature of the input, and expectancies for learning outcomes.

DIFFERENTIATING LEARNING WITHIN THE REGULAR CURRICULUM

Procedures for Presenting Learning Opportunities

Exposure – Students are exposed to experiences, materials, and information which are outside the bounds of the regular curriculum, do not match age/grade expectancies, and introduce something new or unusual.

Extension – Students are afforded opportunities to elaborate on the regular curriculum through additional allocation of working time, materials, and experiences, and/or further self-initiated or related study.

Development – Students are provided with instruction which focuses on thorough or new explanation of a concept or a skill which is part of a general learning activity within the regular curriculum.

DIFFERENTIATING LEARNING AS A SEPARATE CURRICULUM

Type of Input

Accelerated or advanced content
Higher degree of complexity of content
Introduction of content beyond the prescribed curriculum
Student-selected content according to interest
Working with the abstract concepts in a content area
Level of resources used
Type of resources available

Expectancies for Learning

Appropriating a longer time for learning
Creating or generating something new (information, ideas, product)
Depth of learning
Transfer and application of learning to other and/or new areas of greater challenge
Evidence of personal growth or sophistication in attitudes, appreciations, feelings
Formulating new generalizations
Development of higher level cognitive processes
Stylizing and implementing own study design

DIFFERENTIATING CURRICULAR ACTIVITIES FOR THE GIFTED AND TALENTED

MEANS OF DIFFERENTIATING	EXPLANATION	ILLUSTRATION
1. Accelerated or advanced content	Working with knowledge and skills which correlate with the student's mental rather than chronological age, parallel his interests, and satisfy his need and quest for substantive information	Student ready for algebra at nine-year-old level is given a tutor.
2. Higher degree of complexity of content	Allowing student performance to dictate speed/direction of learning Learning experiences which require higher order thinking processes, such as analyzing, creating, and evaluating Learning experiences that require assimilation of principles, theories, and concepts associated with knowledge held by "the professional or expert"	The gifted student is pursuing the topic of Occults as an outgrowth of learning the expected topic of Mythology.
3. Introduction of content beyond the prescribed curriculum	Learning what is traditionally reserved for another grade or age level Learning what is related to other areas or crosses the boundaries of the disciplines	Gifted student is studying the cause-and-effect relationships of various forms of paternalism in people's voting pattern in different countries as an independent study within a United States history class.
4. Student-selected content according to interest	Allowing student need and interest to govern what is to be learned and/or to dictate what areas within a body of knowledge that will be studied	The gifted student interested in violin is independently pursuing the topic in a general music class by leaving his regular class in the elementary school to attend class at the high school.
5. Working with the abstract concepts in a content area	Dealing with those ideas, theories, and concepts which are inferred or discrete and which require reflective, critical, and creative thinking in order to make them concrete or give them meaning	The gifted student illustrates the ways a proverb is "lived" by a literary character.
6. Level of resources	Allowing students to use resources beyond those reserved or designated for regular curriculum input	Gifted elementary student calls a college professor to obtain information regarding his questions in a particular subject.
7. Type of resources available	Insisting on acquiring information from multiple and varied resources which includes other informational sources besides books	The gifted student was given the yellow page telephone directory to find out who could be contacted to assist him in obtaining information regarding his study.

MEANS OF DIFFERENTIATING	EXPLANATION	ILLUSTRATION
8. Appropriating a longer time for learning	Acknowledging that the student with multi-interests and abilities needs appropriate time to learn by defining his work schedule; recognizing that the student sometimes needs to pursue a topic or skill more extensively or to a greater degree of proficiency	The gifted student contracts with the teacher as a means of setting time limits on studying a topic. The gifted student is given additional time to experiment with properties in chemistry in order to discover or prove something in which he is interested in a more complex manner than is assigned to the other students in the class.
9. Creating or generating something new	Expressing additional examples, new and original alternatives and relationships, and possible solutions in either verbal or illustrative form to given issues, problems, and ideas	The gifted student, as a result of a study of current political issues, is developing a new method to raise campaign funds for political office which is to be submitted to a Congressman for reaction.
10. Depth of learning providing alternative and related experience with recognition that the student requires fewer stages and less time to learn a concept	Gathering information to a level of understanding which satisfies the attainment of a skill or idea, the quest for learning exhibited by the student and the objectives of the instructor	The gifted student is engaged in collecting and processing data which could clarify the meaning of loneliness as it applies to ethnic groups within American society.
11. Transfer and application of learning to other and/or new areas of greater challenge	Applying what is learned to substantiate, negate, extend, or verify learnings in another area of the curriculum or another body of knowledge	The gifted student in a math study is utilizing the process of multiplication to develop statistical predictions of how the country's food supply will accommodate the population explosion.
12. Evidence of personal growth or sophistication in attitude, appreciations, feelings	Cultivating and rewarding honest opinions and reactions, divergent responses, and questioning attitudes; incorporating learning about humaneness as a concomitant to learning a body of knowledge of a specific skill; learning how to assess and obtain feedback about "in" personal and academic endeavors	The gifted student is making a profile of famous men who were scholars in order to identify the traits he has in common with them.

MEANS OF DIFFERENTIATING	EXPLANATION	ILLUSTRATION
13. Formulating new generalizations	Summarizing and developing new theories and ideas for what has been learned and which may be used at some other time.	The gifted student has summarized all the data relative to World War I and II to formulate a new theory about a society's need for dominance.
14. Development of higher-level cognitive processes	Learning and practicing the skills related to the processes of analyzing, synthesizing, and evaluating as both separate processes and as processes which are part of the strategies of problem solving, critical thinking, and creativity	The gifted student has evaluated the need for learning about geology and presented his argument to the Board of Education.
15. Stylizing and implementing a student study design	Recognizing and utilizing the skills of research and scientific exploration effectively in a given learning endeavor and finding out what style of learning is successful for the student	The gifted student has organized an outline for developing a position paper on some aspect of the use of atoms.

WORKSHEET--DIFFERENTIATING CURRICULAR ACTIVITIES FOR THE GIFTED AND TALENTED

Means of Differentiating

Input
1. Accelerated or advanced content
2. Higher degree of complexity of content
3. Introduction of content beyond the prescribed curriculum
4. Student-selected content according to interest
5. Working with the abstract concepts in a content area
6. Level of resources
7. Type of resources available

Expectancies
8. Appropriating a longer time for learning
9. Creating or generating something new (information, ideas, product)
10. Depth of learning
11. Transfer and application of learning to other and/or new areas of greater challe
13. Formulating new generalizations
14. Development of higher level cognitive processes
15. Stylizing and implementing own study design

Reference to Means Of Differentiating	Curricular Application	Elaboration of Learning Activity
Examples:		
Number 5	Oceanography Unit	Prove the statement, "The world is a sea," by expr in an editorial.
Number 11	Oceanography Unit	Design an experiment with foods to illustrate a fa sea life.

WORKSHEET--DIFFERENTIATING CURRICULAR ACTIVITIES FOR THE GIFTED AND TALENTED

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13. Formulating new generalizations
14. Development of higher level cognitive processes
15. Stylizing and implementing own study design

to Means ntiating	Curricular Application	Elaboration of Learning Activity
	Oceanography Unit	Prove the statement, "The world is a sea," by expressing your ideas in an editorial.
	Oceanography Unit	Design an experiment with foods to illustrate a fact or idea about sea life.

ENRICHMENT: What Is It?

BREATH OF LEARNING

DEFINITIONS: Defining the scope of learning experiences
Extending the curriculum

DETERMINANTS: Needs of the gifted and talented
Needs of society and educational institutions
Principles of learning

DESCRIPTION:	Transfer of learning into other subjects	Integration of ideas, concepts, principles	Tangential learning opportunities	Application to personal and social development
Type of thinking process required	Enrichment is a means of characterizing both the curricular experiences and the organizational procedures for educating the gifted and talented. Enrichment becomes the vehicle for structuring learning opportunities to match the needs of gifted and talented students and to direct their education in relationship to the expectations expressed for them. Enrichment is a combination of the teacher's presentation of content to the student and the student's interaction in learning the content. Enrichment must be considered as an integral part of curriculum development and the organizational structure or prototype. It is not, therefore, to be treated as a singular dimension of a program but rather as the fundamental feature of all programs. The terms is used both to qualify a program and to differentiate a program for the gifted and talented. It outlines the processes for deviating from the traditional curriculum proposed for all students and the strategies for facilitating the learning for the gifted and talented.			
	Ideation of new and original ideas			
	Learning abstract ideas, concepts			
Level of difficulty and complexity of material				
Comprehensiveness of data to be learned				
DESCRIPTION				

DEPTH OF LEARNING

DEFINITIONS: Sequence and logic of learning experiences within the subject matter
Identifying ways to intensify the curriculum

DETERMINANTS: Acknowledgement of the characteristics of gifted and talented
Assessment of individual growth patterns
Identification of student interest and needs
Recognition of goals and objectives

WORKSHEET — Providing Enrichment Activities

DIRECTIONS: This worksheet can be used as a model for developing an individual lesson plan or for developing a total curriculum. Define the content to be enriched for the lear whether enrichment will be emphasized in depth or in breadth. Specify the element ment within the sequence or scope of enrichment by placing a check along side of t Utilizing the content, elaborate the type of enrichment with an illustrative aciti

DEPTH SEQUENCE	CONTENT (skill, concept, principle, etc.)	APPLICATION	
☐ Comprehensiveness of data to be learned	Example: Philosophies of Man: Concept: "A sound mind in a sound body"	Example: Applying Juvenal's maxim to today's education, the entertainment media or a literary work	☒
☐ Level of difficulty and complexity to be learned			☐
☐ Learning abstractness of ideas and concepts			☐
☐ Ideation of original ideas and products			☐
☐ Type of thinking process required			☐

WORKSHEET -- Providing Enrichment Activities

TIONS: This worksheet can be used as a model for developing an individual lesson plan or as a guide for developing a total curriculum. Define the content to be enriched for the learner. Decide whether enrichment will be emphasized in depth or in breadth. Specify the element of enrichment within the sequence or scope of enrichment by placing a check along side of the item. Utilizing the content, elaborate the type of enrichment with an illustrative acitivity.

PTH ENCE	CONTENT (skill, concept, principle, etc.)	APPLICATION	BREADTH SCOPE
iveness be	Example: Philosophies of Man: Concept: "A sound mind in a sound body"	Example: Applying Juvenal's maxim to today's education, the entertainment media or a literary work	☒ Example: Transfer of information into other subjects
iffi- com- be			☐ Integration of ideas, concepts, and principles
bstract- eas ts			☐ Opportunities for tangential learning
deas ts			☐ Application of personal and social development
inking quired			☐

WORKSHEET:

Qualifying Enrichment Activities

DIRECTIONS: Use this checklist as a measure to assess a learning activity or experience that has been specified as being enrichment for the gifted and talented.

	WHAT ENRICHMENT IS		WHAT ENRICHMENT IS NOT	
☐	productive thinking	--	reproductive thinking	☐
☐	applying and associating learning to other areas	--	accummulating and regurgitating information about one area	☐
☐	learning concepts and generalizations	--	learning facts	☐
☐	complex thinking	--	harder work	☐
☐	student determined readiness	--	grade- or age-level expectancies	☐
☐	extend and/or replace traditional learning experiences	--	provide more work	☐
☐	interrelating information learned	--	separate entity learning	☐
☐	critically evaluate	--	accept all data presented	☐
☐	problem seeking	--	answering questions	☐
☐	stimulating and encouraging giftedness and talent development	--	penalizing giftedness and talent development	☐
☐	learning things as they should or could be	--	learning things only as they are	☐

GUIDELINES FOR DEVELOPING CURRICULUM

Investigation . . . . . Learning activities for

- -finding and using objective and subjective research
- -answering why, how, and wherefore
- -proving something and/or designing experiments
- -looking beyond what is known to find what is unknown
- -finding missing data or gaps in information

Stimulation . . . . . Learning activities for

- -discussing and debating opinions, points of view, and philosophies
- -relating information and skills
- -evaluating critically from various vantage points
- -using different and multiple inputs
- -producing more than one answer or solution

Sophistication . . . . . Learning activities for

- -developing and using practical and ethical values of society
- -understanding and working with different cultures
- -appreciating and experiencing "the arts"
- -using theories and abstractions
- -learning complex information
- -tackling an imaginary project

Socialization . . . . . Learning activities for

- -solving the unanswered questions and problems of society
- -participating in community action
- -interacting and communicating with peers and professionals
- -developing leadership and group membership
- -experiencing the self

WORKSHEET — ASSESSING CURRICULUM APPROPRIATENESS

Directions: The appropriateness of the curriculum can be detected by tallying types of learning activities which have been included to satisfy the needs of the gifted. Review the curriculum to determine if there are activities which can be classified under each heading. The distribution of learning activities in each categrory adds up to a "totally" appropriate curriculum for the gifted and talented.

Learning Activities	Opportunities to acquire and work with known information	Learning from the ENVIRONMENT
Sum total is an APPROPRIATE CURRICULUM	Sum total is an APPROPRIATE CURRICULUM	Sum total is an APPROPRIATE CURRICULUM

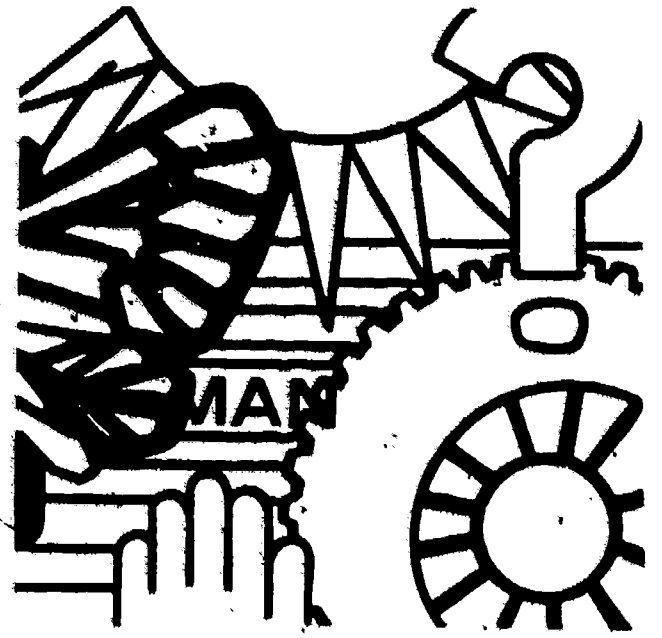
Applying Activities	Opportunities to identify and deal with unknown information	Learning from RESOURCES

Creating Activities		Learning from the SELF

TYPES OF CURRICULA

The curriculum which is a composite of various teaching/learning activities is the one which will have the greatest applicability and usability within the program. Existent within the curriculum must be learning opportunities which enable the student to be a producer of learning as well as a consumer of learning. Experiences in directed learning must be balanced with experiences for students to self-style learning. Activities must provide for learning within the multiple strata of intellectual operations.

The identification of the need and purpose for learning will determine the base on which the curriculum will be built. What is incorporated into the curriculum is tied to a curricular pattern wherein content and process form the learning activities.



CURRICULAR PATTERN	DESCRIPTION	EXAMPLE
Subject or Skill	A domain of knowledge or a skill provides the substance for directing the curriculum.	"Space" Research Skills
Core	A generalized theme or topic which has broad and diverse application to several subject areas is used to develop and integrate learning experiences.	The Interdependence of Man
Interest	The student's self-selected topic determines the learning activities.	My Study of Butterflies
Process	The skills of thinking are applied to student and/or teacher-selected topics, themes, subjects.	Designing a New City
Question	An outline of basic questions formulates the learning experiences.	What Is Causing the Energy Crisis?
Experiential	The development of attitudes, understanding, and appreciations from first-hand experience forms the activities for learning.	Exploring the Museum
Environmental	The relevant issues and features of the environment are used as the springboard for learning concepts and skills.	The Freeway

FORMAT AND PACKAGING CURRICULUM

Making curriculum functional and accessible is the essential criterion for deciding the type of format and package to adopt. The social and cultural setting in which the curriculum will be used is also an important consideration. The curriculum which can be used by the teacher or student as a learning tool will have greater impact than the one which simply becomes a shelf reference. The concept of developing general guides which merely discuss learning ideas and eventually absorb additional teacher effort and time to develop these into learning activities has become obsolete. The curriculum which is in a form that is classroom-ready will motivate both teacher and student use and will consequently insure the fulfillment of its purpose for learning. The inclusion of types of resources and materials which augment learning activities is needed in order to make the curriculum a viable aid for teachers and students.

FORMAT	DESCRIPTION
Guide	The collection or an outline of learning experiences which direct the teacher or student toward achieving a desired set of objectives
Unit	A comprehensive delineation of activities related to a specific subject, topic, or theme indicating the breadth of learning opportunities and the sequential development of learning
Task Card	A group of learning activities which are either related to a predetermined subject or are open-ended in their application to any student-selected subject (These are individually constructed and become self-contained learning activities which can be used separately or as a complete set.)
Learning Center	A collection of both tasks and materials which are placed within the classroom environment to act as an instructional aid to introduce, teach, and reinforce learning through a variety of experiences
Learning Kit	A package of learning suggestions, directions, and correlated materials which promote specific learnings

WORKSHEET--DESIGNING A CURRICULUM TYPE AND PACKAGE

INTRODUCTION: The steps to be taken in designing a curriculum are the following:

1. Determine what is to be learned.
2. Respond to question of why this learning is valid, purposeful, or appropriate.
3. Delimit the content to be included.
4. Outline the process to be stressed.
5. Choose the curricular pattern which will present the learning activities to t
6. Create the package which will present the curriculum to the teacher and/or stu

C U R R I C U L A R P A T T E R

	Subject	Core	Interest	Process	Question	Experient
Guides						
Units						
Task Cards						
Learning Centers						
Learning Kits						

EXAMPLE

EXAMPLE

The intersection of a curricu
with a format for packaging
is one starting place for des
culum.

Which will be connected to be
culum type and package?

WORKSHEET--DESIGNING A CURRICULUM TYPE AND PACKAGE

10 steps to be taken in designing a curriculum are the following:

Determine what is to be learned.
Respond to question of why this learning is valid, purposeful, or appropriate.
Delimit the content to be included.
Outline the process to be stressed.
Choose the curricular pattern which will present the learning activities to the student.
Create the package which will present the curriculum to the teacher and/or student.

U R R I C U L A R P A T T E R N S

Subject	Core	Interest	Process	Question	Experiential	Environmental

EXAMPLE

EXAMPLE

The intersection of a curricular pattern with a format for packaging the curriculum is one starting place for designing curriculum.

Which will be connected to begin your curriculum type and package?

FORMAT FOR CURRICULUM

WORKSHEET--USING QUESTIONS TO DEVELOP CURRICULUM

Directions:

Questions can be used as the core for developing curricular activities. Note the leve thinking required. Using a content area, fill in the missing parts of each question curricular experience.

Levels of difficulty and thinking

	Focus	Application
Evaluation	How	could you compare _____ to _____
	How	can you prove _____ to _____
	When	could _____ be used suitably?
Synthesis	What	. . . could be added or combined with _____ to make a
	What	is another way to _____?
	How	could you design or use _____ in a new way?
Analysis	What	. . . are the parts or features of _____?
	How	. . . is _____ related to _____
Application	Why or How	. . . is _____ related to _____
	How	. . . can you use _____ to solve the problem of _____
Comprehension	What	. . . can you say about _____?
	How	. . . can you discuss _____ in (quantity) _____
	Which	. . . is the best answer to this question about it _____
	Which	. . . comes first _____ or _____
	How	. . . can you arrange _____ in the right order?
Memory	What	. . . is _____
	How or Where	. . . is _____ used?
	When or How	. . . did _____ happen?

WORKSHEET--USING QUESTIONS TO DEVELOP CURRICULUM

can be used as the core for developing curricular activities. Note the level of difficulty and equired. Using a content area, fill in the missing parts of each question to formulate a experience.

	Application
	could you compare _____ to _____ _____? can you prove _____ to _____? could _____ be used suitably?
	. . . could be added or combined with _____ to make a new _____? is another way to _____? could you design or use _____ in a new way?
	. . . are the parts or features of _____? . . . is _____ related to _____?
ow	. . . is _____ related to _____? . . . can you use _____ to solve the problem of _____?
	. . . can you say about _____? . . . can you discuss _____ in (quantity) _____ of words? . . . is the best answer to this question about it _____? . . . comes first _____ or _____? . . . can you arrange _____ in the right order?
ere ow	. . . is _____? . . . is _____ used? . . . did _____ happen?

WORKSHEET--DEVELOPING A LEARNING CENTER

Definition:

A learning center articulates activities to teach, reinforce, or expand concepts related to subject, theme, skill, or interest. Placed within the classroom environment, it allows stu to work independently according to a predetermined classroom organizational pattern or sche

Directions:

At least two activities must be constructed in each of the three categories which represent levels of learning necessary to provide for a range of difficulty and the varying interests abilities of students. Use the verb listed in each section to construct activities for the center. Fundamental to each center is a collection of resources and references which appea various modalities of the learner.

Define the content area: _____

TEACHING	APPLYING	EXTENDING
cut and paste _____	classify _____	compare _____
listen _____	arrange in order _____	create new _____
observe _____	show examples _____	research
experiment _____	fill in _____	other _____
list _____	locate _____	predict _____
match _____	show parts of _____	reconstruct _____
label _____		

Materials for Input:

_____ _____ _____

_____ _____ _____

_____ _____ _____

WORKSHEET--DEVELOPING A LEARNING CENTER

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us modalities of the learner.

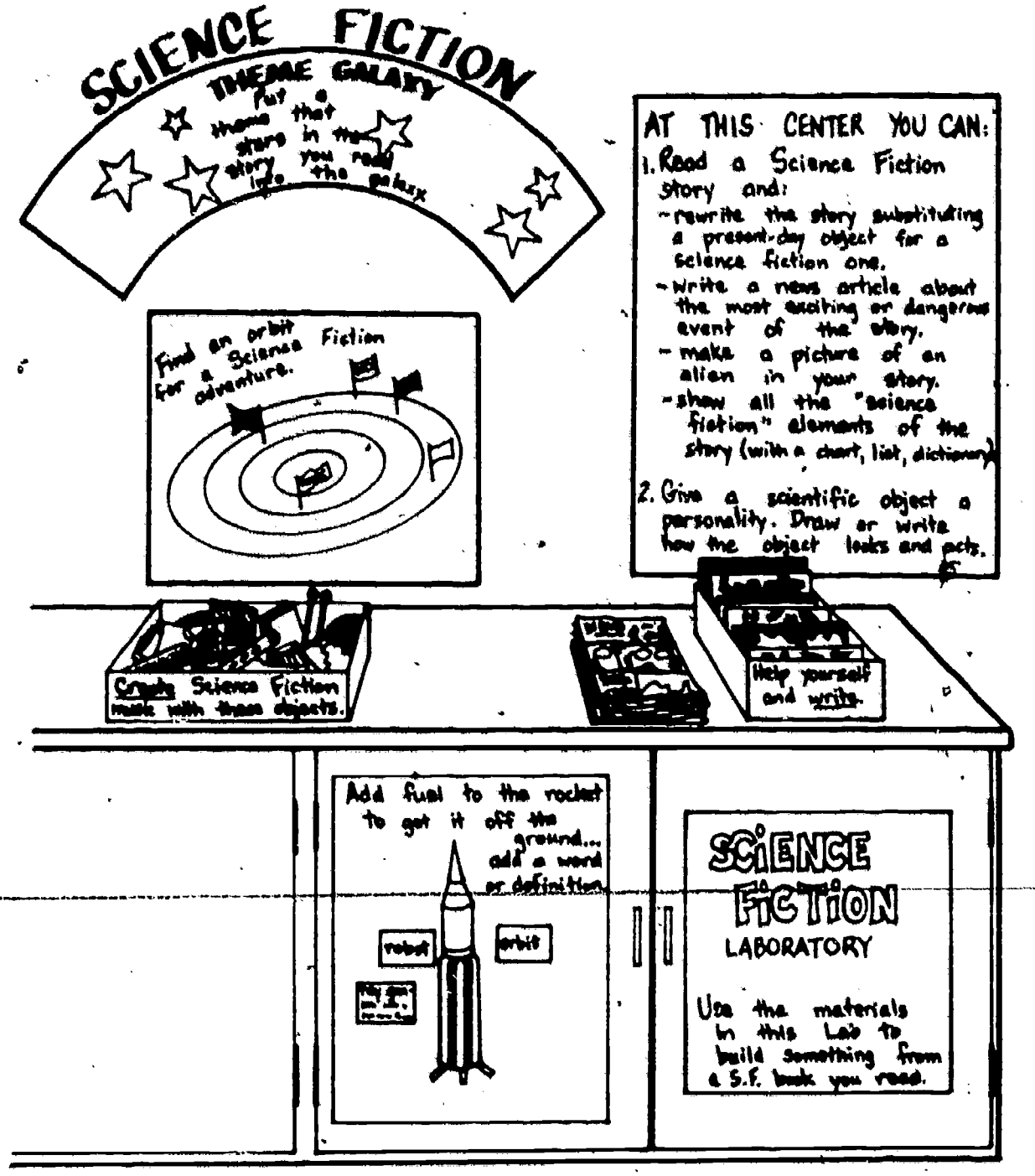
Define the content area: _____

TEACHING	APPLYING	EXTENDING
ut and paste _____	classify _____	compare _____
sten _____	arrange in order _____	create new _____
serve _____	show examples _____	research other _____
periment _____	fill in _____	predict _____
st _____	locate _____	reconstruct _____
tch _____	show parts of _____	
l _____		

Materials for Input:

_____ _____ _____
_____ _____ _____
_____ _____ _____

EXAMPLE OF A LEARNING CENTER



Learning Possibilities

- Recognizing the theme of a story and being able to write from a given theme
- Transforming real-life situations into imaginary ones
- Stimulating reading and creative writing
- Categorizing
- Matching auditory images to verbal or visual images by creating music

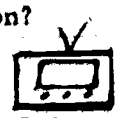
Courtesy of Goodyear Publishing, Inc.
Change for Children, 1973

Worksheet: Developing Open-Ended Task Cards
To Be Applied to Any Study

Directions:

The open-endedness of the task card implies that
- -it has no one, right, or predetermined answer
- -it can be applied to any subject area.

The task card can be used as
- - follow-up activities to an independent or group study
- - activities at a learning center
- - vehicles for facilitating a student's independent study.

Purpose	Example	Design Your Own Task Card
Motivation	Think: What would you combine to bake this tasty dessert?	Think:
Convergent Practice	Test: What two things have been combined to create a television? ____ + ____ = 	Test:
Divergent Application	Try: Combine two ideas, principles, or objects from the study to create a NEW idea, principle, or object.	Try:
Extending Production	Do: Diagram it. Write a review of it. Illustrate its use to solve a problem.	Do:

Research Report Outline

Part 1. A description of the animal

Be sure to include the following:

1. How the animal looks
2. How you would describe the animal to someone who had never seen one
3. What animal he is most like.

Part 2. The food the animal eats

Be sure to include the following:

1. How he gets his food
2. Where he finds his food.

Part 3. The home of the animal

Be sure to include the following:

1. Where he lives
2. What he uses to make his home
3. What he uses his home for
4. The effect the seasons have on his home
5. The effect his food has on where he builds his home.

Part 4. Helpful or harmful ways of the animal

Be sure to include the following:

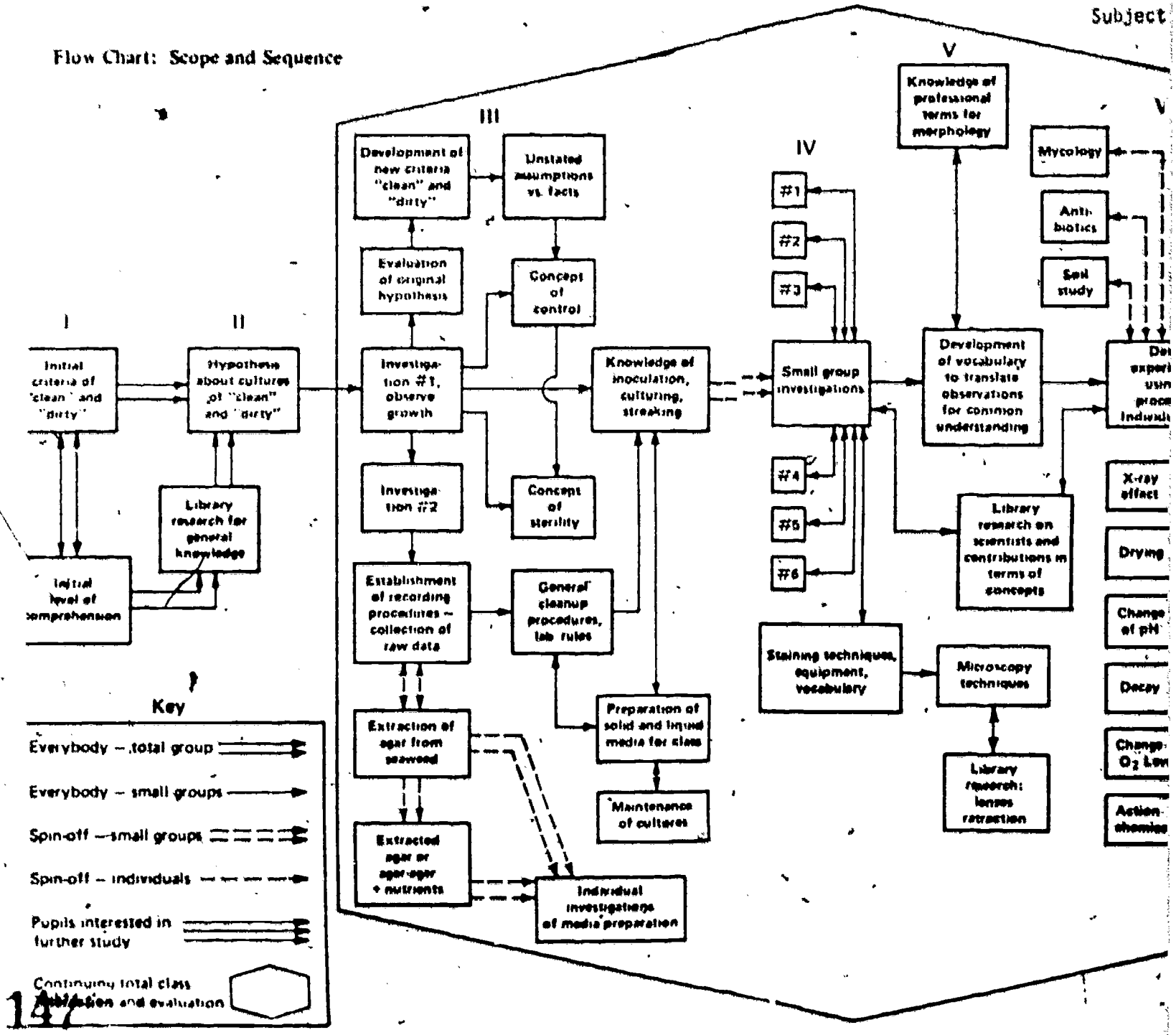
1. Whether he has any enemies
2. Whether people like to have him around or not

Part 5. Strange or interesting habits of the animal

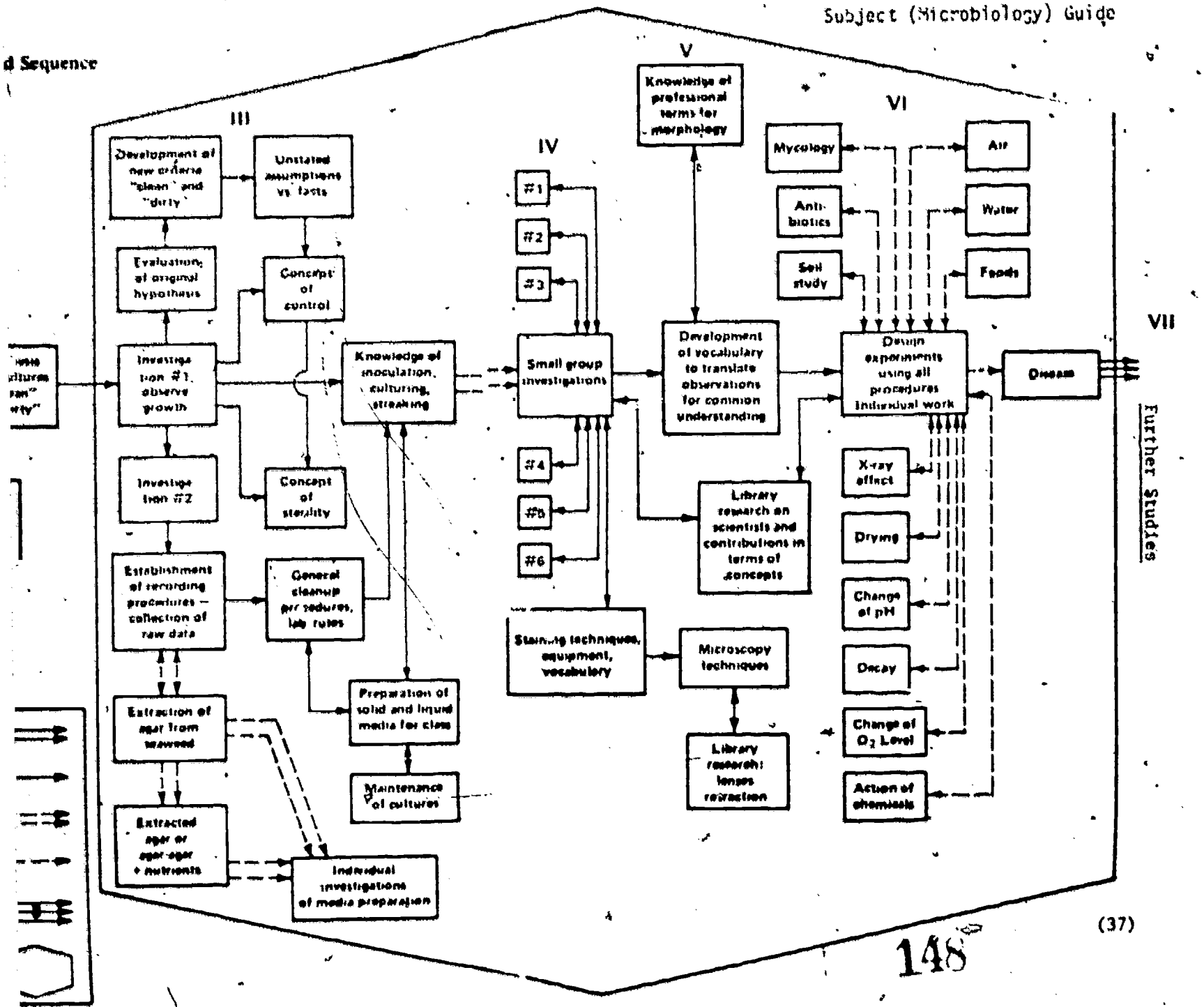
Be sure to include the following:

1. Ways the animal protects himself
2. Ways he cares for his family (13).

Flow Chart: Scope and Sequence



d Sequence



(37)

Ancient Greece

LANGUAGE

... Match letters in our alphabet with letters in the Greek alphabet by making a set of flashcards.
... Discover words from our daily language which use Greek letters in them.
... Show the sounds of Greek letters by making a chart showing letters and sounds.

MEDICINE

... Discover what the Greeks did to cure one another.
... Trace the influence of Hippocrates on modern medicine.
... Can you make a medical museum showing medical implements and drugs the Greeks used?

POTTERY

... Unearth the uses that the Greeks had for pottery.
... Make pottery showing scenes of ancient Greece.
... Make pottery which people could unearth in the year 4,000. Show signs of life today.

CLOTHING

... Make paper dolls showing the type of clothing that Greeks wore.
.... Make contrasting paper dolls showing what the ancient Greeks wore and what we wear for play, work, and sleep.

HOUSES

... Model or draw the home of a wealthy Greek and a poor Greek. Label each area.
... Make blueprints of a Greek house and a modern house, showing likenesses and differences.

EDUCATION

... Show the likenesses and differences between schooling now and in ancient Greece.
... Become a pedagogue for a day and teach some friends the way they would have been taught in ancient Greece.

ATHENS

... Take an imaginary walk around the city-state of Athens. Use your sense of observation. What things do you

SEE HEAR FEEL TASTE SMELL? (2)

CURRICULUM MODEL

Subject Unit Guide

Literature

Instructional Guide

The following sequence of steps -- each of which is concerned with content, one or more objectives, and suggested learning experiences -- is presented as an instructional guide.

Step One

Course content: The student delineates his present criteria for selecting literary work.

Objective: To define the criteria he now uses in selecting a literary work

Learning opportunities: The class is given books to be used in the course. The students select any three works of interest and read them. They list briefly their reasons for selecting those particular works. The lists drawn up are then discussed in class and classified according to whether they represent the criteria of the critics, the criteria of the psychological critics, or the personal standards of the students.

Step Two

Course content: The student critiques a novel; in so doing, he broadens his own standards of literary criticism.

Objective: To analyze a novel on the basis of his own criteria for literary criticism

Learning opportunities: Each student in the class reads the same novel and writes a critical essay about it; he uses his own standards of literary criticism. The teacher evaluates each essay, looking for criticism consistent with the personal criteria which the student he established, as well as for insight into and understanding of the work itself. After it has been edited by the student, the paper is filed for future reference.

Step Three

Course content: The student identifies, in various examples of literary criticism, some of the techniques of the new critics and the psychological critics, as well as any techniques that might be typical of myth criticism.

Objective: To be able to recognize, from examples of professional criticism, the three types of literary criticism most prevalent in the twentieth century

Learning opportunities: The students read a variety of examples of criticism written by professional critics and identify techniques and tools of criticism that are typical of the new critics and the psychological critics. The students tentatively identify any critical techniques which, in their judgment, may exemplify myth criticism. The members of the class will need to make some educated guesses about what myth criticism might include.

Instructional Guide

In small groups the students compare notes and develop group definitions of myth criticism. These definitions are then compared for the benefit of the total class, and elements of similarity and dissimilarity are examined and discussed.

At this point the teacher explains that the myth critics ultimately focus on the universally unifying elements in literature, primary to which is the archetype. (The teacher will need to define "archetype" and "monomyth.") Abrams defines the "archetype" in literary criticism as that term which is applied to

> ...a character type or plot pattern or description which recurs frequently in literature and folklore and is thought to evoke profound emotional responses in the reader because it resonates with an image already existing in his unconscious mind (5).

The basic archetype or monomyth is the death-rebirth explained in detail by Campbell in THE HERO WITH A THOUSAND FACES (5).

Step Four

Course content: The student reviews a literary work by looking for elements of the monomyth and archetypes.

Objective: To identify archetypes and elements of the monomyth in a literary work

Learning opportunities: All the members of the class reread the novel they explored in the first assignment of this course to look at the archetypes and elements of the monomyth in that work. A discussion is held regarding these elements. A panel of students lead the discussion, and the teacher can ask the opportune questions that would lead to a clearer understanding of the elements involved.

Step Five

Course content: The student reads widely, identifying elements of the monomyth in the literary selections he has chosen.

Objective: To recognize elements of the monomyth in the selections the student is reading

Learning opportunities: Pursuing a plan of independent study, each student reads many literary works of various genres, locales, times, and geographic areas. He keeps a log of his reactions and findings; in this log he notes the elements of the monomyth apparent to him in the works he is reading. During conferences with the teacher, the student indicates his comprehension of the myth critics' key terms. The teacher reminds the class about using rapid reading techniques to read and reread these literary selections.

---

*M. H. Abrams, A GLOSSARY OF LITERARY TERMS. New York: Holt, Rinehart & Winston, Inc., 1964, p. 5.

**Joseph Campbell, THE HERO WITH A THOUSAND FACES. Cleveland, Ohio: World Co., 1949.

Instructional Guide

At the end of his reading log, the student makes generalizations about the appearance of the elements of the monomyth found in various times and places and written by various authors. These generalizations are discussed and debated in class.

Step Six

Course content: The student critiques a literary work by analyzing the work's relationship to the monomyth.

Objective: To analyze a literary work by evaluating the relationship to the monomyth

Learning opportunities: Each student selects a literary work to analyze and evaluates its relationship to the monomyth. The critical essay he writes is evaluated by the teacher, who looks for evidence of the student's understanding of the major concerns of the myth critics.

Step Seven

Course content: The student searches for an explanation for the existence of the monomyth.

Objective: To determine why the monomyth exists

Learning opportunities: A sociologist, a psychologist, and an anthropologist are invited to speak to the class. Either separately or as members of a panel, these persons explore the reasons which their disciplines offer for the existence of the monomyth. Ample opportunity should be provided for the students to discuss with the visitors their own theories on why the monomyth exists, as well as to quiz these experts about statements they made during their presentations. Each student then writes a brief paper stating (a) which theory he thinks best explains the existence of the monomyth and why and (b) whether he thinks the monomyth will continue to have validity in the future and why. (In the event "live experts" are not available to visit a school, arrangements might be made through the school and the telephone company for the students to hear, and interact with, such experts by means of telephone communication.)

Step Eight

Course content: The student identifies archetypal images and symbols.

Objective: To recognize archetypal images and symbols in a literary work

Learning opportunities: The class is divided into six groups, each group reading a different novel. After the novel has been preread and read quickly for plot, it is reread for the purpose of identifying archetypal symbols. The students look for a controlling symbol in the book and note how the author suggests symbolic meaning through the interplay of various elements in his work. They also observe how archetypal symbols depend for their meaning on their universal recurrence in the cycles of time and in the lives of all men.

Instructional Guide

Step Nine

Course content: The student reads widely, noting the archetypal images and symbols in what he is reading.

Objective: To recognize archetypal images and symbols in literary works

Learning opportunities: The class reads many literary works of varying periods, genres, locales, and authors. In a log each student keeps a record of his reading, as before. He notes the symbol and other archetypal images and symbols; he notes also how they affect the quality of each literary work. While the student is reading, the teacher circulates among them and provides what assistance is needed.

The students then write a brief paper in which they discuss how they feel that the imagery and symbolism of a myth can be translated into another language without losing its impact, while imagery and symbolism of a poem can rarely be translated successfully. To assist them in defending their arguments, the students may want to use examples from literature which they are studying in foreign language classes. These papers are then discussed in class.

Step Ten

Course content: The student critiques a literary work by analyzing its elements of the monomyth and its archetypal symbols and imagery.

Objective: To evaluate a literary work by analyzing the elements of the monomyth and the archetypal symbols and imagery present in the work

Learning opportunities: Each student selects a literary work to read and critique on the basis of analyzing the elements of the monomyth and the archetypal symbols and images found in it. After evaluating the student's ability to analyze the elements of the monomyth and the patterns of archetypal symbols and images in the work, the teacher returns the essay to the student for editing.

Step Eleven

Course content: The student learns to recognize the theme in literary work.

Objective: To recognize the myth critic's concern for the theme in a literary work

Learning opportunities: The class as a whole reads several literary works. In each one, the students look for the theme of the work, perceiving the theme as an outgrowth of the interaction among plot, tone, characters, symbol, and archetype, as well as a reference to the entire context of the work.

Instructional Guide

Step Twelve

Course content: The student critiques a literary work; in so doing, he uses the tools of the myth critic.

Objective: To analyze a literary work from the standpoint of the myth criti

Learning opportunities: Each student reads samples of literary criticism produced by myth critics and takes note of those tools of myth criticism which he might be able to use in the future. Then he reads a literary work and evaluates its mythic elements (imagery and symbolism, theme, monomythic elements, and the like). The critique which he submits is evaluated by the teacher, who looks for evidence of the student's understanding of the tools and purposes of the myth critics.

Step Thirteen

Course content: The student compares new criticism, psychological criticism, and myth criticism.

Objective: To evaluate the strengths and limitations of the three major trends in literary criticism in the twentieth century

Learning opportunities: Each student reviews what he has learned of the critical techniques and concerns of the new critics, the psychological critics, and the myth critics. Then, in a brief paper, he identifies what he believes are the strengths and limitations of each approach. The students' papers are compared and discussed in class.

Step Fourteen

Course content: The student synthesizes the three major critical trends of the twentieth century, describes what he feels will be a prevalent trend in the future, and develops his own theory.

Objective: To develop his own eclectic or original theory of literary criticism

Learning opportunities: The student reviews what he has learned about each of the three major critical trends of the twentieth century. He weighs this information against his own critical sense. He describes, orally or in written form, what kind or kinds of literary criticism he feels will prevail in the future. Then he develops his own eclectic or original critical theory. The students' written theories might be sent to several professional critics for evaluation, or these same critics might be asked for their hypotheses on the nature of the next trend in literary criticism. If such hypotheses are obtained, it should be interesting to note how these critics vary in their predictions.

Instructional Guide

Step Fifteen

Course content: The student applies his own critical theory and analysis of a novel.

Objective: To apply his own eclectic or original theory of literary criticism to the analysis of a novel

Learning opportunities: The student critiques a novel of his own and uses his own eclectic or orignial critical theory in making an analysis. The teacher evaluates the logic, consistency, and effectiveness with which the student has applied his own approach to the critique he has written.

Step Sixteen

Course content: The student evaluates his own progress in the course.

Objective: To evaluate how his own critical sense and literary appreciation have developed during this course

Learning opportunities: The student compares the first critique he wrote in this course with others he wrote subsequently during the course, and he tries to determine his own strengths and limitations as a literary critic. He comments on the critical values he now has and also comments on those values and criteria which he feels he needs in the future to judge literary works. Still further, he evaluates how his own critical sense and appreciation of literature have developed during this course (39).

Sample Lesson Plans

The eight proposed lesson plans on the study of ecology are presented in this chapter. Each lesson identifies behavioral objectives, recommends teaching strategies, suggests pupil activities and experiences, and includes lists of resource materials.

Lesson One: Substratum

This initial unit is intended to be used with a cluster group or with an entire class. Much of the work is based on verbalization of ideas. The teacher should recognize that verbalization of self-generated ideas may take a great deal of courage on the part of some of the children. Willingness of the pupils to share knowledge and to admit lack of knowledge can be nurtured through a respectful attitude on the part of the teacher. In this way the teacher will be acting as a model upon which the children can base their own behavior.

Behavioral Objectives

The pupils will frame questions clearly and specifically enough to get information. (analysis, response)

The pupils will formulate a definition of substratum. (synthesis)

The pupils will be able to identify numerous examples of substratum and some organisms that live on them. (knowledge)

The pupils will receive and respond to the ideas of other members of the group or class. (receiving, responding)

The pupils will use resource materials to find answers to questions left unanswered by their observations. (response, analysis, application)

The pupils will share new knowledge with the rest of the group or class. (responding, valuing)

The pupils will communicate to the group or class their understanding of the relationship between substratum and the physical characteristics of the organism living on the substratum. (comprehension, application, response)

Teaching Strategies

The teacher provides a challenging way of arriving at the meaning of substratum by showing a film, identifying the substratum, and then having the children define the term.

The teacher illustrates the interrelationships among concepts and asks the pupils to generate additional illustrations.

The teacher allows time for the boys and girls to receive and respond to ideas of individual learners.

The teacher encourages pupil-directed learning by providing an opportunity for observation and investigation of the physical characteristics of earthworms.

The teacher stimulates further reading by anticipating needs and making suitable references easily accessible.

Suggested Activities

Show the film, LIFE ON A DEAD TREE.

Identify the dead tree as the substratum for ants, lizards, beetles, and the like.

Ask the pupils to try to define substratum on the basis of this information only. Substratum can be defined as the base on which an organism lives.

Show two films, LIFE IN A VACANT LOT and THE FRESHWATER POND. Show the first one with the sound turned off. Ask the children to speak up, while the film is being shown, to identify the substrata and the organisms living on them. Show the second film in the usual manner.

Sample Lesson Plans

Ask the pupils to pool their knowledge and identify other kinds of substrata that are already familiar to them; for example, dry sand, freshwater streams, rotting leaves, and stagnant pools.

Have the boys and girls make a bingo-like game by writing the names of nine different substrata in nine squares on 9" x 9" cards. Each card should have the names of the substrata arranged in a different order. From small cards with organisms' names written on the front and matching substratum written on the back, read to the pupils the names of the organisms that live in the various substrata. The children should cover the appropriate substratum squares on their cards with markers when they hear matching organisms named. Three substrata covered in a straight line make a bingo. A check for correctness of answers can be made by referring to the back sides of the teacher's cards.

Provide a live earthworm and a magnifying glass for each pupil. Allow time for the children to become familiar with the worm characteristics.

Ask the pupils to find out how the worm moves. (They should be able to see with the magnifying glasses, and feel with their fingertips small bristly appendages known as setae.)

Ask the children whether the presence of setae completely explains how earthworms move within the soil. (It is expected that the pupils will recognize that a way to dig is also necessary. They may even be able to observe their earthworms eating their way through the soil.) Give the children sufficient time to try to find an answer to this question.

As a group, the learners should consider how other needs of earthworms are met. They might discuss such needs as food supply, knowing where to go, breathing, and so forth.

Pupils finding answers to these questions through observation of their worms should share their findings with the group or class as soon as they become aware of their new knowledge.

Answers to questions still unanswered should be sought by the learners in reference materials made available by the teacher.

Save the earthworms in a jar of damp earth.

Show the film, LIFE IN THE OCEAN.

The pupils should be instructed to watch for examples of organisms that have different physical characteristics and different ways to achieve similar results within the same substratum. An example would be the ways in which an octopus, a fish, and a starfish move about. These three creatures have different physical structures and move in different ways and yet they all exist within the same substratum.

Instruct the children to look through resource materials and try to find an interesting example of a physical characteristic that permits an organism to survive in its particular substratum.

Then let each pupil present his example to the group or class. Encourage a variety of kinds of presentation, such as the use of large illustrations or models, chalk talks, live demonstrations, or oral reports. The following exemplify the kinds of things that can be reported on: birds' feet, which are adapted to holding on to branches; frogs' eyes, which have transparent lids that close under water; and lizards' skins, which preserve the body moisture of lizards.

RESOURCE MATERIALS

Equipment for Activities

Magnifying glasses — one per pupil
Movie projector (16mm)
Cards scored like bingo cards (large size, 9" x 9")

Sample Lesson Plans

Cards with names of organisms written on the fronts and kinds of substrata designated on the backs (small cards)
Earthworms -- one per child (available at fishing supply outlets)
Large jar containing damp earth
Markers for a bingo-like game

Selected References

Books and articles

Anderson, Margaret J. "The Underwater World of the Caddisfly." Nature and Science, V (July 8, 1968), 14-15.
Hogner, Dorothy Childs. EARTHWORMS. New York: Thomas Y. Crowell Company, 1953.
Ripper, Charles L. MOLES AND SHREWS. New York: William Morrow and Co., 1957.
Selsam, Millicent, and Betty Morrow. SEE THROUGH THE SEA. New York: Harper & Row Pubs., 1955.

Films

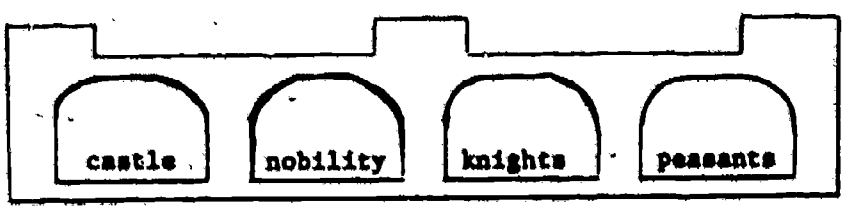
THE FRESHWATER POND. Encyclopaedia Britannica Films, Inc., 1962.
LIFE IN A VACANT LOT. Encyclopaedia Britannica Films, Inc., 1966.
LIFE IN THE OCEAN. Film Associates of California, 1955.
LIFE ON A DEAD TREE. Film Associates of California, 1975 (36).

CHARTS ... THINGS TO DO AT THIS CENTER

1. Make blueprints of buildings that use parts of a castle.
2. Make a map to show where famous castles are located.
3. Design or model a castle for a special locality (the moon, our city, the ocean floor).
4. Use the parts of four different structures to design a NEW castle.
5. Design your own coat of arms.
6. Write a letter to the President to tell him why knighthood should or should not be continued in 1976.
7. Write an editorial to prove or disprove this statement: "Gunpowder Destroyed Knighthood."
8. Make a portrait of someone you think qualifies as a knight.

GAMES ... FOR TEACHERS OR STUDENTS TO MAKE FOR USE AT THE CENTER

Use the key to open the "Kingdom's Castle" doors:



Find words or sentences that will open these doors by describing what they are or what they do.

ACTIVITIES ... TO BE USED WITH SPECIFIC MATERIALS

	Material
... Create a sports page to show the games knights played.	Sports pages to work on or from
... Graph the number of people who know "castle or knight" words.	Graph paper
... Match parts of today's buildings to the parts of a castle: drawbridge, gate, great hall, keep, chapel, watchtower, court yard, moat, cookhouse.	Worksheet or ditto:
... Compare a castle to one of these: apartment, prison, office building, fort, park.	Worksheet or ditto

Parts of the castle	Parts of today's buildings

... Fill out an application to become a knight. Tell how your characteristics help you qualify.

CHARACTERISTICS	YOU
To defend.....	_____
To guard.....	_____
To protect.....	_____
To be courteous...	_____

Materials

Books (fiction and non-fiction), ... model of a knight or castle, ... study prints of castles, knights, ... filmstrips, ... raw materials for building (sugar cubes, sticks, etc.) (27).

CURRICULUM MODELS

Skill Unit

Listening

The purpose of this unit is (a) to help students become aware of listening needs and of the importance of listening and then (b) to help them develop good habits of listening.

The table of contents, which follows, lists a daily schedule of areas to be emphasized. The completed project includes thirty-nine one-half-hour plans with activities which have been chosen to stress these areas.

The last few sessions of the unit will bring together students for sound attitudes, techniques of propaganda, methods of delivery, and persuasion. Students will then be exposed to writings, records, and speakers so that they may use the skills they have learned in evaluation and interpretation.

Contents	Estimated Days To Cover
1. Directing and maintaining attention	1
2. Following directions	2
3. Listening to the sounds of our language	1
4. Using auditory analysis	1
5. Using mental reorganization	1
6. Using context in listening	2
7. Distinguishing relevant and irrelevant information	2
8. Listening with a purpose	3
9. Finding main ideas and important details	3
10. Indexing an aural message	2
11. Making comparisons in an aural message	2
12. Finding sequence in an aural message	2
13. Making inferences and drawing conclusions	3
14. Forming sensory images for oral description	2
15. Sensing emotions and moods through words used and manner of delivery	2
16. Critical listening	5
17. Appreciative listening	5
	39

(35)

What Manner of Man

FRAME OF REFERENCE

The Renaissance was a time when circumstances and genius combined to produce great thought and works.

PROCEDURE

A. Introduction of "What Manner of Man" essay.
Question: What kind of a person do you think he might have been? Discuss.

B. Reading of Short Biography
Question: What kind of times and circumstances might have produced this manner of man? (To find out what the students know about the Renaissance, ... to arrive at some tentative conclusions about the period.)

C. Survey - Time
Verification Period - A Discovery Time
One week for reading to develop background, to see what the student can find out about the period, ... to verify tentative conclusions. Questions are mainly cognitive at this time:
1. What led up to the Renaissance?
2. What was life like during this period?

D. Depth Reading and Reflection
Study and discussion in depth -- two weeks -- of people, period, daily life, areas of activity. Questions:
1. What evidence have you discovered which could support this statement: "The Renaissance was a time when circumstances and genius combined to produce great thought and works"? (convergent)
2. What might have been different in our world today if the money had been lacking in the above circumstances? (divergent)
3. Is our world a better place to live because of the contributions of this period?

E. Focus on DaVinci
1. Will Durant's Essay (Approximately three weeks)
The Man (Student copies)
The Inventor (Student copies)
The Scientist (Student copies)
The Philosopher (Student copies)
Philology (Student copies) (Creative writing)
The Observer (Student copies) (Art Activities)
2. Quotes about DaVinci by his contemporaries

F. Individual Research

1. With the study of Leonardo as a key, each student will make an individual in-depth study on any phase of the Renaissance, with the exception of DaVinci. Possible areas for topics are painting, sculpture, political thought, medicine, the budding sciences, mathematics, people of the period.
2. Oral reports will be given, relating the chosen topic to the Frame of Reference statement ... "The Renaissance was a time ...".
   a. To develop use of Reader's Guide
   b. To develop use of multiple sources
   c. To develop skill in note-taking, reporting from notes only
   d. To develop skill in use of outlining
   e. To develop skill in selection of graphic material to reinforce a report.
3. Written essay -- following individual reporting, use the topic "What impact has the Renaissance had on our world today? How are influences from your area of study felt by us today?" (12).

INDEPENDENT STUDY GUIDE

Operations of Productive Thinking	Activities
Cognitive - Memory What are the characteristics, living patterns, and habits of this animal?	... Diagraming and labeling the interior and exterior parts of the animal's body ... Making a family tree for the particular animal being studied which shows the various members of the particular animal family ... Modeling the environmental surroundings of the particular animal being studied and making an Animal Atlas indicating where this animal lives in various countries, environments, etc. ... Making a "The World of (name of animal being studied)" in a movie or sequence chart form to show the animal's living pattern and habits in relationship to food, shelter, protection, etc. ... Making a travelogue to show how the animal came to live as he does today and tracing the evolution of this particular animal
Convergent What have been the contributions of this animal to society?	... Relating the particular animal being studied to art, music, and literature and making examples of these to place into a "Fine Arts Gallery of (name of particular animal being studied)" ... Illustrating and modeling or collecting samples of this particular animal's contributions in food, clothing, science, education, etc., through the ages ... Comparing and contrasting this particular animal being studied to other members of the same animal family and to other animal families, noting similarities and differences through diagrams, illustrations, and models
Divergent How could this animal survive in another environment in another animal family?	... Designing and modeling "the new animal" ... Making illustrations of this "new" animal's living pattern and habits ... Writing a first-person account in which the animal relates its feelings about the changes being made ... Illustrating the implications these changes would have to man, society, and the animal world (27).

The Study of Creative Man

The major concepts from the social science disciplines are all related to the study of the central theme, man. Thus, for the gifted child, concepts dealing with Creative Man may be interwoven with structural bases in the social sciences. Creative Man may be introduced deliberately in such a unit, given herein as a fourth-grade example, "Men and Women of Ideas." Even at this early intermediate level, gifted students will have been exposed to prior learning about persons who have achieved. As the students progress through the intermediate grades and beyond, they will gain increased cognitive and affective comprehension of what it means to be a creative, productive person.

While the teacher may wish to develop his own categories of outstanding achievements with his students, Figure II-1 offers a suggested means for structuring the continuing study of Creative Man. Depending on the composition and interests of the class and teachers, the sequencing of study in different segments of the outlined structure would vary from class to class.

The basic plan would be that students elect to become involved in long-term study of components of the structure given in Figure II-1. Some students might prefer to devote themselves to an in-depth study of one person or category of persons; other students might select a time span to study across the breadth of several categories of creative persons or might contrast present, past, and future times. Comparisons of characteristics or syntheses could lead to multiple possibilities for activities involving productive thinking and affective awareness of creative qualities.

Guiding Questions

As guides to major concepts from the social sciences, the following questions may be interspersed throughout the study of Creative Man to encourage a broad pursuit of ideas on the topic. The teacher, or the teacher and students together, may choose those areas of focus for investigation, discovery, and discussion.

Physical Geography

1. How have differences in climate affected the lives and productivity of creative men and women?

2. Have some creative persons been especially affected by the climate where they live?

3. How have creative men and women adapted and modified their lives in response to problems presented by climatic conditions?

4. What other physical conditions of the land have limited or helped creative persons?

FIGURE II-1

Categories of Outstanding and Creative Achievements

Characteristics	Artists	Authors	Explorers	Inventors	Musicians	Philosophers	Scientists
Life							
Youth							
Adulthood							
Education							
Personality							
Uniqueness							
Historical influences (local and world)							
Environmental influences (local and world)							
Syntheses							
Commonalities							
Differences							

FIGURE II-1

Categories of Outstanding and Creative Achievements

	Artists	Authors	Explorers	Inventors	Musicians	Philosophers	Scientists	Others
rlatles								
nflu- and								
l local								
s								

Guiding Questions

Cultural Geography

1. In what way has each creative person's environment in a particular locale contributed to his economic welfare?

2. How have social and societal patterns in each creative man's environment affected his behavior?

3. In what ways has his political environment modified the creative productivity of each creative man or woman?

4. In what parts of the world have been found economic, social, and political factors that have increased man's productivity?

5. In what areas have conditions been such that creative man has been greatly inhibited in his productions?

History

1. How would you present the sequence of development of creative men and women in each of the sciences, in the several forms of art, in literature (prose and poetry), in social leadership, in inventions, and in other areas?

2. Why have changes, creative productions, and inventions taken place more rapidly in certain periods in history?

3. What has contributed to the inhibition or delay of creative progress in other periods in history?

4. What have been some of the common characteristics of creative men and women in the different periods in history?

5. What are the implications for creative progress in our day?

6. What are your predictions for creative men and women in the future?

7. What may be the effects of a cultural heritage on various kinds of creativity?

8. What has appeared to be the role of ideals, ethics, and moral values in the development of man's creativity?

9. How would you collect, specify, analyze, and interpret data related to any of the previous questions?

Guiding Questions

Political Science

1. What has been the importance of the state or the nation in the development of a particular creative person?

2. How has a particular country's philosophy of government affected the creativity of men and women in that country?

3. What may be the particular conditions that foster "social invention"?

4. Why do certain countries appear to have more flexible and creative people leading their governments?

5. How may man someday invent an effective international or global and interplanetary political system based on humanity's ideals?

6. What are the conditions under which civilization produces larger measures of freedom to be creative?

7. What are some of the differences involved between a political climate in which creative persons are contributing to humanity and political climate in which creativity develops more in terms of self-interest only?

8. Is democracy necessary for the fostering of creative productivity in citizens?

9. How do creative persons show their responsibility as citizens?

Economics

1. How have creative persons contributed to the economic welfare and economic progress of society?

2. What are the relationships between the creative arts (painting, music, and literature) and the productivity of the economy?

3. What evidence is there that some creative people are productive despite economic deprivation?

4. Does competition foster or inhibit creative thinking? Why?

5. What may be the relationship between standard of living and creativity in various countries?

Guiding Questions

Anthropology

1. What are the factors contributing to the evolution of many creative cultures?

2. How would you characterize the development of less creative cultures?

3. What are some of the earliest evidence of man's ability to add and adjust to his natural environment?

4. In what ways are creative men and women more inventive and adapting to their natural environment than are other men and women?

5. What would it be like if you imagined yourself to be a creative person 1,000 years ago? 500 years ago? 100 years ago?

6. How is your cultural background related to your own creativity?

7. What are the creative opportunities and the urgent problems that need resolution in our culture today?

8. What basic changes in the culture will man make in the next 100 years?

9. What are some of the problems that man must resolve to promote the welfare of mankind and mutual respect for various cultural patterns?

10. Are there variations in the creative productivity of various ethnic groups? If so, why do such differences exist?

11. What is the responsibility of society to the creative person?

Psychology

1. How does creative man behave among other men?

2. What are the special needs of creative persons?

3. How are creative men and women like or unlike other people?

4. To what extent do creative persons need social groups of other people?

5. What have been the effects of group membership on the productivity of various creative persons?

6. How mature are creative persons compared with other persons of their own chronological ages?

7. What are the personality characteristics of creative persons in comparison with those of other persons?

Guiding Questions

8. How do creative persons value socialization?

Sociology

1. Are there any special conflicts of creative persons with their social systems?

2. How do these conflicts come about?

3. How do creative persons communicate their new ideas to other persons?

4. How may a person realize more of his own possibilities to produce in creative ways?

5. What may be some of the effects of social class on creative performance?

6. What is the probable relationship of prestige to future creativity?

7. Does the creative man relate well to the established goals of a society? Why?

8. How do creative men in one culture relate to creative persons in another culture?

9. Are some societies more creative than others? Why?

10. How do such societies adapt and progress more rapidly than others?

11. What is the difference between social invention and revolution?

Philosophy

1. How do the creative man's values and philosophies reveal his personal style of creating?

2. How do logic and emotions influence creative productivity?

3. How do creative persons judge their works?

4. Why may there be a lag between society's decision that creative work has value and the creator's opinion that his work is outstanding?

5. Do creative persons prefer a philosophical emphasis on ideas rather than "things"? Why?

6. What is a creative man, woman, or child?

A Drama Guide for Questions and Activities

Intellectual Operations	Sample Questions and Suggested Learning Tasks
	THE SEA GULL (Chekhov)
Cognitive-Memory	How does Chekhov suggest Treplev's hostility toward Trigorin?
Convergent thinking	What is the function of Sorin in Act II?
Divergent thinking	Discuss the play as a commentary on attitudes toward art and literature.
Evaluative thinking	Is Masha's confession to Trigorin (Act III) properly motivated?
	THE LOWER DEPTHS (Gorki)
Cognitive-Memory	Identify the structural elements.
Convergent thinking	Point out any irregularities in normal structure.
Divergent thinking	Discuss the basic theme of Gorki's play. Identify the dominant tone (e.g., hope, despondency, despair). What message or messages do the characters seek to convey?
Evaluative thinking	How is this play naturalistic? What about it is not naturalistic?
	MISS JULIE (Strindberg)
Cognitive-Memory	Cite specific speeches to demonstrate naturalistic elements in the play.
Convergent thinking	What three aspects of life do the three characters represent?
Divergent thinking	What do the references to the dog and the bird mean?
Evaluative thinking	Is the behavior of the characters consistent with their philosophy?

A Drama Guide for Questions and Activities

Intellectual Operations	Sample Questions and Suggested Learning Tasks
	SIX CHARACTERS IN SEARCH OF AN AUTHOR (Pirandello)
Cognitive-Memory	What is the difference between "character" and "man" as used by the father?
Convergent thinking	Contrast the position of the son and the father in the play.
Divergent thinking	What views of art and reality are being expressed in the scene between the manager and the actors?
Evaluative thinking	What comment does the play make on human communications?
	THE HOUSE OF BERNARDA ALBA (Garcia Lorca)
Cognitive-Memory	What hold does Bernarda have over Poncia?
Convergent thinking	What is the dramatic function of the grandmother?
Divergent thinking	Is the situation portrayed unique to the culture? Discuss possible analogies.
Evaluative thinking	To what extent do the references to colors help develop the tone of the play?
	JUNO AND THE PAYCOCK (O'Casey)
Cognitive-Memory	Explain the references to yoga and theosophy.
Convergent thinking	What is the function of the music and the prayers used in this play?
Divergent thinking	How is the "Irishness" of this play created?
Evaluative thinking	Discuss the positive or negative effects of O'Casey's stereotypes.
	THE DEVIL'S DISCIPLE (Shaw)
Cognitive-Memory	What is an "obtrusive moralizer"?
Convergent thinking	Show how Shaw's stage directions and character introductions make us see him as an "obtrusive moralizer."
Divergent thinking	By extension, what comments is Shaw making about contemporary society, even though the play concerns the American Revolution?
Evaluative thinking	Discuss the validity of the attacks Shaw makes on specific social, religious, and political attitudes (38).

CURRICULUM MODEL

Question Guide

Space

General Goals

To gain a better understanding of the vastness of the universe and our place in it

To gain more knowledge on the theories regarding the origin of our universe in order to understand the scientific undertakings now in progress to gain knowledge about other planets

To appreciate the advances being made in astronomy

To review the Scientific Method

Discussion Questions

If a theory regarding the origin of the universe could be proven to be true, what effect, if any, would it have on the people of the world?

Why do you think scientists have been spending so much time and money on researching outer space?

Man has not solved his social problems on this planet, nay, in our own United States. What do you think about taking on more problems IF this were possible?

Are you interested in space travel? Why?

Which of the theories we have discussed seem more plausible to you?

Do you believe in U F O?

What is your concept of 1800 million years? Do you feel this poses a problem in explaining the age of the earth, or in any scientific research?

How can the steps of the Scientific Method help you to solve your problems? Give examples (10).

SURVEY -- LOOK FOR HOW THESE BEHAVIORS ARE SHOWN ANYWHERE AROUND THE SCHOOL

Behavior To Watch for or Observe	Recording of How the Behavior Was Shown	Evaluation of the Effect of the Behavior
Helpfulness		
Good Sportsmanship		
Anger		
Fairness		

Establish purpose for use of biographical data to discover common attributes of "self-actualizing" people.

Teacher-directed exploration

1. Discuss definitions suggested by students.
2. Name great persons from history whom you believe to be self-actualizing people. List on the overhead projector.

TEACHER ACTIVITY

Distribute assignment sheets and Student's Bibliography.

After students have browsed in the library . . .

1. How can we use biographical data to learn more about "self-actualizing" people?
2. Can you see a general area of biographies that appeal to you as an in-depth study that would warrant a substantial block of time for reading? Name them. List on the overhead projector.
3. Distribute sample contracts. "You may follow the format of this sample or write one that will meet your needs."
4. Keep the creative product open and flexible. No firm commitment is needed until the second conference.
5. Schedule your first conference with the student.

Share definitions of "self-actualization."

Reading Assignment

1. Browse in the library facilities of the school and community, exploring areas that might appeal to you.
2. Use the "Reference section" of the libraries -- Biographical dictionaries, Who's Who?, Who Was Who?, Great Books, and books marked "X" on the Student's Bibliography.

STUDENT ACTIVITY

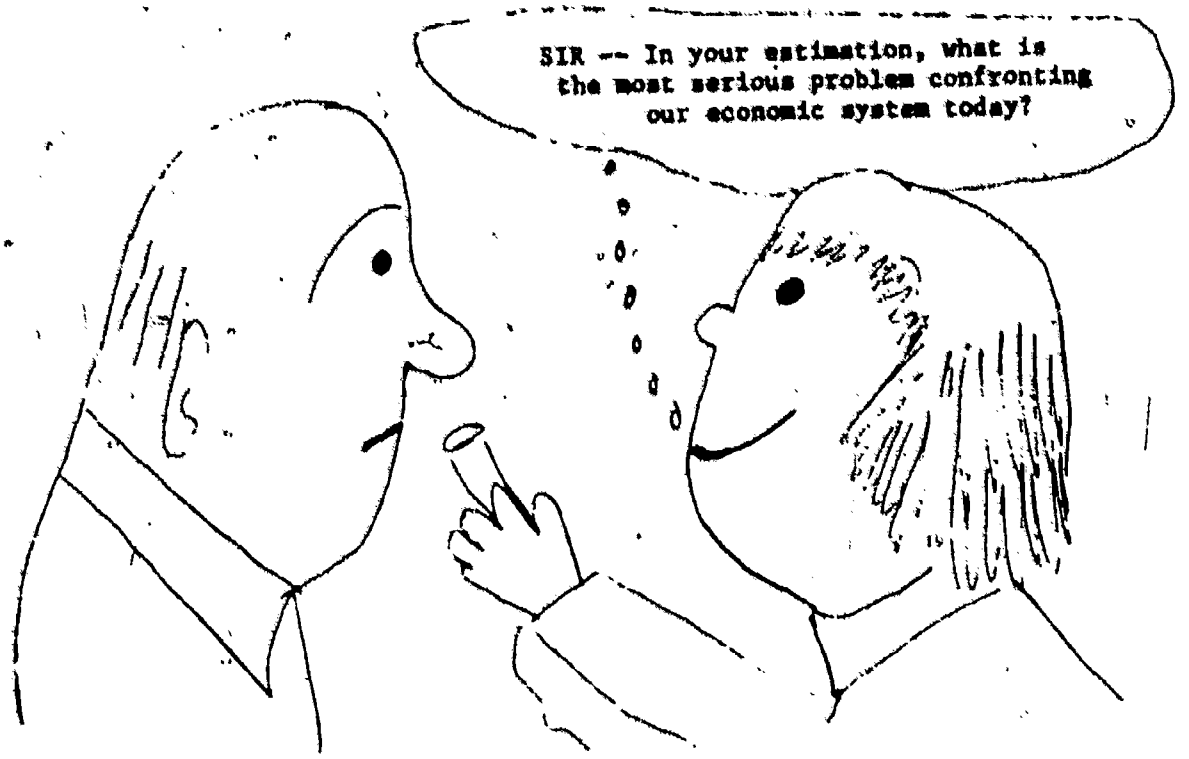
Ask questions and explore the many possibilities with the teacher. Choose a general area of biography that you feel would be interesting for you to pursue in depth. It should be an area that can reasonably be completed in approximately four weeks.

Write up the initial stages of your contract and be ready to discuss your plan.

Sign up for your conference (54).

Speaking of Interviews

If an "expert" is kind enough to grant an interview, then the student or students should be well prepared. This means the questions should be illuminating and not pointless. An expert's time is valuable; it is imperative that the students learn the art of interviewing. The following are examples of two activities which help students learn to ask better questions.



Activity 1 -- Small group activity, 3-5 students

Each group decides upon an authority to be interviewed. If the authority is an opera singer, then the group compiles a list of relevant questions. After the small groups have compiled their questions, they come together. The questions from each group are presented to the entire class for evaluation. Are they relevant? Are they phrased in a polite manner? Are they thought-provoking, i.e., do they require more than a yes or no answer? Do they add to the interviewer's knowledge? These are some of the questions that should be considered when evaluating.

Speaking of Interviews (continued)

Activity 2 -- Small group activity, 3-5/students

Divide the class into several groups. Give each group one of the interviewing activities listed below. Have each child within the group compose at least four questions applicable to the particular situation.

A. An astronaut who has just returned from the galaxy of Andromeda

B. A 12-year-old child who has just invented a cure for the common cold

C. A 99-year-old man who has just broken the record for pole-vaulting

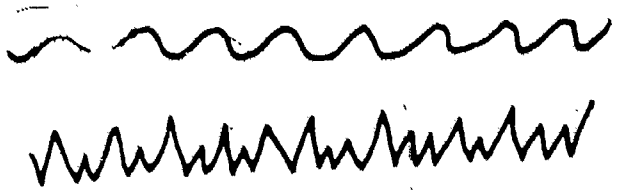
D. A prominent journalist who has just won the Pulitzer Prize for writing

E. A physicist who has just discovered a way for man to travel faster than the speed of light

Have each group role-play an interviewing session, with one child assuming the role of the person to be interviewed and the others assuming the role of the interviewers (40).

THAT'S ME

Match the phrases with the lines below to show how you feel when these things happen to you. Find situations in history where famous men may have felt one of these ways. Illustrate your findings in a "History Book of Feelings."



I can't do it.

Help!

I'm in trouble.

I got it!

Hooray!

Who - me?

I don't know ...

I love it!

I won!

I never do anything right.

Whew ...

I don't understand.

It'll be all right.

I'm so excited!

They like me . . . (27).

OBSERVATIONS OF CURRENT MATERIAL -- POLITICAL CARTOONS

Direct class to sign up for one day of the week on which the student will be responsible for bringing in a current cartoon for discussion. Some duplication will exist with six or seven a day, but this procedure will still provide for a variety in type and scope of cartoon. Possible questions of a general nature are listed below.

1. What symbolism has the cartoonist used? Why do you think he chose the symbolic form? Are any of his symbols universal in nature? Are any of his symbols unusual or difficult to understand?

2. What impact might this cartoon have on public opinion?

3. Does this cartoon cause you to feel any strong emotion? What did the cartoonist do to create these feelings in you?

4. What are the cartoonist's feelings about the subject? Do you think a cartoonist would or should depict cartoons showing views opposite of his own?

5. Find out what you can about the cartoonist. What unique characteristics does he possess that enable him to communicate in this manner?

6. Become familiar with the editorial policy of a newspaper by careful reading of editorial and opinion pages that will be furnished to you for study. Do the cartoonists always mirror the editorial policy and views of the publisher?

7. Who is most likely to be affected and influenced by the cartoonist and his work?

8. How might a cartoonist be influenced by outside factors such as

   a. Publisher's opinion?
   b. Economic status or needs?
   c. Personal political opinion?

9. Discuss your opinions about the appropriateness of "making fun" of leaders of government and world society.

10. What responsibilities to the reading public are present for the cartoonist?

11. "The world is a perpetual caricature of itself, at every moment it is the mockery and the contradiction of what it is pretending to be." (George Santayana) ... Discuss the ways in which this quote might be applied to our study (45).

CURRICULUM MODELS

Environmental Task Card

Structures

PROBE IT

Investigate:

The size of the land decermines the shape and the type of structure built on it.

Guesser?

What type of structure is best for a small piece of land?

What type of structure is best for a large piece of land?

PROVE IT

Investigation Clues

*Measure and make a blueprint of the length and width of your home, apartment, classroom, or school building. Imagine the size has been cut in half. Imagine the size has been doubled. Make blueprints to show how you would remake the structure.

*Use the lid of a box as your lot. How many different kinds of structures can you build to fill the lot?

*Make a list of the largest buildings in the world. How much land is each built on?

Scientific Tools:

-something to measure with
-paper for a blueprint and a pencil
-a box lid and sand

Record Your Findings

What do you notice that space does to the shape of buildings?

(27)

DO IT WITH NUMBERS . . .

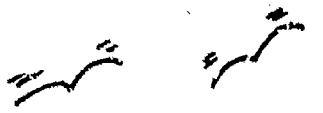
Add the column of numbers.

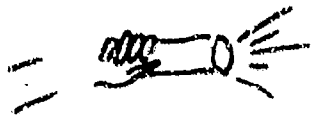
$$\begin{array}{r} 4 \\ 2 \\ 3 \\ 1 \\ +\ 5 \\ \hline \end{array}$$

DO IT WITH IDEAS . . .

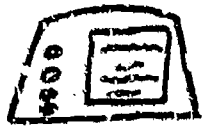
Add the ideas. What big idea do they make altogether?

in the

birds flapping 

man with 

a fan

the television 

\+ add

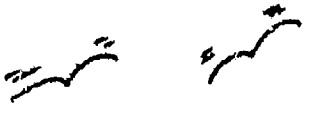
Now... Use other types of addition problems to create your own "idea math."

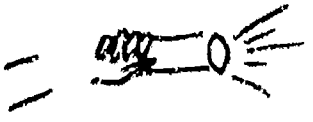
. . . 4
2
numbers. 3
1
+ 5

. . .

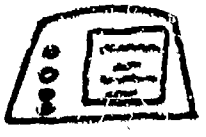
at big idea do they make altogether?

in the dark night

birds flapping  their wings

man with  a flashlight

a fan blowing air

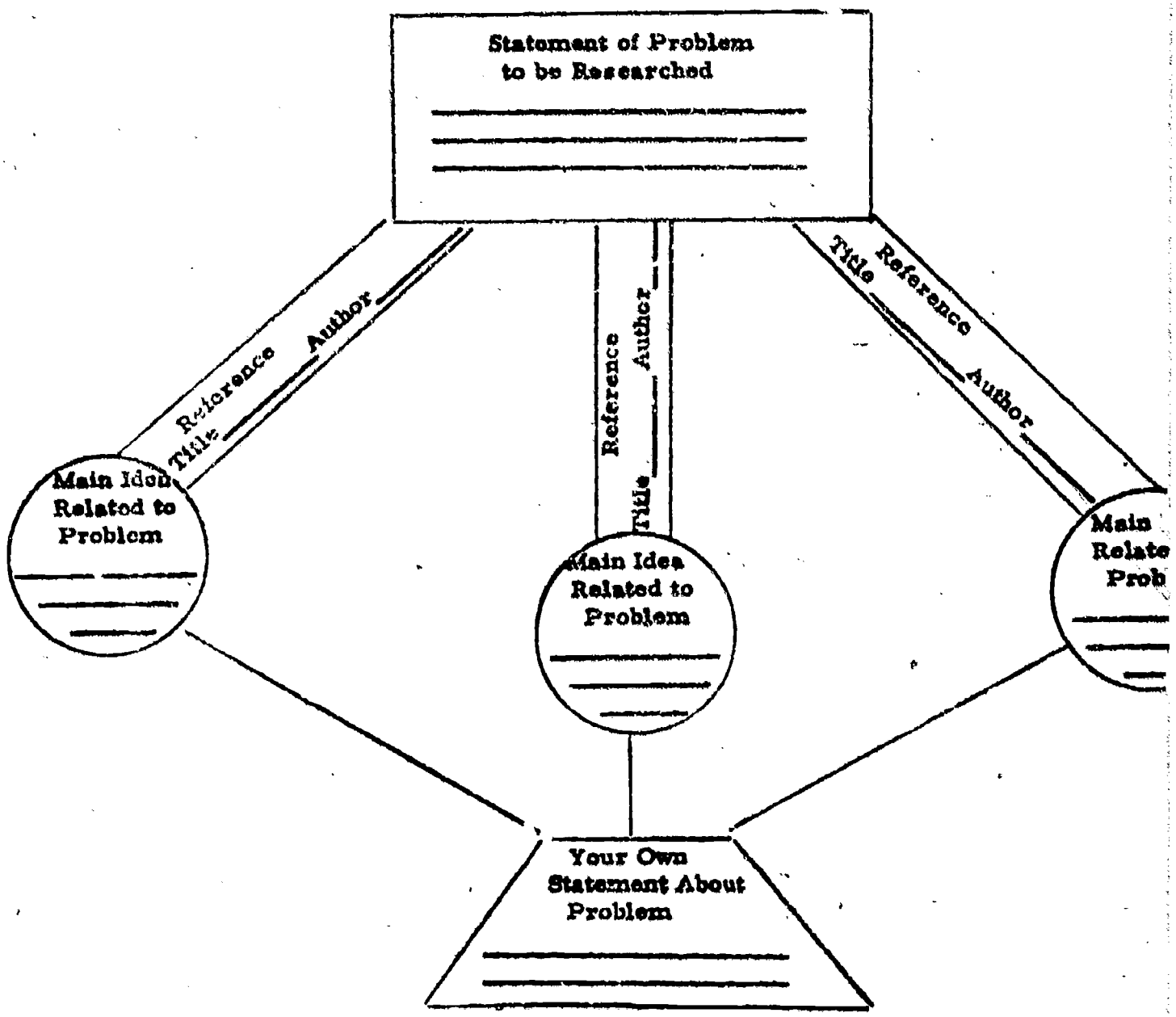
the television  playing

+ add

Now... Use other types of addition problems to create your own "idea math."

Directions: Use this model to do your research.

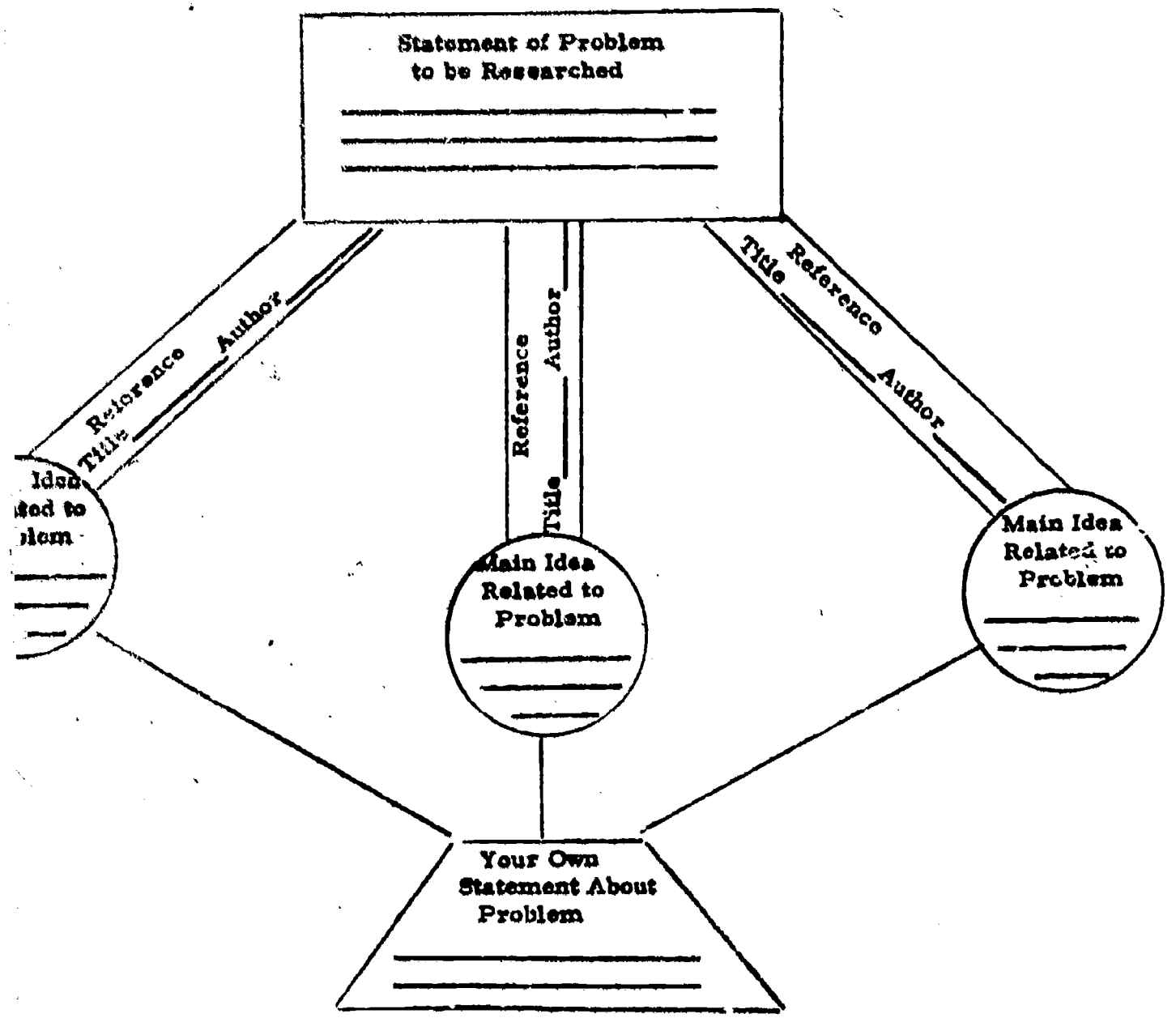
RESEARCH USING MULTIPLE REFERENCES



155 (22)

Use
do
h.

RESEARCH USING MULTIPLE REFERENCES



How does the United Nations help to solve world problems?

How can you apply the information that you have learned to solve any one or all of the problems listed below:

1. Integration
2. Population explosion
3. Arms race
4. Poverty
5. Others of your own choice

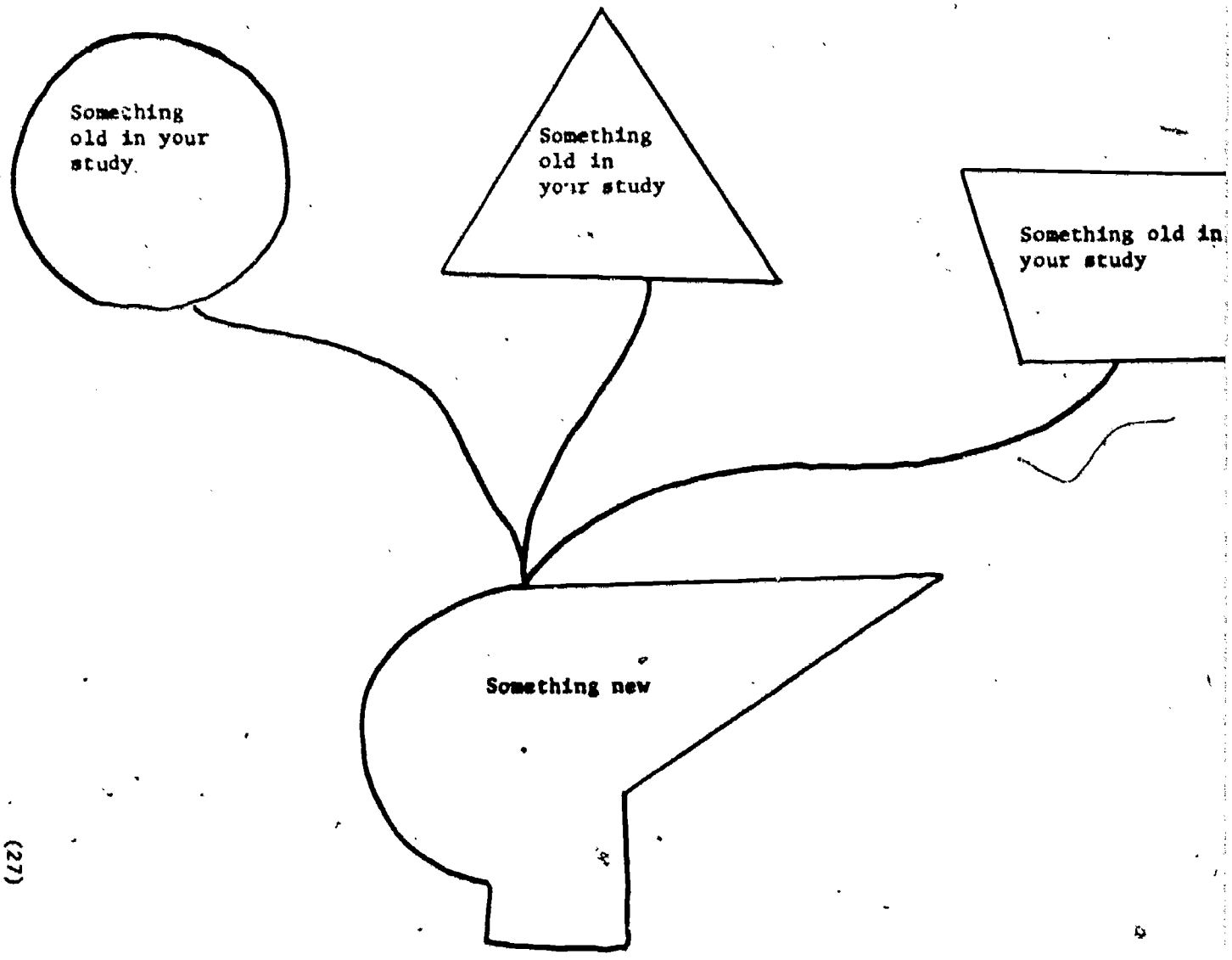
Problem: _____

Applying information to solve the problem: _____

(27)

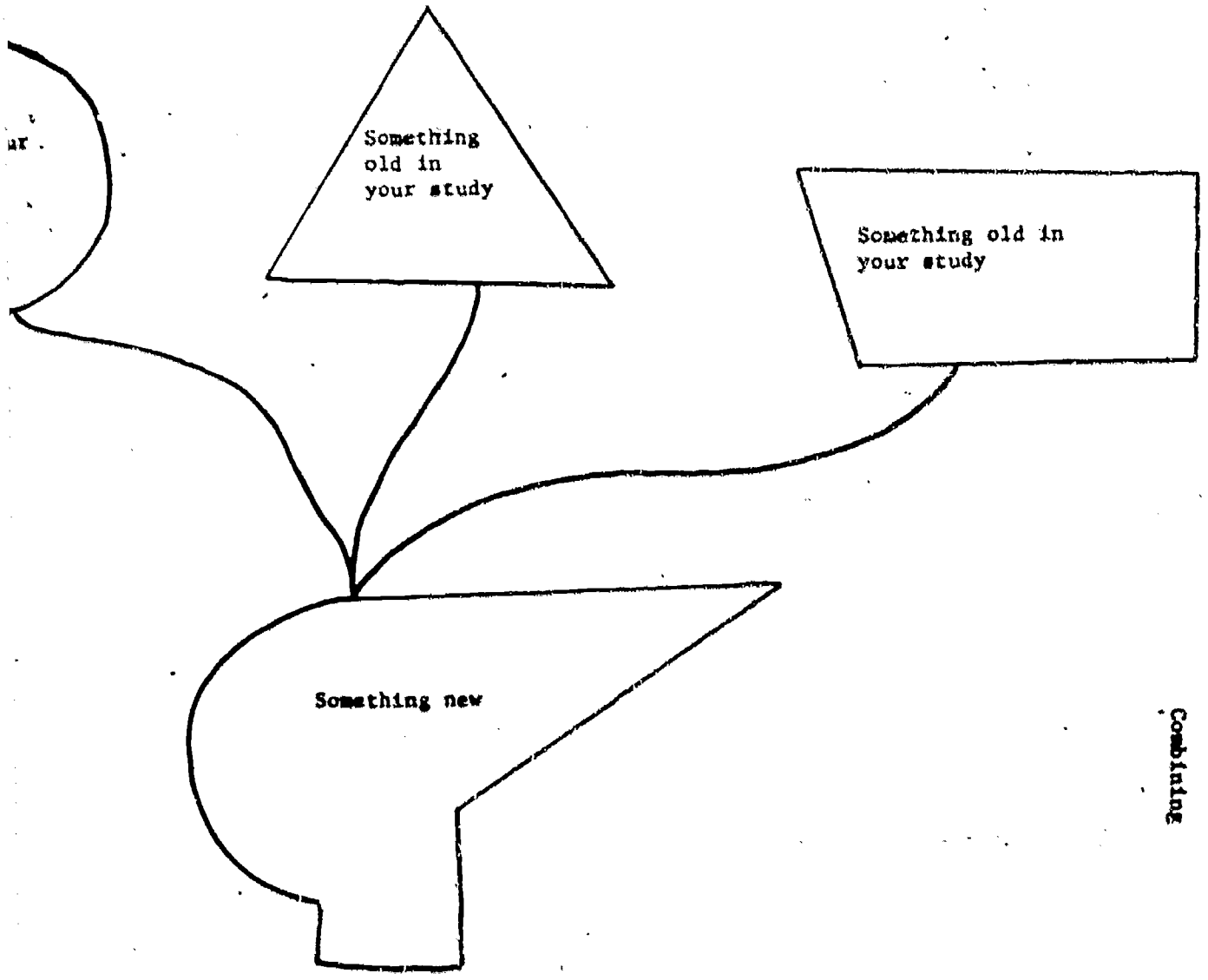
GET IT TOGETHER

Use three different things from your independent study. Combine them to design something new



GET IT TOGETHER

fferent things from your independent study. Combine them to design something new.



Topic Development

Some of the sources used by the CLUE staff to develop topics of interest are as follows:

1. Current issues in the community (newspaper or magazine article). The examples below were taken from newspaper articles.

Topic: "Better before Bigger"

Background: A common motto heard around Memphis these days is "Better before Bigger". Columnists such as Robert Johnson in the Memphis Press-Scimitar and organizations such as the Memphis Chamber of Commerce maintain that Memphis should improve on what it has (schools, streets, services, housing, etc.) before it tries to achieve the bigness of Atlanta or Chicago.

They believe Memphis will only be getting more problems, higher crime rates, etc. Others point to Atlanta saying that only a few years ago it was the size of Memphis, but now it is a thriving metropolis with the title of "New York of the South." They, too, want Memphis to move ahead like Atlanta.

Possible Questions:

1. Do you agree or disagree with the motto "Better before Bigger"? Why or why not?

2. What advantages can you think of in Memphis trying to achieve the bigness of Atlanta or Chicago?

3. What kinds of problems might arise with the increased size of Memphis?

4. How could these problems be eliminated before they arise?

5. What suggestions can you give for improving Memphis and making it a better place to live?

6. Does the size of a city determine the desirability for living? Why or why not? (40)

CURRICULUM MODELS

Environmental Task Card

Ecology

THE CHALLENGE ...

Dear Citizen:

The United States Government has decided that due to the extreme shortage of water the following rules MUST be observed:

1. No one can drink more than one cup of water per day.
2. No one can wash their bodies, clothes, dishes, etc., except once a month.
3. No one may play with water from this day forth.

People who are found breaking the law will be sent to the desert to live as punishment.

Sincerely,

Your Government Water Agency

HAVE YOU THOUGHT ABOUT ...

New sources for water ... Reusing water ... Substitutes for water ... Conservation of water ... Purification and fluoridation

YOU COULD ...

... Develop a new water supply source.
... Make up\new rules for the conservation of water.
... Take a survey of how and when you use water in your home.
... Graph the cost of water for the average family in the city. Compare this to the cost of water for a family living in the desert.
... List and illustrate as many different sources for water as you can.
... Make a chart to show all the different uses of water.
... Write a story titled "The Waterless Day."

IF YOU WANT TO GO FURTHER . . .

Trace the path of water from its source to your faucet.

Using a map of California and the United States, locate the major dams and reservoirs. Model and compare different dams.

USING THE MATERIALS . . .

Build a model of your own water system or build a model of a dam. (27).

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CURRICULUM BUILDING: GENERAL FORMAT
WORKSHEET

ELEMENTS TO BE INCLUDED	KNOWLEDGE TO BE LEARNED	THINKING SKILLS TO BE STRESSED	ATTITUDES, APPRECIAT
ACTIVITIES	TEACHER	STUDENT	
MATERIALS	TEACHER	STUDENT	

CURRICULUM BUILDING: GENERAL FORMAT
WORKSHEET

GE TO BE LEARNED	THINKING SKILLS TO BE STRESSED	ATTITUDES, APPRECIATIONS, UNDERSTANDING

TEACHER	STUDENT

TEACHER	STUDENT

CURRICULUM BUILDING: FORMAT FOR STUDENTS
WORKSHEET

WHAT I WANT TO FIND OUT (Content to be studied)	WHAT I NEED TO DO (Resources to be used)	WHAT I WILL DO WITH WHA (Learning p

CURRICULUM BUILDING: FORMAT FOR STUDENTS
WORKSHEET

I WANT TO FIND OUT ent to be studied)	WHAT I NEED TO DO (Resources to be used)	WHAT I WILL DO WITH WHAT I HAVE LEARNED (Learning process)

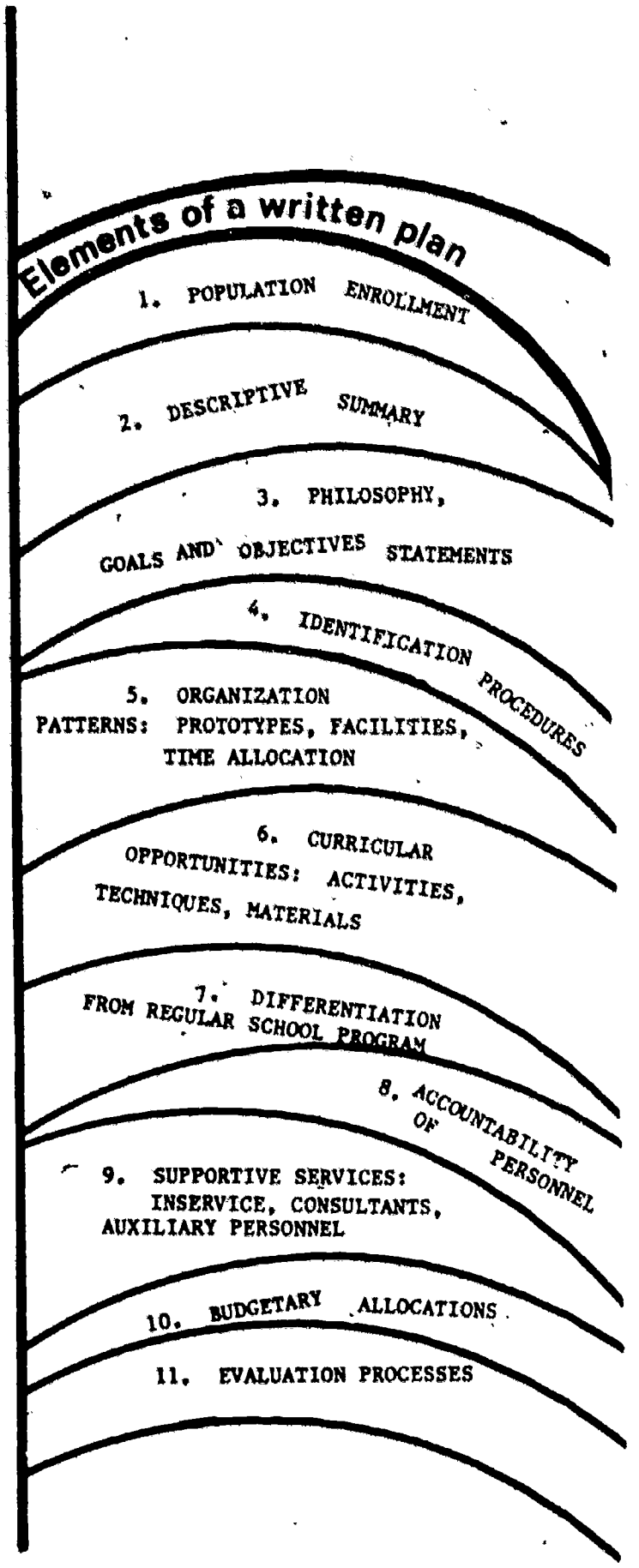
Developing a written plan

WRITTEN PLAN

The written plan formalizes and communicates the program and thus becomes an available reference for indicating what the program is supposed to accomplish. It also is a guide for evaluating how well the program achieves its goals. The written plan also may insure the continuity and continuation of the program in the event of institutional or administrative change.

The format and content of the written plan must be designed to present a comprehensive and articulated analysis of the program. Any question pertaining to the program should be easily answered after having read the written plan. One indication of a thorough and clear written plan is its ability to convey the program in written form without reliance on interpretation by an individual.

Inherent within the written plan is a description of the facets and processes which make it operational. Explicit illustrations are included to indicate how the program has been tailored to the special population it is to serve. This information reinforces the need for the program and stresses the uniqueness of its design. Employing a format to structure the content guarantees the inclusion of the basic elements of the program. This is an important first step in writing a plan.



California Application

California Administrative Code, Title 5, Section 3860, requires prior approval of the Superintendent of Public Instruction of a program (continuing or new) proposed to be conducted on or after July 1, 1970. The application for approval must be filed with the Superintendent of Public Instruction at least 30 days before the opening date of the semester or summer session when the program is to be given.

It is the intent of the State Department of Education to assure all children equal opportunity to be screened and identified as mentally gifted minors and to be placed in programs to meet their unique needs and requirements. To further these ends, certification of equal opportunity is a requisite of prior approval for both continuing and new programs for mentally gifted minors.

A. Enrollment

1. Number of mentally gifted minors anticipated to be in programs by the end of the school year for which this application is made.

2. Total district pupil enrollment anticipated by the end of the school year.

B. Ethnic Survey

C. Proposed Budget

1. State contributions

2. Local expenditures

D. Programs - Types

E. Means of Identification and Placement

1. List the procedures used in identifying children and youth as culturally disadvantaged, underachieving, mentally gifted minors (pursuant to Section 3822 of California Administrative Code, Title 5).

2. Attach copy of the developmental case study including the screening and nomination forms.

F. Written Plan

1. Abstract

2. Complete descriptive district written plan

G. Evaluation of Continuing Programs

H. Verification of Equal Opportunity

I. Signature of District Official

Connecticut Application

A. Cover Page -- with pertinent information including

1. School district name
2. Superintendent's name and phone number
3. Program director's name
4. School address
5. Superintendent's signature

B. Identification Procedures

C. Programs

D. Supportive Services

E. Evaluation

F. Budget

1. Personnel
2. Instructional Equipment and Materials
3. Special Education Consultant Services

WRITTEN PLAN
WORKSHEET
#1

1. POPULATION DISTRIBUTION

Numbers	Grade Levels	Placement or Lo

2. BUDGET

Income	Program Allocations	Expenditu
	Salaries	
	Instructional Materials	
	Transportation	
	(other)	
	(other)	

WRITTEN PLAN
WORKSHEET
#1

DISTRIBUTION

Numbers	Grade Levels	Placement or Location

Income	Program Allocations	Expenditure
	Salaries	
	Instructional Materials	
	Transportation	
	(other)	
	(other)	

WRITTEN PLAN
WORKSHEET
#2

PHILOSOPHIC REFERENCE
(Statements, goals, objectives)

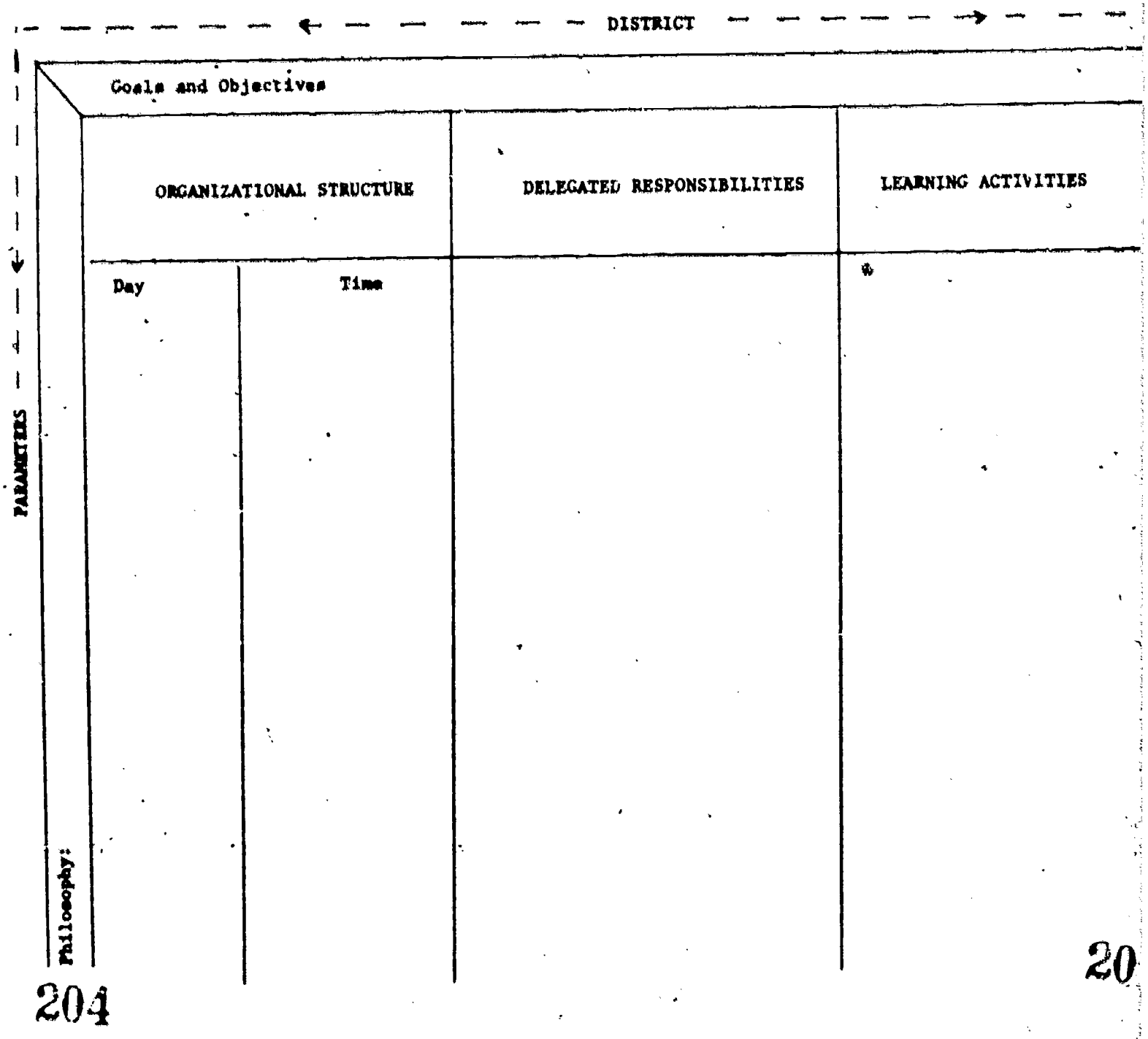
LEVEL	ORGANIZATION		CURRICULAR IMPLICATIONS	DIFFERENTIATION FOR THE GIFTED	ACCOUNTABILITY	
	prototype	time alloted	(activities, techniques, materials)		Personnel	Task Pro

WRITTEN PLAN
WORKSHEET
#2

PHILOSOPHIC REFERENCE
(Statements, goals, objectives)

IZATION	CURRICULAR IMPLICATIONS	DIFFERENTIATION FOR THE GIFTED	ACCOUNTABILITY EVALUATION		
time alloted	(activities, techniques, materials)		Personnel	Task Process	Time

WORKSHEET--Program Planning within Individual Schools



WORKSHEET—Program Planning within Individual Schools

DISTRICT → PARAMETERS

nd Objectives				
ANIZATIONAL STRUCTURE	DELEGATED RESPONSIBILITIES	LEARNING ACTIVITIES	Budgetary Considerations	
Time				

Preparing for the program

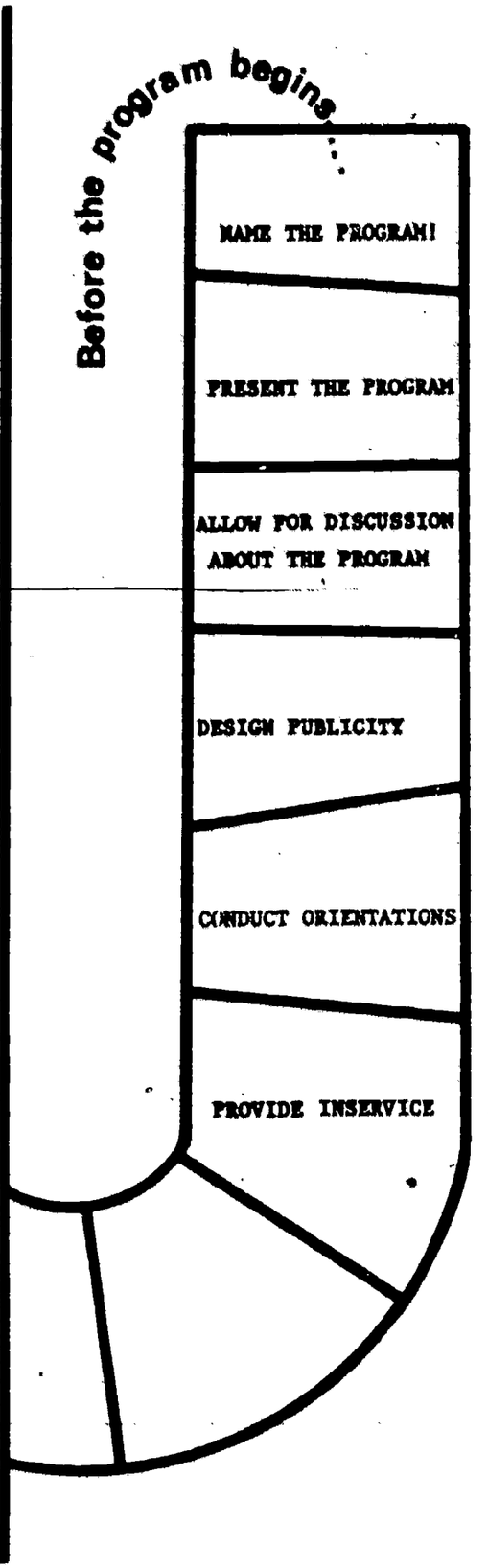
PREPARING FOR THE PROGRAM

A concomitant to program development is the construction of a plan for introducing students, staff, and parents to the program. Devising a series of activities or meetings which promote an awareness and understanding of the program for the gifted and talented is vital. Structuring formal or informal occasions where people are able to listen and react to the purposes and mechanics of the program will generate enthusiasm and will help to establish a commitment to the program.

All opportunities for input and dialogue should be coordinated so that there is consistency in what is being communicated about the program. Because no one person will be available continuously to provide information about the program, it is important that key individuals within the institution thoroughly comprehend the program. Making many people conversant with the program will enable them to answer questions and supply information when those who are directly affiliated with it are absent.

The amount of effort expended in communicating and publicizing the program increases the potential for the program to become an integral part of the institution. Communicating and publicizing are an on-going process which should include personal and written contacts throughout the school year. The availability of some type of visual presentation which can be transported and shared at various meetings is helpful. In addition, consideration must be given to the use of students as spokesmen for their program.

Opportunities	Communication Tools
Orientation meetings for parents, staff, and students	Abstract of written plan
Workshops	Brochure
Extension courses	Newsletter or bulletin
Coffee klatches	News releases to local papers
Individual conferences	Speaker's bureau
Visitations	
Social meetings	
Field trips	
Fairs and exhibits	



Student Involvement

Project CLUE
Memphis City Schools
E. S. E. A. Title III

Project CLUE

Project CLUE (Cooperative Leadership for Urban Education), funded through a Title III grant of the Elementary and Secondary Education Act, represents an effort on the part of Tennessee's four major school systems to discover cooperatively ways for solving problems common to urban education. Primary goal of the project is the development of a model for achieving the involvement of urban students in learning strategies which will change student apathy into positive action and channel student activism into responsible accomplishment. The four school systems involved in the project are Memphis, Nashville, Chattanooga, and Knoxville.

A Reason for Being

Far too often, intellectually gifted students in urban school systems fall into one of three categories. They become student activists bent upon destruction of the system; they become apathetic, dropping out of the system or demonstrating their apathy via other forms of withdrawal behavior; or they settle into a life of mediocrity. Memphis CLUE theorizes that education needs to take note of the part gifted students may play in our society and of an evergrowing need for leaders who can think critically as well as creatively.

Program Design

Working with approximately 600 academically talented fourth, fifth, and sixth graders, the Memphis program draws pupils from 51 schools. Each student attends two half-day sessions per week at a CLUE center. The centers are located in elementary schools in 10 areas of the city, representing a cross-section of socioeconomic levels. A variety of grouping patterns is used in composition of the seminar classes, including cross-grade, grade-level, all-girl, and all-boy groups. During the remainder of the school week, students spend their time in regularly assigned classrooms. The program emphasis is on aiding students in the development of processes and skills

Program Design (continued)

which may be used as tools in the utilization of the higher levels of thought. The operation of the more common kinds of electronics media used in the storing and disseminating of information is an exciting part of the student's experiences. Skills in speaking and listening are also cultivated, including the ability to speak logically and listen critically. The need for skills required in research and organization of materials is also provided for in the experiences afforded the young participants.

Stimulating Creativity

The Memphis program is designed so that diligent attention is paid to the nurture and stimulation of creativity, which frequently lies dormant within the intellectually gifted student. A visitor to seminar classrooms would find a variety of creative activities in progress at any given time. For example, a group of sixth graders might be rewriting a classical drama, phrasing it in contemporary language. Several youngsters might be filming scenes at the Memphis zoo in preparation for a documentary. Some might be interviewing conservationists in connection with a study of ecology. The informal atmosphere of seminar sessions, plus a newly defined role for the seminar teacher, is conducive to creative growth.

Valuing the Individual

Ideally, in the seminar setting the student operates as a self-motivated learner. He is in the program by choice. No grades are given, and no textbooks are used. To more effectively facilitate individual student interests, Memphis CLUE, in its second year of operation, consolidated several of its seminar centers, reducing the number from seven to four. The object was to pool teacher strengths in such a way as to better accommodate more individual study. Currently, centers are located at Richland, Colonial, Hamilton, and Corning Elementary Schools.

Group Interaction

Although every student is valued as an individual with specific interests and capabilities, it is also recognized that students often need to learn methods of effectively communicating, negotiating, and in other ways interacting with one another. The discussion group, then, is a central feature of the seminar class. Within this informal group setting, each participant encounters experiences which cultivate his awareness of the feelings of self and others. He learns the various ways in which individuals express themselves. He becomes involved with the group in decision-making and problem-solving activities. He learns, through trial and error, skills for negotiating when an impasse is reached.

Involvement with the Community

Memphis CLUE has made a conscious effort to develop among teachers, parents, school administrative personnel, and the lay public, an increased understanding and awareness of the characteristics and needs of gifted children as well as objectives of the CLUE program. Interested persons are encouraged to observe the program. Staff members often participate in panel discussions or appear on radio and television to discuss CLUE. Many community organizations have provided invaluable assistance. For example, the Memphis Pink Palace Museum has worked in a continuing capacity to arrange special studies, complete with research and discovery sessions. Area universities and colleges are liberal in allowing groups to use their personnel and facilities. The Memphis Art Academy has assisted in identification of students gifted in art and has provided a classroom for art seminar sessions. Local government organizations are often visited by students, and Federal governmental agencies are most cooperative in arranging field trips and interviews. In addition, members of several women's organizations have aided CLUE by providing transportation, classroom assistants, and resource persons (40).

INFORMATION MODELS

School District Brochure

Programs for the Gifted
San Diego City Schools
1972- 73

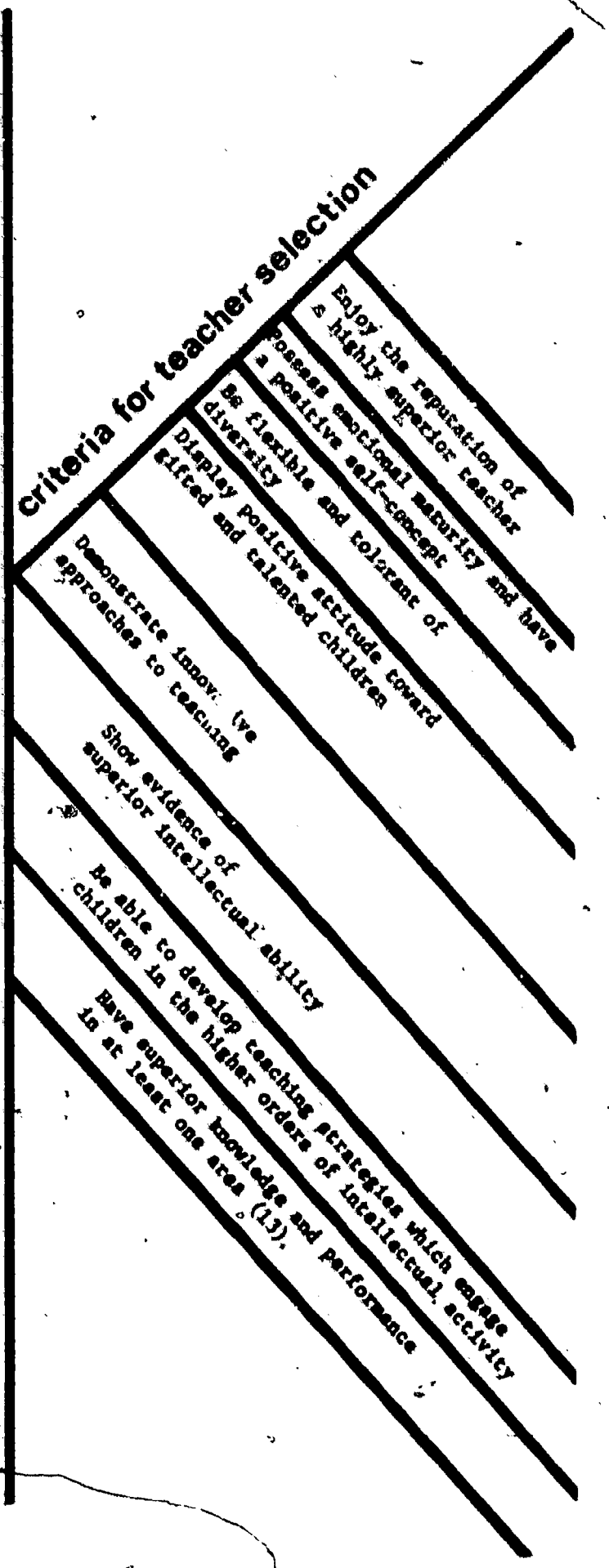
Grades 3 - 6	Grades 7 - 9	Grades 10 - 12
CENTERS FOR GIFTED (37 schools)	ADVANCED CLASSES Achievement and teacher/counselor Recommendation	ACCELERATED, ADVANCED AND HONORS COURSES Lead toward Advanced Placement examinations
CLUSTER CLASSES	CLUSTER CLASSES	SELF-INITIATED STUDIES
SUMMER ENRICHMENT COURSES	SELF-INITIATED STUDIES	EXPLORATORY WORK EXPERIENCE
EDUCATIONALLY HANDICAPPED CLASSES FOR GIFTED Academically underachieving or emotionally handicapped (two classes)	SUMMER ENRICHMENT COURSES	SUMMER ENRICHMENT COURSES
SEMINAR CLASSES (Highly gifted, five schools)	SEMINAR CLASSES (Highly gifted) Double-period English, social studies (seven regional centers)	INDEPENDENT STUDY (Highly gifted) (Five regional centers)
	INTERGRADE COUNSELORS	EARLY COLLEGE ADMISSION UCSD CSU, SD USIU USD
		CLUSTER CLASSES
		INTERGRADE COUNSELORS

PROGRAM PROGRESS

There is no insurance that guarantees against the failure of a program. However, establishing and adhering to certain policies do enhance the probability of a program's success.

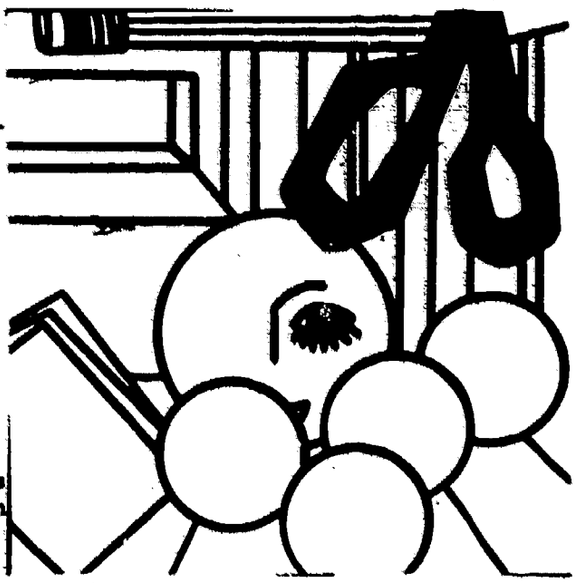
The selection and assignment of teachers and administrators who are adequately trained in methodology and well versed in the philosophical ideals relevant to the needs and characteristics of the gifted and talented represent a necessary prerequisite for a successful program. The diversity of interests and skills among the teachers allows for teaching/learning situations which attend to the individual differences among the gifted and talented. Although the concept of teachers who are facilitators rather than directors of learning prevails in all education, teachers who can act as a resource for learning are given high priority for appointment to work with the gifted and talented. A teacher who perceives himself as an initiator rather than a dispenser of learning is also more apt to work comfortably in releasing students to be self-directed.

Rendering services to the program's staff is directly connected to the quality of services received from them. Services which offer teachers assistance without promoting uneasiness or guilt are profitable and growth-producing. Where teachers can see the opportunities available to them and understand that soliciting any type of help is to their advantage, consultant services are beneficial. When consultant services are pragmatic and non-judgmental, teachers are more receptive to them. Consultation can be offered on an individual or group basis, or it can be a scheduled classroom visitation or demonstration. A resource team composed of teachers who have expertise in given areas can be made available to teachers on an as-needed schedule. Teacher-to-teacher visitations are a source for shaping and validating the teacher's assessment of her own prowess as an educator. The development of a library or center where program materials and professional books can be housed precipitates circulation and concern for instructional aides to affect the teaching process.



INSERVICE EDUCATION PLAN

A system devoted to raising the level of the teacher's competencies in working with the gifted and talented is a fundamental aspect of a total program design. The following concepts, recognized as being paramount to a program for the gifted and talented, are also necessary for structuring inservice education for teachers: diverse learning opportunities, exposure to a variety of ideas and theories, and freedom to adopt and use ideas in a self-stylized manner.



The inservice program must satisfy the requests of teachers as well as the perceived needs of the program administrator. Obviously, planning that is a cooperative venture of the staff responsible for the program will fulfill this requirement.

Basically, inservice opportunities can be classified according to the different types of workshops held for teachers: input workshops, dissemination workshops, and production workshops. The major purpose in differentiating these workshops is to use them as a reference point for developing a comprehensive plan for inservice which assists teachers in understanding and obtaining the appropriate tools for attending to the gifted and talented.

Input Workshops	Teachers are presented with information that introduces, develops, or reinforces strategies for teaching or learning. There can be many sources of input for teachers. Outside consultants and program teachers can be employed for this task.
Dissemination Workshops	Teachers are provided with new resources or materials to use in the learning environment. Teachers can be encouraged to share and exchange ideas which have worked for them. Publishers can display and explain products which can be used in the program.
Production Workshops	Teachers are involved in producing materials, guides, and other resources which augment the program. Their task can be to develop new materials or to spend their time in copying exemplary material and models which are useful in teaching the gifted and talented.

An inservice education program that is most conducive to helping teachers is one which operates on a continuous basis throughout the school year and makes teachers aware of the time, place, and topic to be offered. More and more attempts are being made to discover ways that teachers can attend inservice workshops other than on an after-school basis. Money can be allocated to pay for substitutes to release teachers during the school day or to pay them for their participation after school or on Saturdays. Receptivity to workshops depends on scheduling them at a time when teachers are most alert for this experience.

From its inception the Escondido program has placed major emphasis upon the teacher as the vital instrument for effective changes and improvement in the classroom. We subscribe fully to the conclusion presented in the California Project Talent Final Report in 1969:

> The adequate implementation of an operative enrichment program. . . goes to the root of educational change when it focuses upon changes in teacher behavior, knowledge, and professional insightfulness. [Through a strong inservice training program for teachers] the teacher rather than the pupil becomes the real recipient of innovative program change. It is hypothesized that recommended changes in teacher attitudes, behavior, and knowledge will directly result in exemplary curriculum change, additional incorporation of new content into the curriculum, more insightfulness for the academic problems of pupils, better communication, and transfer of more effective teaching techniques across classroom boundaries.

The emphasis in our inservice for MAL teachers has been upon changing teacher behavior and teaching methods. We have offered and continue to offer inservice experiences which are specifically designed with those stated objectives. Examples of such inservice courses are (a) 30 hours of work in Dr. Richard Suchman's Inquiry Training, (b) 16 hours in Junior Great Books Leadership, (c) 60 hours of class sessions in Dr. Hilda Taba's "Teaching Strategies To Develop Children's Thinking," (d) 40 hours of class sessions in BASICS (Building and Applying Strategies for Initial Cognitive Skills) based upon the studies of Dr. Irving Sigel.

The Teaching Strategies and BASICS classes are offered each year, and presently 150 district teachers have participated in these intensive inservice classes. BASICS is aimed at the 4-9 year old group. Teachers trained in the BASICS program are able to design and conduct learning activities which enable children to develop a wide range of cognitive skills, ranging in complexity from observing to generalizing. Teachers trained in the Teaching Strategies Program are able to design and conduct learning activities in three areas which are of vital importance in the development of the ability to think: concept development, interpretation of data, and the application of generalizations. There is positive statistical evidence that the Teaching Strategies Program changes teacher behavior and attitudes and helps students improve significantly in the areas of reading and vocabulary skills.

The rationale for conducting these particular inservice programs is based upon the research finding that teachers get from children what they seek. If their purpose is to get higher levels of thinking from students, they must know the appropriate strategies. These strategies can be learned and have been proven to be effective in raising the level of children's thinking. With increasing skill in using changed teaching techniques comes a marked change in attitude from "teacher as conveyor of information" to "teacher as facilitator for the development of higher-level mental processes." These are the qualitatively different teaching methods so important in teachers of the gifted (50).

To: The teachers of gifted students

A N N O U N C I N G

T H E C R E A T I V I T Y W O R K B O O K

... Developing skills of problem solving (cause and effect, analyzing, comparing, describing, associating)
... Reinforcing mathematics concepts
... Pre/post testing for progress

Attached for your perusal is the workbook intended for use with gifted students as an individual or small-group assignment.

A workshop has been planned for Thursday, January 18, at the Oak Street Library -- 3:30 to 4:30 P.M. In this way we will introduce the materials.

Other options available to assist you in using the materials include
... In-classroom demonstration with your students in order to get you started using the materials
... Assistance in setting up a learning center with these materials in your classroom
... Consultations about the materials at your convenience before or after school or lunch time

Check the alternatives, days, and times you wish. Detach and return this form indicating your preference for using the materials.

Name: _____
School: _____
Grade: _____

Preferences:
__In-classroom demonstrations with students
__Setting up a learning center with these materials
__Consultation about these materials
__Send ____ sets of the materials to me

Days	Time (Please list the time block which is best for you.)
Monday	_____
Tuesday	_____
Wednesday	_____
Thursday	_____
Friday	_____

Problem

The gifted student refuses to do in-depth work, preferring the assignments which are extremely simple.

Possible Solutions

1. Ask him to serve on a committee to plan optional assignments. Include on the committee class members who are creative and enjoy challenging work.

2. Arrange group assignments and include him in a group of students who get satisfaction from in-depth study.

3. Occasionally give simple assignments.

4. Work with a committee with him as a member to set up standards for types of assignments.

5. _____

6. _____

WORKSHEET — PLANNING INSERVICE EDUCATION

1. Members of the Planning Team

2. Analysis of Needs for Workshops

Teacher	Administrator	Stu

3. Schedule of Inservice for the School Year _____

Type (Input, Dissemination, Production)	Topic	Leaders	Date	Place

WORKSHEET -- PLANNING INSERVICE EDUCATION

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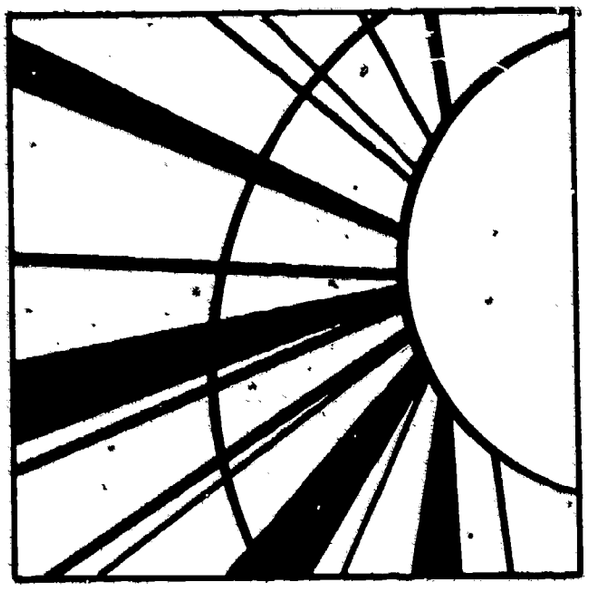
	Administrator	Student

dule of Inservice for the School Year _____

Type (Dissemination, Production)	Topic	Leaders	Date	Place	Time

THE INSERVICE KIT

Inservice Kit



An effective inservice program encourages teacher interaction and stimulates professional growth. Communication and information are essential to an effective inservice session. The following pages represent a collection of topics to be used as transparencies for introducing information relative to program planning, curriculum development, processes of teaching and learning, and self-assessment. These transparencies can also be used to stimulate discussions and actions regarding the direction, scope, and evaluation of a program for the gifted and talented. They are intended to be used to assist those responsible for facilitating the planning and implementation of a program in organizing and presenting the inservice workshop. They can be used separately for individual inservice sessions or they can be used as a package to familiarize educators, parents, and community members with the intent, nature, and purposes underlying a gifted and talented program.

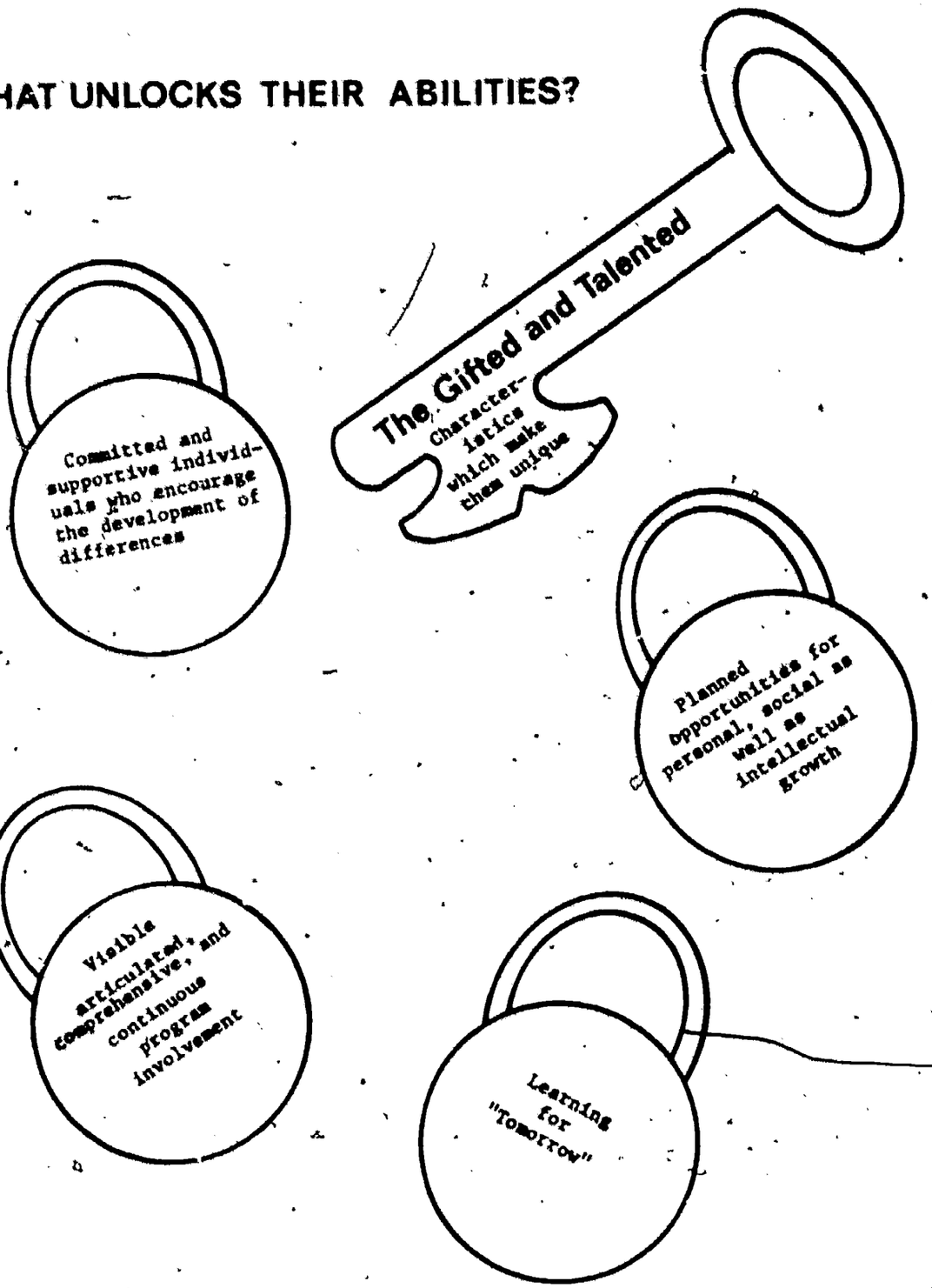
It should be noted that the pages to be found in the inservice package can be augmented and/or supported by using the narrative, worksheet, or model pages included in this handbook. The worksheet pages in the various sections of the handbook provide inservice participants with directed opportunities to practice and develop ideas for themselves and the students they teach.

Following is a listing of the inservice package pages and topics which correlate the titles of these pages:

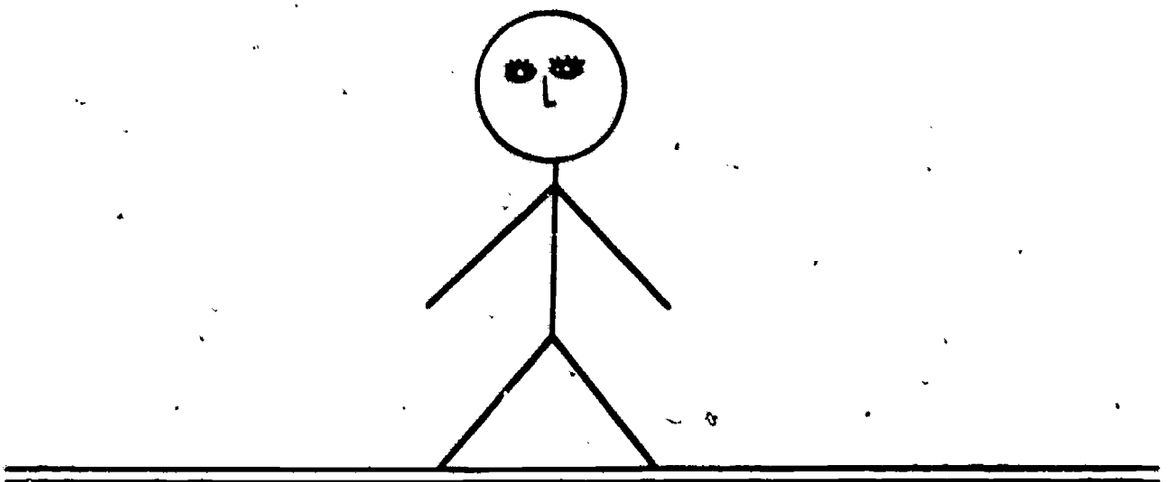
INSERVICE PAGE TITLE	TOPICS FOR INPUT AND DISCUSSION
What Unlocks their Abilities? Where Do You Stand?	- Need for a Program - Components of a Program - Philosophy Governing the Education of the Gifted and Talented - The Need To Accommodate Perception and Behavior to the Gifted and Talented
Administrator's Support Shaping the Program	- Differentiated and Special Roles of Personnel To Effect a Program - Accountability of Personnel - Selection of Personnel - Involvement of Personnel
Goals for Providing Unique Learning for the Gifted	- Planning for a Program - Differences between Traditional and Differentiated Curriculum - The Needs of the Gifted and Talented - Selection of Curricular Experiences

INSERVICE PAGE TITLE	TOPICS FOR INPUT AND DISCUSSION
Differentiated Curriculum for the Gifted and Talented	- Teaching Learning Models - Organizing for the Teaching-Learning Experience - Evaluating Teacher Effectiveness - Selecting Appropriate Materials - Developing Learning Activities
Teaching-Learning Cycle	- Characteristics of the Gifted and Talented - Specifying Processes of Learning - Determining Prototypes - Identifying and Developing - Enrichment Activities - Special Needs and Types of Giftedness
The Learner's Triangle	- Principles of Learning as They Apply to the Gifted and Talented - Motivation Techniques - Record Keeping and Reporting - Identifying Content Areas and Concept for the Gifted and Talented
Things They Say. . . What Would You Say?	- Affective Education for the Gifted - Utilizing Pupil Personnel Services with the Gifted - The Teacher as a Counselor - Self-Concept and Individual Frame of References for the Gifted and Talented - Expectations for the Gifted and Talented - Student Involvement in Program Planning - Communicating to Parents

WHAT UNLOCKS THEIR ABILITIES?



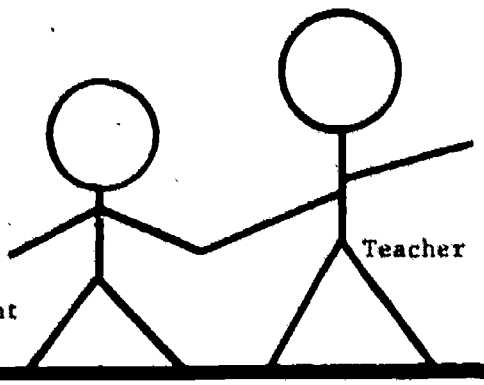
WHERE DO YOU STAND?



Expect predetermined answers.	Accept diverse responses.
Compete intellectually.	Acknowledge student expertise.
See the gifted as a homogeneous group.	Stress individual needs of the gifted group.
Specify more and harder work as enrichment.	Qualify thinking process as enrichment.
Be uncomfortable about "special" attention for a specific group.	Recognize the difference of the gifted; require specific curriculum and progress development.
Stress need for materials as the vehicle for attending to gifted.	Emphasize learning process and exposure to experiences as the principles for education of the gifted.
Think gifted need less time and effort than other children.	Realize the characters of the gifted require preparation, effort, and energy.
Feel program is imposed and/or mandated.	Support the need of differentiated education for the gifted with research, philosophy, and objectives.

Inservice

ADMINISTRATOR'S SUPPORT



ACCEPTANCE

Differences of the gifted population

Beginning without the necessity to have all the answers

Designating of different roles for specific individuals

Responsibility for the program and its development

RECOGNITION

Need for action

Assessment of concerns, alternatives, goals

Understanding of underlying concept of programs for the gifted

PLANNING

Involvement of students, parents, staff

Establishment of priorities for implementation

Evaluation of time, structure, staffing

Formulating documents

DEVELOPMENT

Providing inservice education

Obtaining resources

Designing curriculum

Deciding on personnel and materials

Planning evaluation procedures

INTERPRI

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Involving communit

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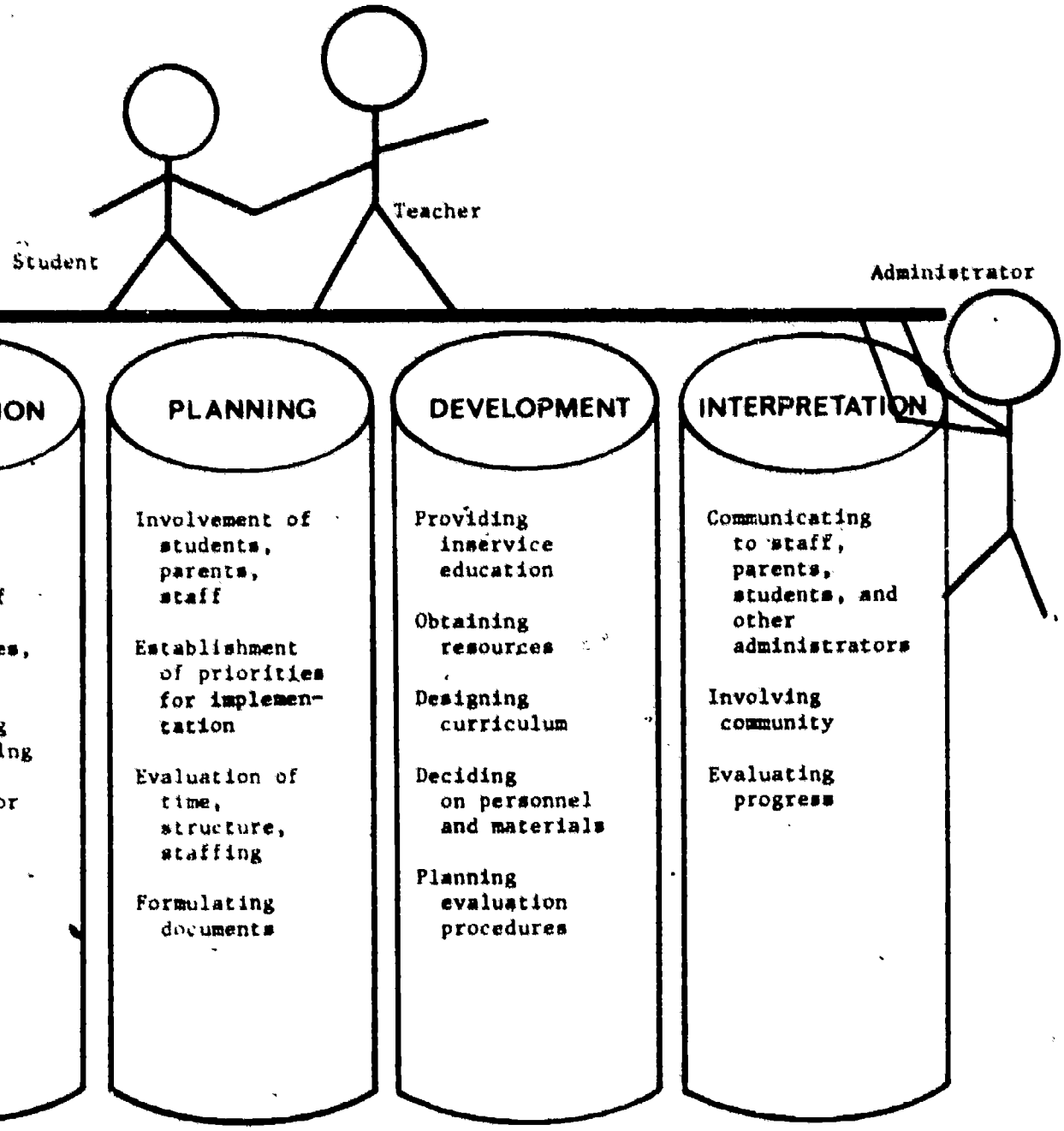
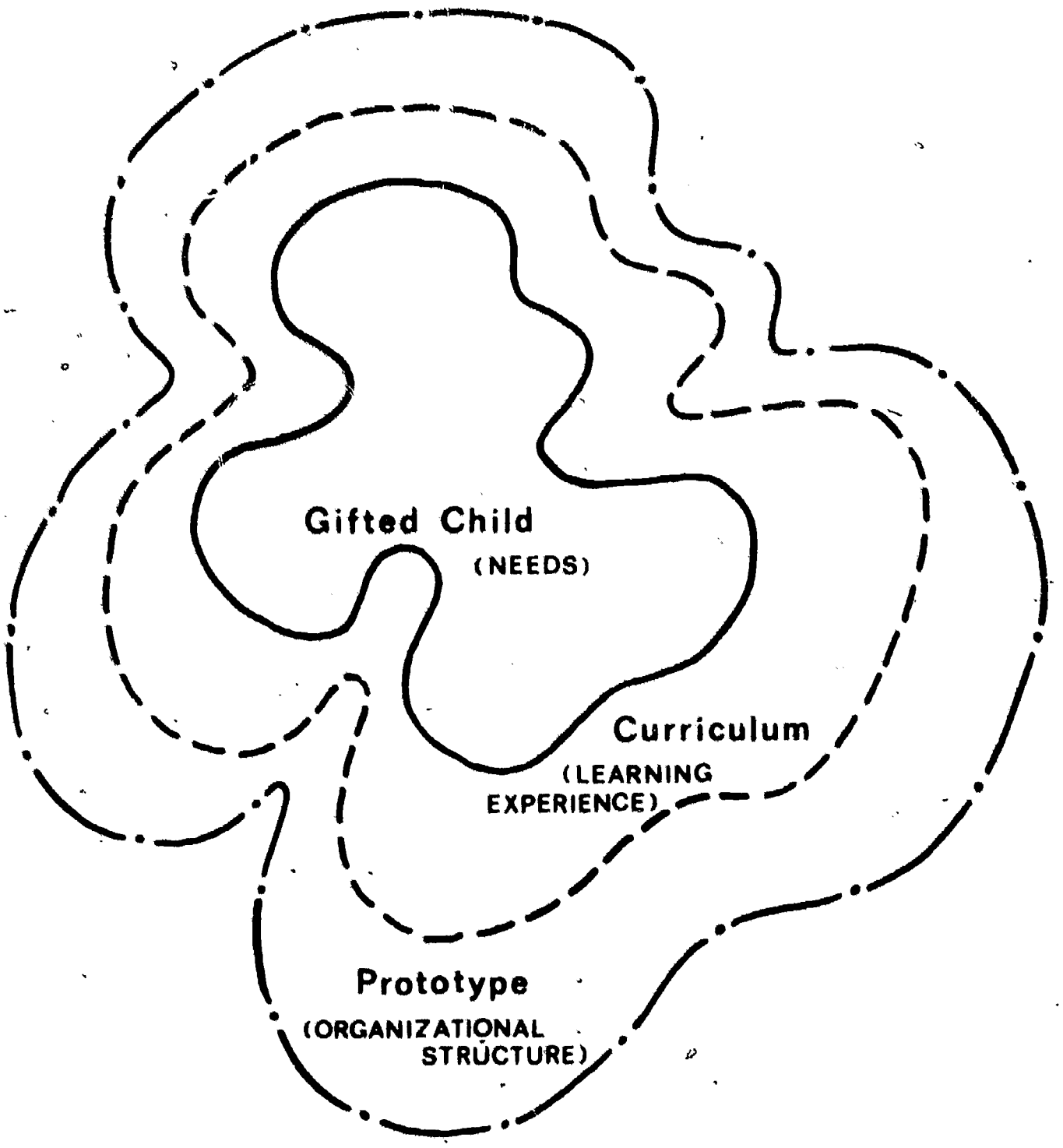
Inservice

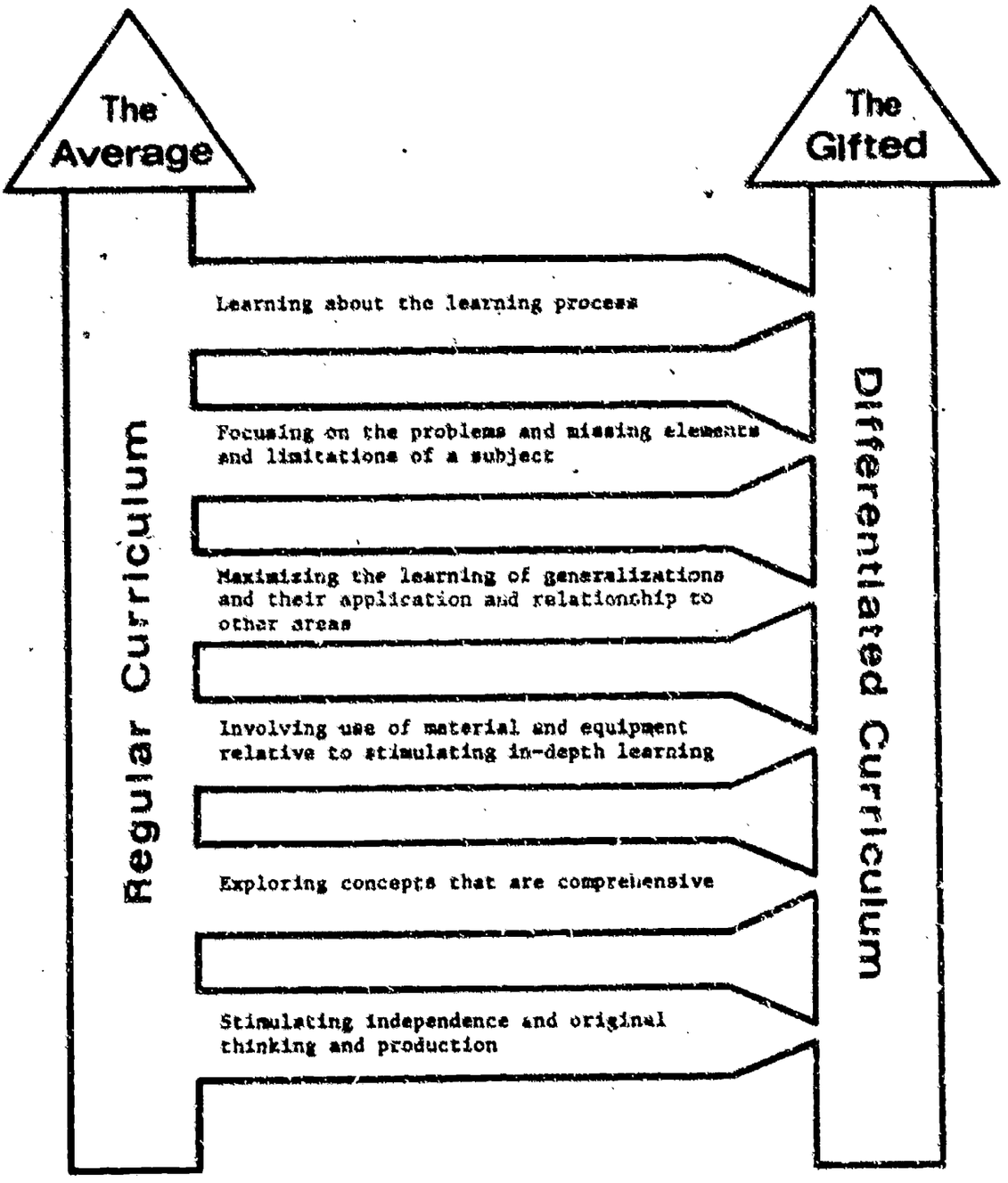
NISTRATOR'S
PPORT

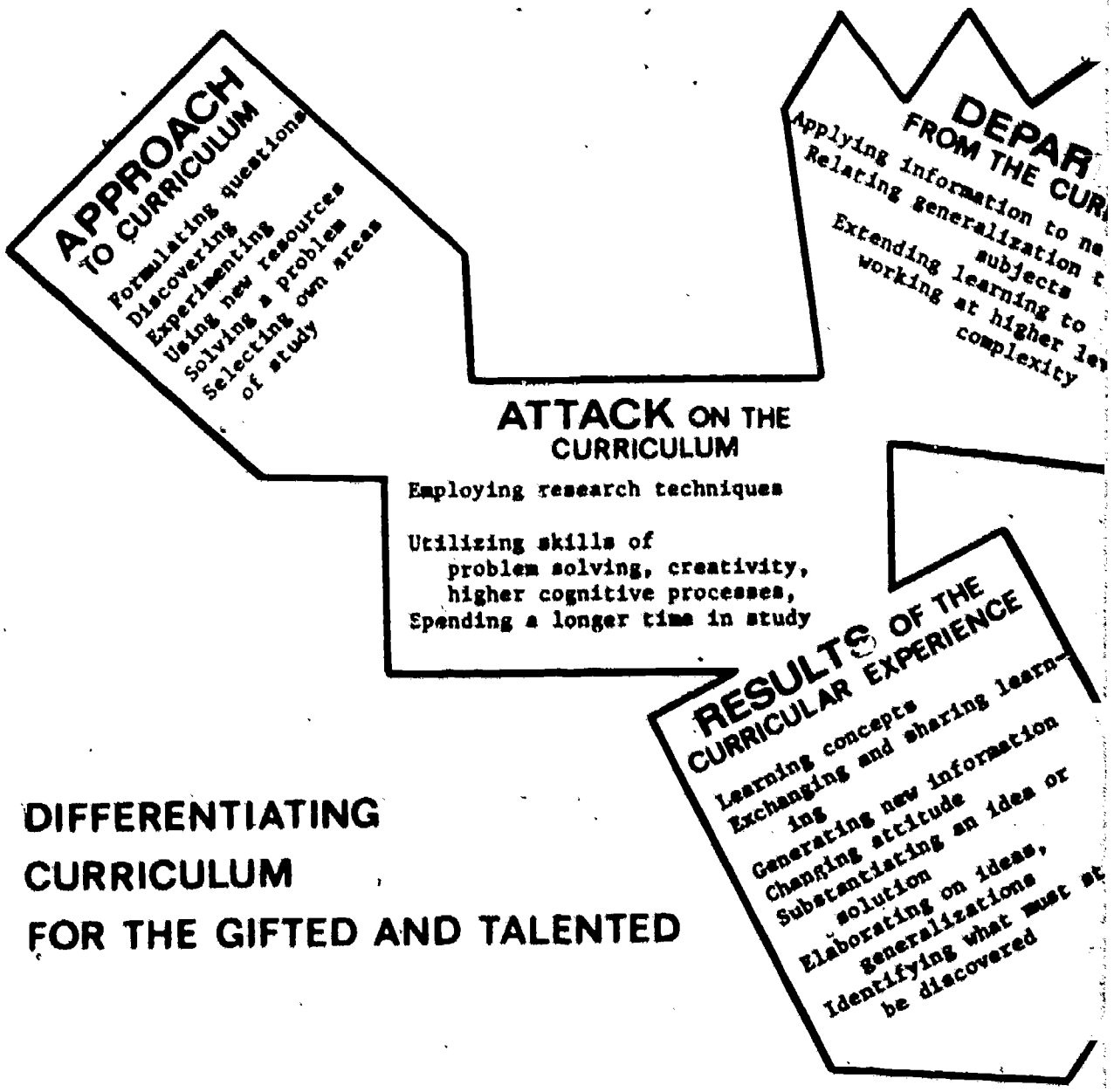


SHAPING THE PROGRAM

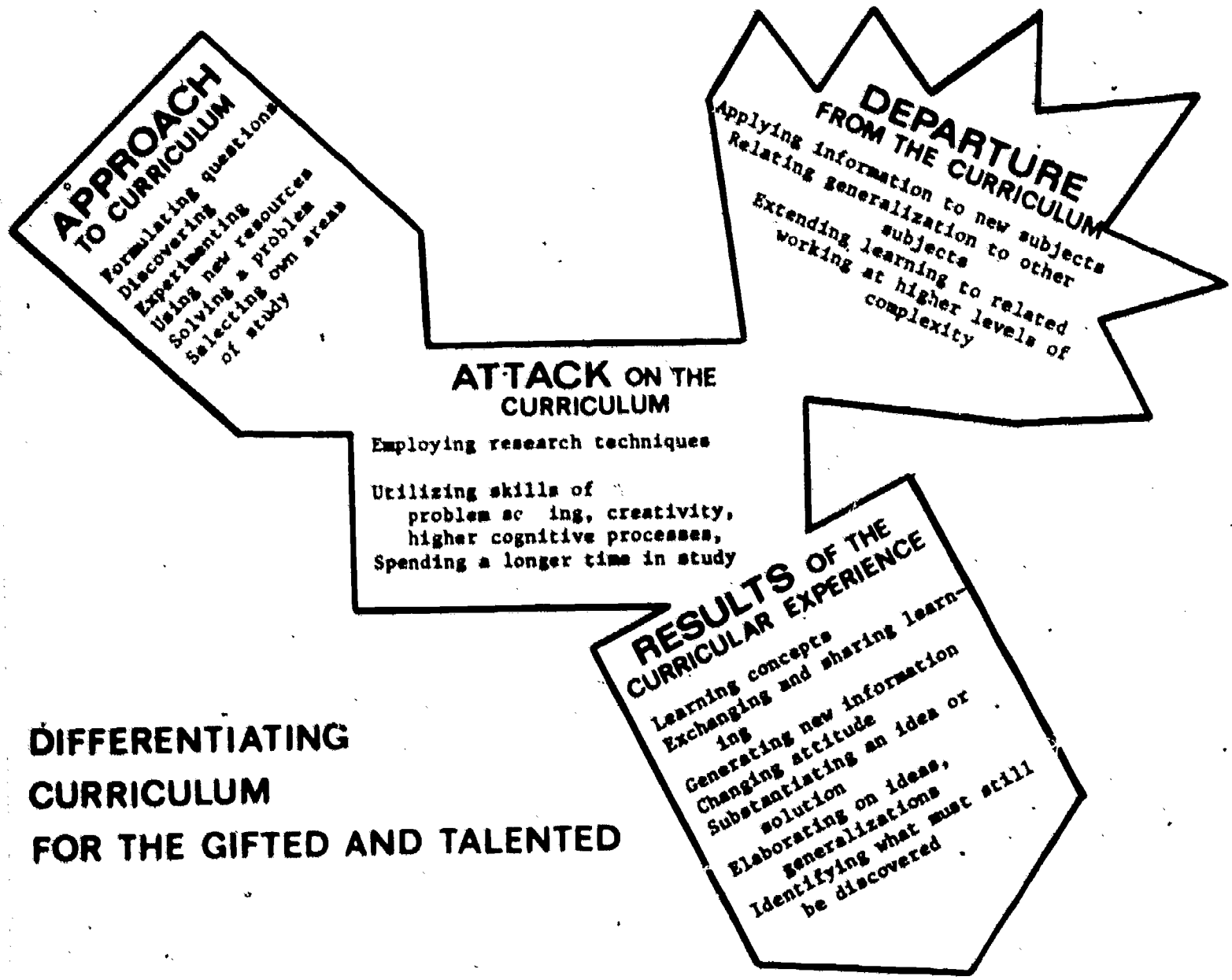


GOALS FOR PROVIDING UNIQUE LEARNING FOR THE GIFTED



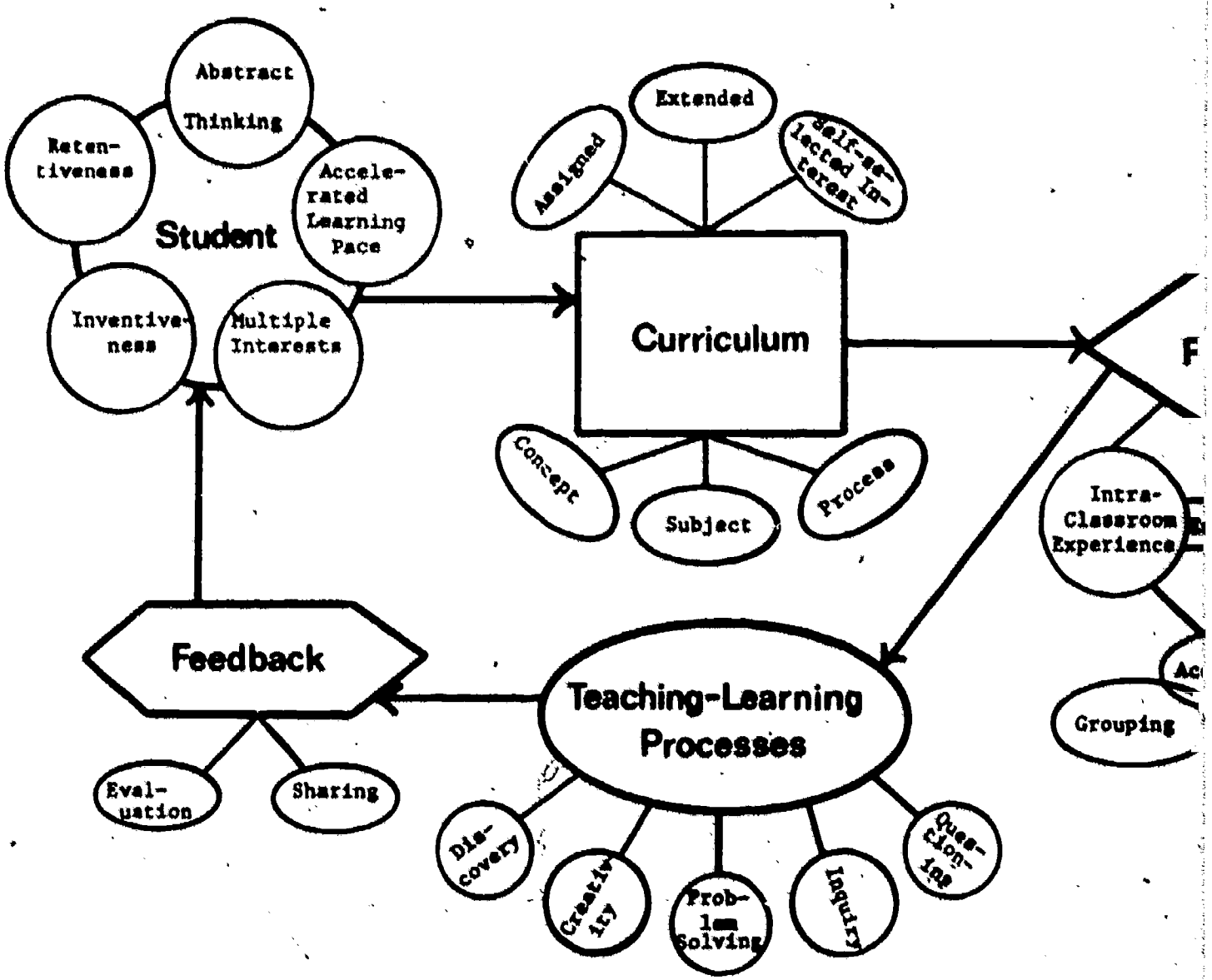


DIFFERENTIATING CURRICULUM FOR THE GIFTED AND TALENTED

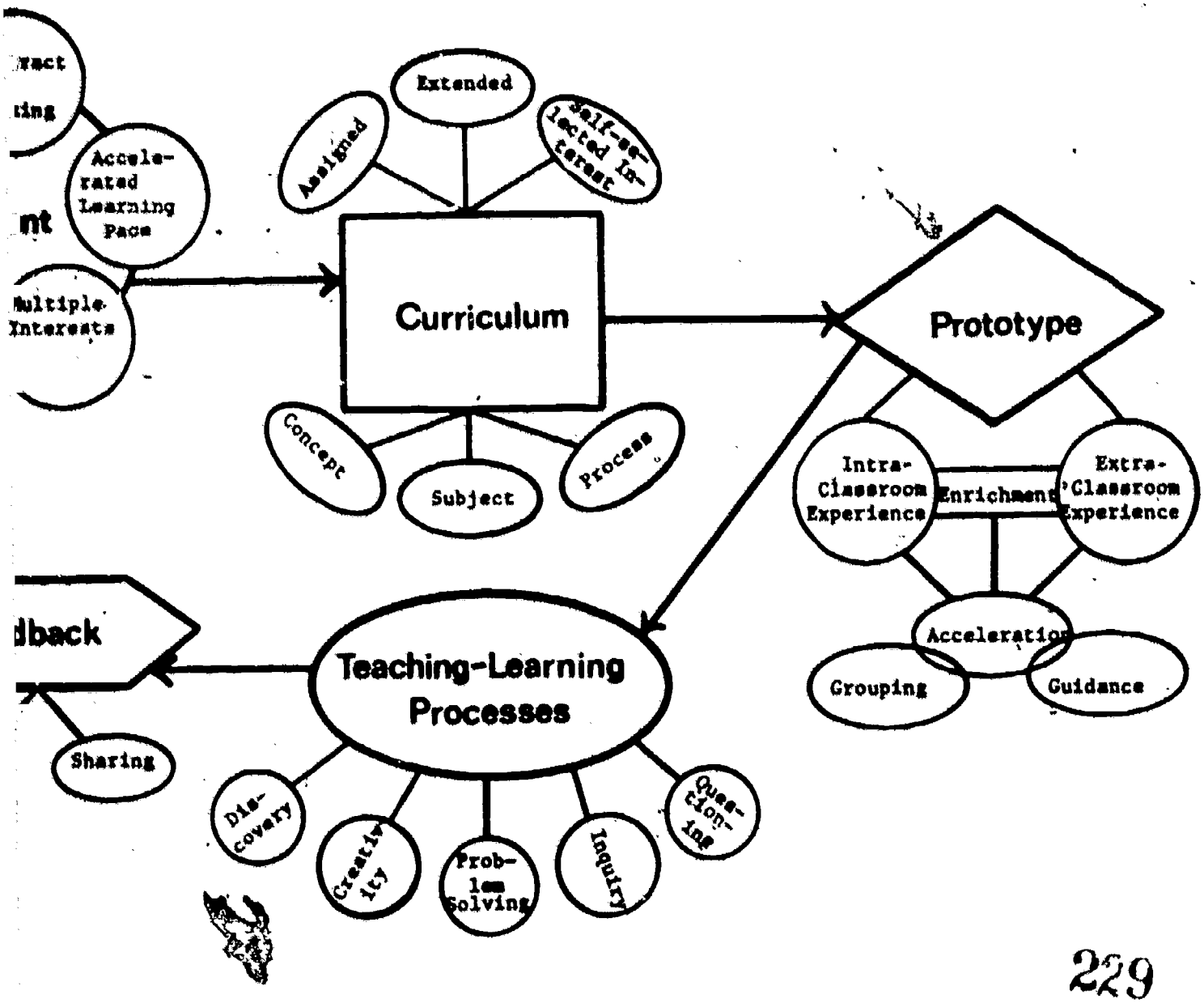


DIFFERENTIATING CURRICULUM FOR THE GIFTED AND TALENTED

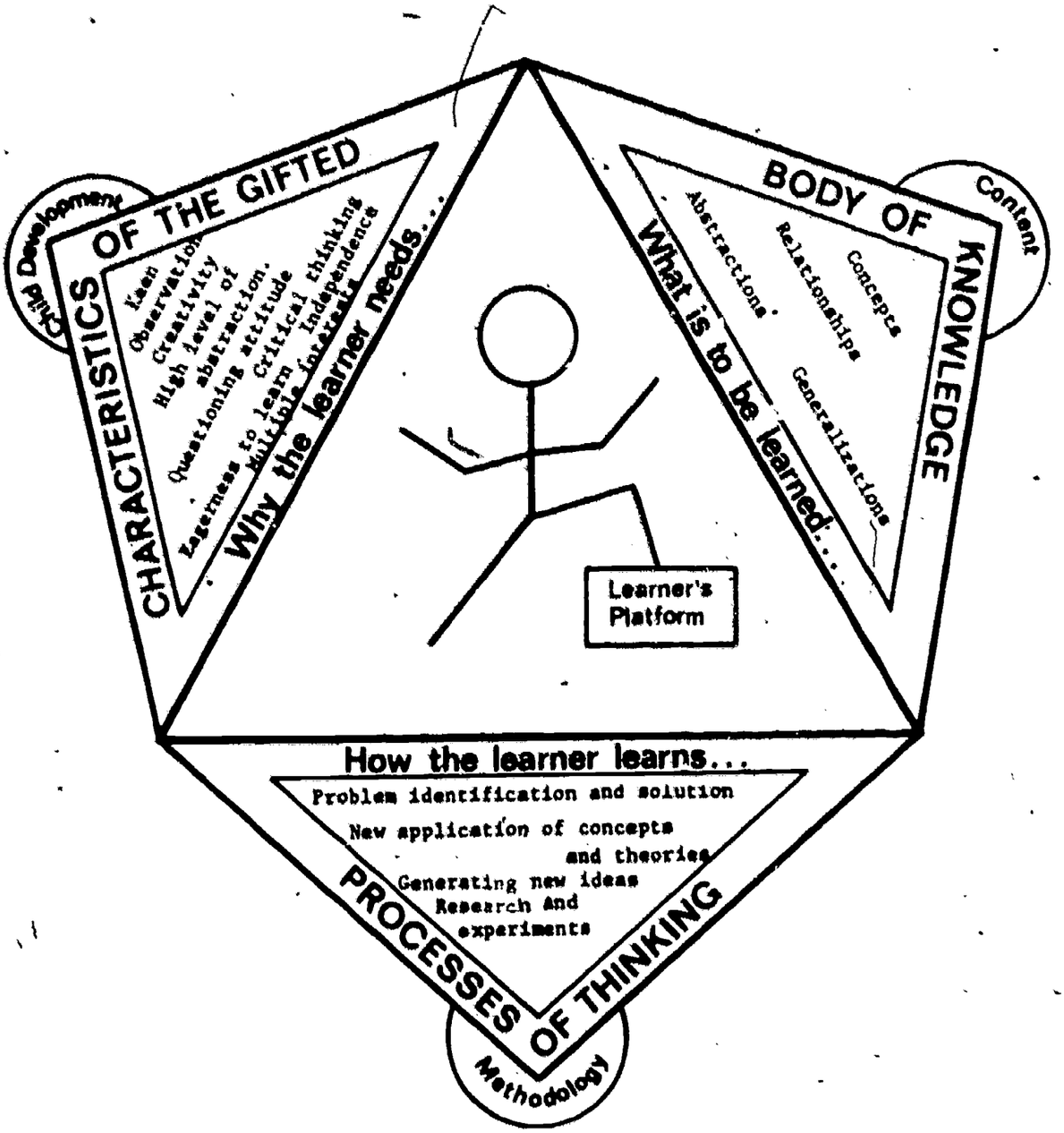
TEACHING-LEARNING CYCLE



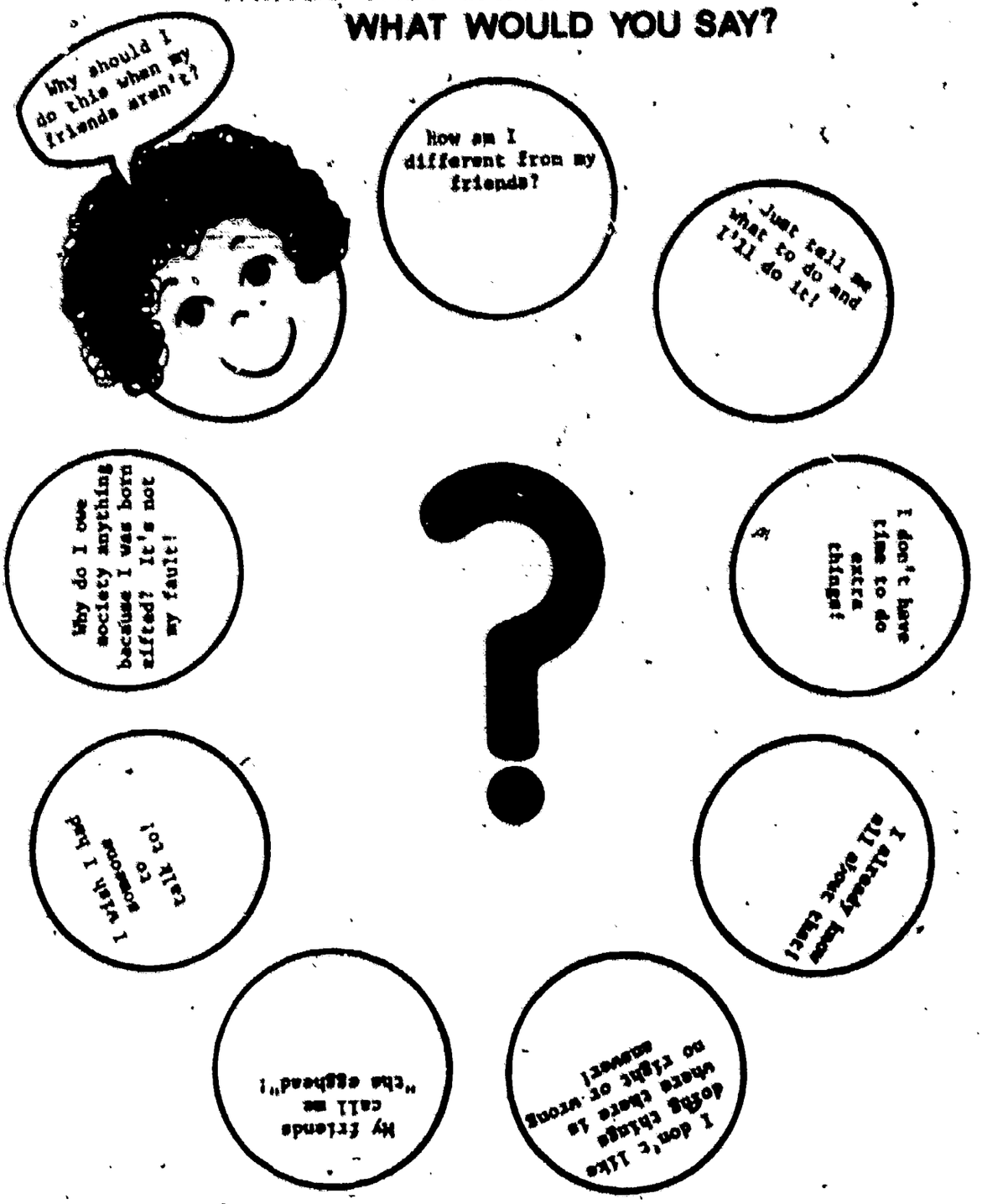
TEACHING-LEARNING CYCLE



THE LEARNER'S TRIANGLE



THINGS THEY SAY...
WHAT WOULD YOU SAY?



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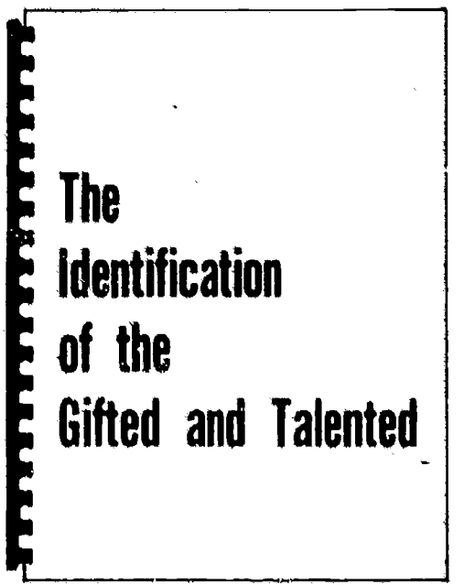
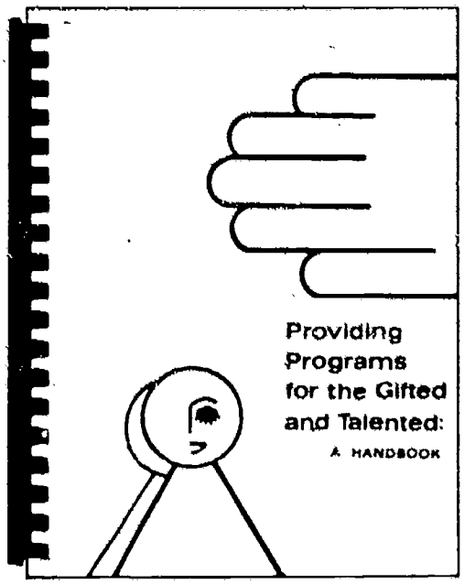
Gifted and Talented: Handbooks

National/State Leadership Training Institute on the Gifted and the Talented
Civic Center Tower Building
Suite PH-C
316 West Second Street
Los Angeles, California 90012



The Identification of the Gifted and Talented — by Ruth A. Martinson; An Instructional Syllabus for the Education of the Gifted and the Talented. This syllabus presents a rationale for the identification of gifted students, suggests appropriate identification procedures, and gives examples of materials used by various school districts. — **$5.30**



Providing Programs for the Gifted and Talented — A Handbook (Including Worksheets and Models) — by Sandra N. Kaplan. An Instructional Syllabus for the National Summer Leadership Training Institute on the Education of the Gifted and the Talented. This handbook has been written for those initiating or expanding a program for the gifted and talented. It presents an overview of the features and procedures which need attention in designing and implementing a program. It is intended as a handbook or supplemental resource. — **$5.70**

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Therefore, EPDA programs must be operated in compliance with this law.

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