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Developing a Guide to Implement a Program through the Library Resource Center for Academically Talented at the Elementary Level

Linda Rash

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DEVELOPING A GUIDE TO IMPLEMENT A PROGRAM THROUGH
THE LIBRARY RESOURCE CENTER FOR ACADEMICALLY
TALENTED AT THE ELEMENTARY LEVEL

by

Linda Rash

July, 1984

To provide for the unmet needs of the academically talented at Southgate Elementary School in Kennewick, Washington, a pull-out program was written and implemented through the library resource center. Research related to gifted/talented characteristics, identification and selection techniques, curriculum development, and teachers of the gifted was evaluated and applied to the program organization. Benefits of the program to students, parents, staff, and the community were numerous. Suggestions were made for application in other school settings using the developed guide as a resource.

ACKNOWLEDGEMENTS

This project is dedicated to Jack Shopbell, a truly "gifted" principal, who devoted much time, support, and guidance to help make FOCUS a successful endeavor.

To Byron DeShaw in appreciation of his patience and continuing help through the course of my MA work--a giant thank you.

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CHAPTER ONE

Introduction

Gifted children are our nation's neglected minority. This simple, but powerful, statement leaps from a myriad of articles, researchers, school district experts, parents, and legislators across the country. It was this implication that change was needed, coupled with the fact that no formal program existed in the district, that motivated a two-year study and implementation of a gifted program at Southgate Elementary School in Kennewick, Washington.

It was determined that the Southgate librarian would be the gifted program planner, teacher, and administrator. She had spent six years as a classroom teacher, during which time the inequities in provisions for these students were evident to her. Also, the library instructional schedule allowed for free blocks of time for teaching special classes and program management.

The library resource center at Southgate was regarded as the center of the educational process. Support by the principal and staff was enthusiastic in helping mold the facility into a place where all were welcome to pursue a variety of learning experiences. This attitude promoted the furthering of endeavor to provide advanced learning opportunities for gifted students.

Definition of Terms

For the purposes of this study and program implementation, two definitions were selected from the many available. From the National Office on Gifted and Talented, "Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or service beyond those normally provided by the regular school program in order to realize their contribution to self and society." (17:3) Washington State's definition came from the Office of the State Superintendent of Public Instruction and stated, "A gifted child is defined as one who has natural potentials that are manifest in extraordinary academic competence and/or creative talents. Academic competence is defined as superior performance as measured by any systematic (standardized) procedure for making inferences about the ability of an individual. Superior performance, for operational purposes, is defined as a score at or above the 98th percentile on an accepted standardized procedure." (17:3)

Although it was an acknowledged fact that there were many Southgate students who possessed talents of outstanding quality, the realities of limited personnel, time, and resources forced the scope of the program to center on approximately 3 percent of the school population, who could be identified as academically talented. The theory was

widely held among the administration and staff that it was this group which had the least opportunity of fully exercising its potential.

Selection of students for the program was an initial organizational detail of major proportions. Information was gathered from other districts regarding appropriate methods of involving teachers and parents in a nominating process. (Forms used for this purpose are included in the program guide.) The tests to be used with the nominated youngsters were selected on the basis of availability and moderate cost.

The CAT (California Achievement Test) was chosen to measure cognitive intelligence and convergent thinking abilities. One definite advantage of this choice was that many candidates for the program had already taken this test within a recent time period and the scores were readily available. The test was administered to groups of students who had not taken it before. The second instrument chosen was the Slosson Intelligence Test, which would measure mental maturity. This test was administered on an individual basis and was very time consuming; however, it was the last step of the selection process and a number of candidates who were nominated were found not to qualify. At the conclusion of the nomination/testing phase, it was determined that the program could accommodate those who had demonstrated an I.Q. score of 130 or higher. This number was 25, which was 5 percent of the Southgate School population. It was

also decided that, as openings occurred in the program, efforts would be made to include precocious second graders.

As selection for the program began, the staff requested an official name to avoid sensitivity regarding the "gifted" label. Since this was the year that Southgate had chosen to "focus" on gifted students, FOCUS became the program's name. Several months later, FOCUS became an acronym--For Our Challenged Unique Students.

CHAPTER TWO

Research

Introduction

Most relevant research which aided this endeavor was found in periodicals. More technical aspects of research such as right brain/left brain orientation studies were considered; however, findings of a more practical and applicable nature were the type on which the most time was spent. This review of literature reflects that premise.

Support for the Gifted

Support for special educational programs for the gifted has fluctuated sporadically during the last three decades. Advocates in favor of movements to advance the cause of the gifted student made themselves heard after the Soviet Union's launching of Sputnik in 1957. The increase in special offerings in the sciences and higher level thinking areas was short-lived, however.

Another move toward egalitarian education for the gifted resulted after Congress mandated a study of gifted students in 1969. The results of this study were compiled into the Marland Report. Dismay was rampant within the education community over the findings of this document:

1. The schools were adequately serving fewer than 4 percent of the 2.5 million gifted and talented population.
2. Only 10 states had full-time directors of gifted education, despite a high correlation between full-time effort at the state level and excellence in programming.
3. Only 10 universities had graduate-level programs specializing in gifted education.
4. Fifty-seven percent of school administrators were unaware of any special needs of the gifted and talented population.
5. A high percentage of dropouts were actually gifted children who left school because of boredom with a lockstep system geared to the average child.

(13:16GS)

A positive side effect of the distressing findings of the Marland Report was the creation of the Office for the Gifted and Talented (OGT) within the United States Department of Education. Although there is still need for improvement in educating the gifted, the last decade has definitely been one of growth.

A recent Office for Civil Rights survey of school districts indicates that our schools are serving approximately 35 percent of the gifted population. In addition, 40 states have full-time directors of gifted education; the remaining states and territories maintain at least part-time consultants. The number of universities with graduate-level programs specifically in gifted education has expanded to approximately 26. Perhaps most important, many educators and

parents are now aware of the special needs of gifted children. (13:18GS)

Funding Concerns

Even though state funding has increased sevenfold in ten years, money available for gifted still prohibits many school districts from adequately servicing this special group of students. "In a policy paper presented to the U.S. Congress, James Gallagher, author of Teaching the Gifted Child, points out that federal expenditures for the handicapped are 200 times greater than for the gifted." (13:18GS) Many state governments hold our national administration responsible for the decreased or status quo levels of funding with their educational systems.

It was a financial problem in the Kennewick School District that prompted developing a building-level program for gifted using the barest minimum of capital outlay.

Identification

"A national survey found that 57.7 percent of the elementary and secondary school principals interviewed reported that they had no gifted students in their schools." (7:369)

It is difficult to grasp the idea that so many can still remain ignorant of the existence of gifted students. Just as there are numerous types of giftedness from intellectual to athletic ability, so there are lists of characteristic traits to aid in identification. (See Appendix A, page 29.)

Some of the most common characteristics in general terms include the following:

1. Capable of completing comprehensive assignments and assuming more responsibility.
2. Intelligence test ratings.
3. Physical characteristics.
4. Scholastic achievement.
5. Reading comprehension.
6. Inferential statistics.
7. Capability of high performance in
 - a. a specific academic aptitude.
 - b. the visual or performing arts.
 - c. leadership ability.
 - d. psychomotor ability.
 - e. creative or productive ability. (7:369-70)

In speaking of characteristics, a word of caution is advisable. No one student will be typified by a specific list. Rather, a great number of gifted students may demonstrate an atypical combination of traits from many lists.

Tests

The availability of a great number of excellent commercially produced screening instruments is valuable in the identification process. (See Appendix J, page 50.) In considering a choice of instrument, one must be cautious about the population to be screened. Tests are available to accurately and fairly evaluate students of racial backgrounds, other than Caucasian, as well as any student who

might come from a culturally deprived environment.

Use of an I.Q. test to identify giftedness has been criticized.

The most widely used weapon in the Gifted Hunt, the IQ test, is known to measure only a few selected aspects of intelligence while overlooking many others. Yet the test's frozen picture of ability fits with many gifted advocates' view of intelligence as a static, innate trait.....Some theorists still uphold this view, but many now see intelligence as "developmental"--changing and deepening according to a person's lifetime experience. (19:46)

A policy established within the FOCUS program was the option of retesting students each fall if requested by parents and/or teachers. This afforded students another opportunity to qualify if testing conditions, the student's health, or other variables were questionable previously.

Creativity

Because creativity as a characteristic denoting giftedness appeared so consistently in research discussing general traits, it seems appropriate to devote a separate section to its significance.

"A fairly good thumbnail definition of creativity is that it is the process of combining what exists into something new, whether in the form of an idea, a procedure, or a product." (21:1)

The process of creative thinking can be simplified into four main steps including: 1) definition of the problem or fact-finding; 2) brainstorming or idea-finding; 3) a pause to reflect on the implications of the first two steps; and 4) solution-finding.

The abilities which serve as vehicles to the creative process include: 1) fluency which is the ability to retrieve quickly large amounts of information stored in the mind; 2) flexibility which involves the ability to switch from one kind of thought to another; 3) originality which is the ability to originate unique or unusual ideas; and 4) elaboration which is the ability to embellish and/or complete an idea.

Creativity is most difficult to teach and elusive when it comes to measuring whether it has been taught. In conjunction with the organization of the FOCUS program, a set of guidelines on dealing with creativity were developed. The purpose of these was to be useful in the regular classroom as well as in the gifted program. Copies of these guidelines may be found in Appendix C, page 35.

Curriculum

Definitions

The key word to consider in the development of any curriculum for gifted education is "differentiated". Found in the most popularly accepted definitions of giftedness, differentiated curriculum is the major variable that makes instruction unique for gifted students. It goes above and beyond the regular curriculum in promoting thinking skills, creativity development, and divergent processes. "Qualitatively different," another desirable characteristic of gifted curriculum, is meant to be a safeguard against simply

assigning more work to the able student rather than significant growth-oriented learnings.

Within the guidelines of a differentiated, qualitatively different curriculum, the options for units of study are boundless and are limited only by the imaginations of students and teachers. Since one goal of most gifted programs is to help students become more self-directed, it is probable that much curriculum selection will be accomplished by the student himself.

Renzulli's Enrichment Riad Model

Research does indicate areas where some programs place their emphases.

The most frequently mentioned curricular focus for gifted/talented programs in the 1980-81 was creative problem solving. Joseph Renzulli's enrichment triad model and the development of higher-level thinking skills were second and third in frequency of mention. Computer education and various types of independent learning activities were mentioned next most often. (16:357)

Renzulli's model, as referred to in this quote, presents an interesting curricular option. While it is commonly held that enrichment should occur for all students in all classrooms, Renzulli proposes Type III enrichment for the gifted.

Type III Enrichment: Individual and Small Group
Investigations of Real Problems

This is the essential component separating programs for the gifted from those activities appropriate for all students, according to Renzulli. Whereas Type I and II activities are appropriate for all students, only gifted students will be able to sustain Type III activities. The goal is for students to think, feel and do as professionals. Using appropriate methods of inquiry, students become "firsthand investigators" of a real problem or topic of interest to them. The role of the student shifts from a consumer of information

to one of producer. Teachers assist their students in:
1) Identifying and focusing solvable problems;
2) Acquiring methodological assistance (including reference materials, inquiry skills, how-to-do-it books); and 3) Finding appropriate outlets for student products. (20:2)

The Role of "Play" in Gifted Education

In considering the implementation of an academically-oriented program, Sandra Kaplan points out that too often, the basic needs of children are overlooked.

A belief that being young and gifted automatically transcends the child into quasi-adulthood would cause one to challenge the purpose and relevance of play for these students. Likewise, a belief that a differentiated curriculum correlates with little or none of the regular curriculum would cause one to challenge the need for and place of play in a curriculum for the young gifted child. (11:52)

Outcomes of incorporating play as an instructional strategy can be illustrated in these concepts.

1. The natural inclination of all young children to play applies to and can be modified for the gifted.
2. The involvement of young gifted learners in the processes of play can yield significant information about their readiness for the content, process, and product dimensions of a differentiated curriculum.
3. A young gifted child can be provided with a social link to both gifted and nongifted learners through the play experience. (11:53)

So as not to lose sight of the childlike qualities of natural imagination, pretending, interest in games, and role-plays, the FOCUS curriculum incorporated many activities to provide for the "play" interests important to a child's growth and development.

Reading

Reading is the basis of curricula for nongifted and gifted alike; however, the reading assigned to the latter group should incorporate specific skills.

Although some researchers have listed as many as 186 individual critical reading skills, most can be grouped into the six basic areas of inference, assumption, deduction, interpretation, prediction, and evaluation. Reading programs for gifted children should concentrate on these general areas. (3:1)

Learning Styles

Gifted students possess a wide variety of learning styles; however, some general preferences characterize the group as a whole.

Researcher Emily Stewart found that of these variables, lecture, independent study, discussion, and projects proved most popular with gifted students.....Both gifted and nongifted students in Stewart's study indicated that teaching games were the most preferred and drill and recitation the least preferred of all learning methods. (1:39)

Ruth Martinson and Jean Weiner have developed a list of meaningful and less meaningful learnings for the gifted which would definitely influence a choice of learning styles in program and curriculum development. (See Appendix O, page 64.)

FOCUS Curriculum

In designing the curriculum for the FOCUS program around a theme approach, it was hoped that the elements of independent study, group activities, flexible learning methods, and exposure to a wide variety of materials and experiences would be accomplished. All research described

herein was digested and shared with staff and, in some way, incorporated into the FOCUS program.

The ideas of Taba, Joyce, Gordon, Ennis, and Williams are included in the appendices as further references and as additional evidence of the variety of available idea resources.

Teachers of the Gifted

In considering a teacher of the gifted, it would be appropriate to suggest that he/she be a "gifted" teacher, possessing as much expertise and enthusiasm as possible, along with a high energy level. Roger Taylor proposed that the teacher of the gifted be a "guide on the side" rather than a "sage on the stage". The implications here are obvious!

Barbara Pannwitt presented valuable guidelines to consider when making teacher choices.

While the G/T may continue to learn in spite of and not because of teachers, special competencies and qualities characterize successful G/T teachers. Special training in instructional strategies is a desirable qualification. In 41 states, 28,089 teachers have received such training at G/T and state-sponsored conferences and workshops and colleges and universities that offer courses leading to G/T post-graduate degrees. Seven states grant G/T training certification and two others plan to do so. Among the professional and personal characteristics of successful G/T teachers are:

- Maturity, experience, and professional educational leadership.
- Mental superiority, among the top three percent of the adult population.
- Avocational pursuits of intellectual, literacy, and cultural interests.
- High achievement in their own education.
- High degree of ambiguity tolerance and curiosity.
- Student-centeredness in the classroom, learners along with their students.

- Classroom behavior that is orderly, systematic, businesslike, and structured, yet not inflexibly strict; stimulating and imaginative.
 - Expertise in subject matter and enthusiasm for it.
 - Motivation of their students to want to study, to learn, to think divergently, to be creative, to feel concern for others, to overcome bigotry and selfishness.
 - Preference for teaching bright kids.
- To assign teachers of the gifted on the basis of seniority or in rotation is misguided "distributive justice" and downright misassignment... (17:5)

Conclusion

Once the logistics of a program are organized to provide funding, space, and personnel, then the very important components of a solid identification system, a curriculum that meets the special needs of the gifted, and an enthusiastic support system can be established to provide a well-rounded program.

CHAPTER THREE

Procedures

Following the initial interest in a building-level program, there ensued an in-depth phase of information-gathering. Included here were planned visitations to districts with operating gifted/talented programs, exploring attitudes of the Southgate staff and parents, attendance at informational conferences, reading available literature, and assessing district options for conducting a pilot study.

District Visitations

The Southgate principal and librarian were given release time to observe operating gifted/talented programs in four districts in Washington. These included Project Spectrum in Pasco, Project Success in Poulsbo (North Kitsap School District), and the programs in Bellevue and Vancouver. Although the variety of organizational methods, curricula, and anticipated results was overwhelming among the four districts, it was valuable to observe on-site operation and take note of which components might be most successful in a program at Southgate. The highlight of the visitations was becoming aware of the vast networking system of professionals around the state who were devotedly striving to provide quality educational experiences for

their gifted/talented students.

Gifted/Talented Conferences

Attendance at conferences provided the opportunity to learn more concerning research on gifted/talented students, become familiar with available resources, become aware of various options for organization and curriculum, and, once again, experience the caring network of individuals working to support gifted education.

Three persons were especially impressive with what they have contributed to the field in the way of both research and innovative techniques. Margo Long from Whitworth College, Sandra Kaplan from the Training Institute on the Gifted and Talented, and Roger Taylor from ECA (Educational Consulting Associates) were leaders in the realm of gifted education who aided the formulation of the FOCUS program with sharing their research, ideas, plans, and future dreams. The enthusiasm they managed to instill in the founders of FOCUS was a definite boon to its success. It was at one conference in Vancouver, B. C. that Roger Taylor opened the door to incorporating the affective realm into gifted programs. He demonstrated with research and examples that gifted children need to be assisted with getting in touch with their feelings and in developing a positive self concept. Largely as the result of his influence, the FOCUS program had affective overtones in all phases.

Exploring Attitudes

The primary goals in dealing with the attitudes of teachers and parents were to dispel possible feelings of inadequacy they might have experienced in dealing with gifted children and also to encourage their support of the program. Their feelings of "ownership" and involvement were seen as an asset to success of the project.

As the time for program implementation drew nearer, a two-day retreat for the staff was held at the Cispus Environmental Center. One of the primary topics addressed at that time was the FOCUS program. Information from visitations, conferences, and research of literature had been completed. Materials for the program guide had been written and/or compiled by the librarian with assistance from the principal. Several pages in the guide were fact sheets and worksheets to be used by teachers to work through and analyze their feelings and thoughts regarding gifted students. A very positive interchange took place during this sharing time with many new ideas coming from teachers for management and curriculum ideas. At the end of the retreat, the general feeling among staff members was one of excitement and pride that Southgate would be soon having a program such as this in operation.

Shortly after the retreat for staff, an open parent meeting was held to inform parents about the new gifted program soon to begin. The main topics reviewed included basic information about being gifted, what the school hoped to

provide for this group of youngsters, and an overview of how parents could nominate their child if they felt he/she might be gifted. Printed information on supporting and helping the gifted child within the home was distributed. Parent reaction to this endeavor was favorable; possibly, support could be in part attributed to the fact that Southgate drew from an upper socio-economic area of Kennewick. Many of the parents whose children attended Southgate had been vocal at the local and state levels about more provisions for gifted and talented students. Their willingness to back the program was a never-faltering asset during its two years of operation.

Assessing District Options

A request was made by Southgate to the Kennewick School District for permission to conduct a pilot program at the building level to teach academically talented youngsters. In outlining the guidelines and procedures for intended use, a further request was made for additional personnel and funds to purchase materials. The following is the budget constructed and based on the financial assistance granted by the district.

Budget for Academically Talented Program Southgate Elementary School

Materials (itemized lists on order sheets)	\$1413.44
Aide Time (7½ hours/week x 36 weeks @ approximately \$4.91/hour)	1325.00
Workshops and inservice	<u>500.00</u>
TOTAL	\$3238.44

Recommendations for Implementation

Upon completion of the groundwork for the FOCUS program, the following recommendations were distributed to the Southgate staff, parents, and district personnel:

1. A program for academically talented students in grades 3-5 (three through five) with an I.Q. score of 130 or higher will be organized and administered through the library resource center.
2. Determination of program eligibility will be based on scores from the CAT (California Achievement Test) and the Slosson Mental Maturity Test, and approved nomination forms submitted by parents and/or teachers.
3. The program will be called FOCUS (For Our Challenged Unique Students).
4. The program will follow a pull-out design with students attending special classes taught by the librarian for 1½ hours a week per grade level.
5. Independent study units for the students and additional materials for the teacher will be provided for use in the regular classroom.
6. The curriculum will center on a theme approach with exploration of each topic being developed in as many curricular areas as possible.
7. Parents will be actively involved in the program through attendance at informational meetings, assisting FOCUS class sessions, and/or by mentoring.

8. A budget based on funds provided by the district will provide for materials and a half-time aide.
9. The FOCUS teacher (librarian) will communicate regularly with the homeroom teachers and will provide written progress reports on each student to be included in regular quarterly report cards.

CHAPTER FOUR

The Project

F

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C hallenged

U nique

S tudents

Southgate Elementary

1979-80

-FOCUS-

A PROGRAM FOR ACADEMICALLY TALENTED STUDENTS
AT SOUTHGATE ELEMENTARY SCHOOL
KENNEWICK, WASHINGTON

Librarian/Program Developer:
Linda Rash

Principal:
Jack Shopbell

Do not follow
where the
path may lead,
Go, instead, where
there is no path
and leave a trail.

-anonymous

This guide is dedicated to the hardworking and devoted staff at Southgate Elementary School who cared enough about their students to "leave the path" and, with me, forge a new trail through the realm of gifted education.

Linda Rash

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TWO-YEAR TIMELINE FOR DEVELOPMENT AND IMPLEMENTATION OF
GIFTED PROGRAM AT SOUTHGATE ELEMENTARY SCHOOL

First Year

Determining need for gifted program	August
District visitations to observe operating programs around Washington State (4)	Sept.-June
Conference Attendance (3)	Sept.-June
Reading gifted/talented literature and organizing resource file for staff use	Sept.-June
Assessing attitudes of staff and parents	Oct.-Nov.
Writing program guide	Nov.-June
Budget preparation with approval of the Kennewick School District	April-May
Ordering materials	May
Developing lesson plans	April-June

Second Year

Inservice retreat for staff	September
Informational meeting with parents	September
Naming program	September
Student selection	Sept.-Oct.
Implementation of program	October
Ongoing communication with teachers and parents	Oct.-June
Evaluation of students and program	Quarterly

WHO ARE THE GIFTED?

by Milton F. Larson

Creative and imaginative people often not recognized by their contemporaries. In fact, often they are not recognized in school by their teachers either. History is full of illustrations. Consider some of these:

EINSTEIN was four years old before he could speak and seven before he could read.

ISAAC NEWTON did poorly in grade school.

BEETHOVEN'S music teacher once said of him, "As a composer, he is hopeless."

When THOMAS EDISON was a boy, his teachers told him he was too stupid to learning anything.

F.W. WOOLWORTH got a job in a dry goods store when he was 21 but his employers would not let him wait on a customer because he, "didn't have enough sense."

A newspaper editor fired WALT DISNEY because he had, "no good ideas."

CARUSO's music teacher told him, "you can't sing, you have no voice at all."

The director of the Imperial Opera in Vienna told MADAME SCHUMANN HEINK that she would never be a singer and advised her to buy a sewing machine.

LEO TOLSTOY flunked out of college.

VERNER VON BRAUN flunked 9th grade algebra.

ADMIRAL RICHARD E. BYRD had been retired from the Navy, as, "unfit for service" until he flew over both poles.

LOUIS PASTEUR was rated as "mediocre" in chemistry when he attended the Royal College.

ABRAHAM LINCOLN entered the Black Hawk War as a Captain and came out as a private.

An editor told LOUISA MAY ALCOTT that she could never write anything that had popular appeal.

FRED WARING was once rejected from high school chorus.

WINSTON CHURCHILL failed the sixth grade.

Probably these people were identified as low achievers in school or as misfits on their jobs because of problems of relevance.

WHO IS GIFTED?

A DEFINITION

It is vital that we all be familiarized with the concept of who are gifted & how they are identified:

Talented & gifted children are those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs & services beyond those normally provided by the regular school program in order to realize their contribution to self & society.

CHARACTERISTICS OF GIFTED CHILDREN

Gifted children have shown that they can exceed far above expectations, assimilating knowledge at a much greater rate & arriving at a place of creativity & productivity sooner than the average child. These children may demonstrate amazing creative thinking, productive thinking and a variety of surprising skills. The gifted may exhibit: long periods of concentration; independence, initiative & self directness in tasks; intense curiosity & inquisitiveness.

Another characteristic is an interest in cause & effect relationships. This coupled with a questioning attitude, a certain amount of skepticism & some beginning skills in critical thinking may result in a challenge to teacher's statements.

Gifted children tend to be critical of themselves as well as of other children & adults. This tendency grows out of high expectations which gifted children have of themselves and others. The ability to discriminate, which serves the child well in analyzing, leads to the discovery of discrepancies between people's words & actions. Gifted youngsters are open to new ideas & like to participate in brainstorming & the free wheeling exchange of ideas which lead to new ways of doing things.

Many gifted children like work which allows them to demonstrate independence & self-reliance. Within this framework, one may observe intense periods of concentration. Most gifted children are able to express themselves exceptionally well verbally, although handwriting & spelling ability varies greatly.

The tendency to see familiar things & situations in unusual ways, the attraction to the unconventional, and highly developed verbal skills blend together to produce a keen sense of humor.

Some gifted children display characteristics which make them leaders. These children, typically, are self-confident, enthusiastic & popular. They seem to sense what others want and have ideas & suggestions which are acceptable to a group. It is important that these children be given opportunities to use their ideas in positive directions.

While these characteristics describe many of the gifted population, it should be noted that there will continually be exceptions who do not exhibit typical characteristics or fit into a prescribed pattern.

WHAT SHOULD PARENTS LOOK FOR?

Parents have the opportunity to observe their child's behavior under a wide variety of conditions & have a more extensive sample of behaviors. Some behaviors parents should be sensitive to & look for are:

- ..Learning to read before entering school, sometimes teaching themselves the process of reading
- ..Using large vocabularies for their age
- ..Acquiring basic skills quickly
- ..Displaying an ability for abstract thinking in advance of their peers
- ..Concentrating and attending to information for long periods of time
- ..Having a wide variety of interests & experimenting with them
- ..Possessing a highly developed sense of curiosity & a limitless supply of questions
- ..Constructing relationships between things that are not readily obvious
- ..Retaining great quantities of information

"Gifted children do things a little easier, a little better, a little more quickly, and a little bit differently

from other children." Parents should always remember that a gifted child is both gifted and a child. Like all children, gifted children need and respond to love, care, interest & guidance from their parents.

IDENTIFICATION BY TEACHER OBSERVATION

Teachers see the children in an academic setting and can be very important in identifying the gifted child. This method has its limitations:

- ..Intellectual abilities are not always easy to find because many gifted children with high reasoning & conceptualization are not performing well in school.
- ..The eager to please child may be misidentified as gifted because of attitude rather than ability.

Teachers can observe the child who easily grasps ideas & can function independently. They can also observe the level of work the child is able to accomplish. Teachers' observations are also very important in the social, emotional, physical & motivational aspects of the child's behavior.

ORGANIZATION OF PROGRAM

The literature on G/T education recommends several steps in the organization of a program. These include determining a need, forming an advisory committee to assist with such tasks as goal setting, developing a philosophy, and establishing objectives and timelines, and clearly communicating the program components to all school personnel and the community. Much research has been done as well as comparison with existing programs to determine the design, scope and size of Southgate's program. Based on teacher feedback and available personnel, the emphasis will be on third, fourth, and fifth grades, with attention given to selected precocious second graders.

Teachers of the gifted have a very important role in the success or faltering of the program. They need to concentrate on process of learning rather than the products. These teachers are resource persons and act as catalysts to the gifted child's quest for knowledge. Students should be encouraged to develop self-directedness and independence through

establishing personal timelines, utilizing self-evaluation, expanding reading interests, developing basic skills, and improving communication skills.

GOALS

The main goals for our program at Southgate include the following:

- a) To encourage higher level thinking skills
- b) Self-esteem for each student through awareness, acceptance, and appreciation of individual specialness.
- c) Affective and cognitive growth.
- d) Chance to pursue as many new avenues of learning as possible.

CURRICULUM

"The core of a G/T program is the curriculum." Curriculum must be flexible, easily adapted and changed for individual needs.

The format of our program's curriculum will be that of a "theme" approach. Any given subject will be presented from both activity and academic emphasis. As many aspects as possible in as many areas as possible will be pursued for each topic, thereby explaining the "theme" idea. An example follows:

Subject: The sea

Art - mobiles or collages of sea life pictures

Reading - research to gather information about oceans

Social Studies - uses of sea by different world cultures

Higher level thinking - how might we organize a program to
turn sea water into human drinking water?

Science - experiment to make water into sea water or
observation of animal life

Language - vocabulary of sea words; use in poems, charades,
stories discussions.

Units of study will be teacher-selected, student-selected or group-selected.

Some examples include the following areas:

- a) Creative art
- b) Writing - skills and composition
- c) Cooking and foods
- d) Poetry
- e) Career awareness
- f) The sea
- g) Stock market
- h) Chemistry
- i) Reading for experts
- j) Mind-challenging games
- k) Above and beyond in basics (math, social studies, science, language)

Topics explored in this program may be those presented or covered in the regular classroom; however, our aim is to go into more depth to challenge these special students.

EVALUATION

An adequate system of evaluation is necessary to analyze the success of our program and provide guidelines for improvements needed. Continual feedback will be requested from both teachers and parents and frequent reactions from students considered also. Quarterly reports on each child enrolled in the program will be sent home with the child's regular report card.

IN CONCLUSION.....As knowledge is fully shared between home and school and within the school, caring people will join the effort to provide the best educational opportunities for all students, including the talented and gifted.

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 every 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

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

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.

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...

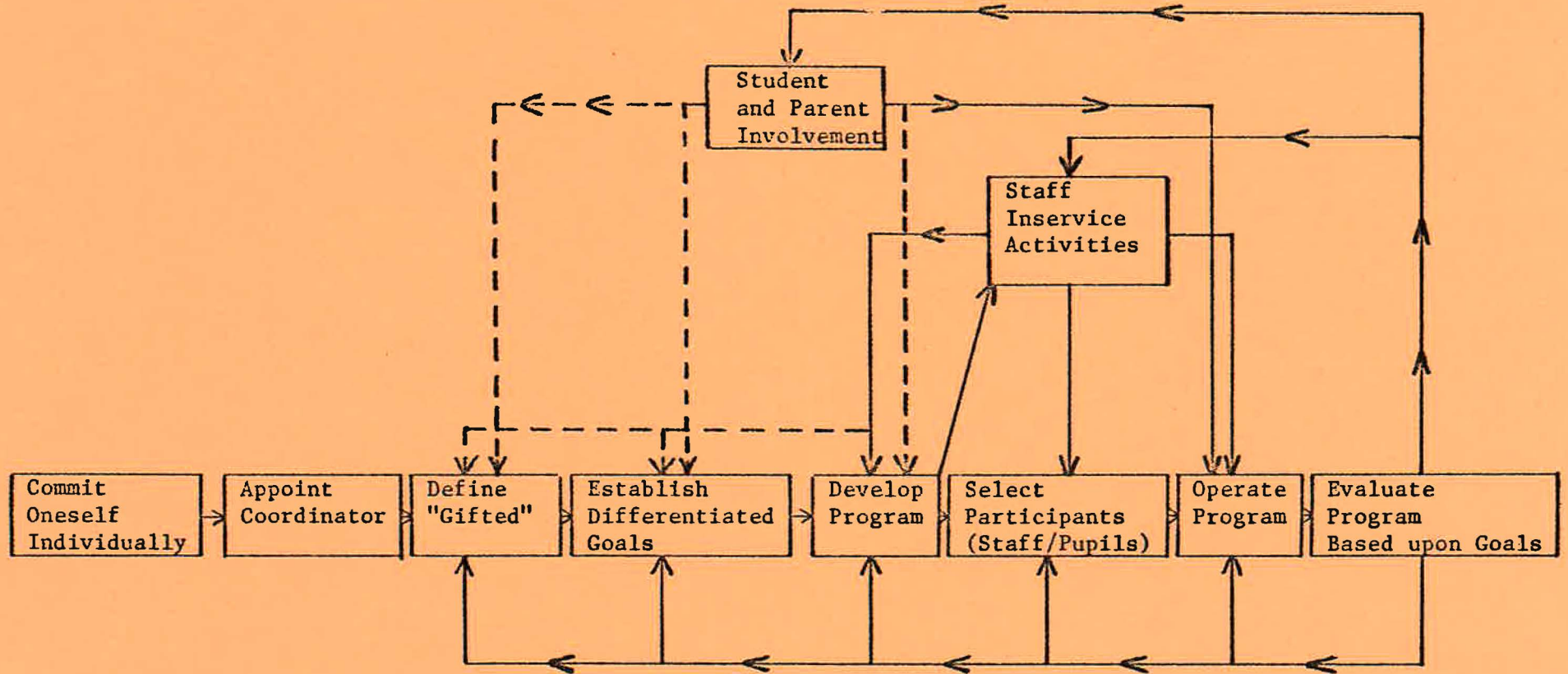
- organizing a planning team with comprehensive and diverse representation
- outlining the boundaries and standards for the end product
- incorporating implementation procedures with program design
- designating a person with supervisory responsibility for planning
- understanding the expectations and 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 TALENTED*

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

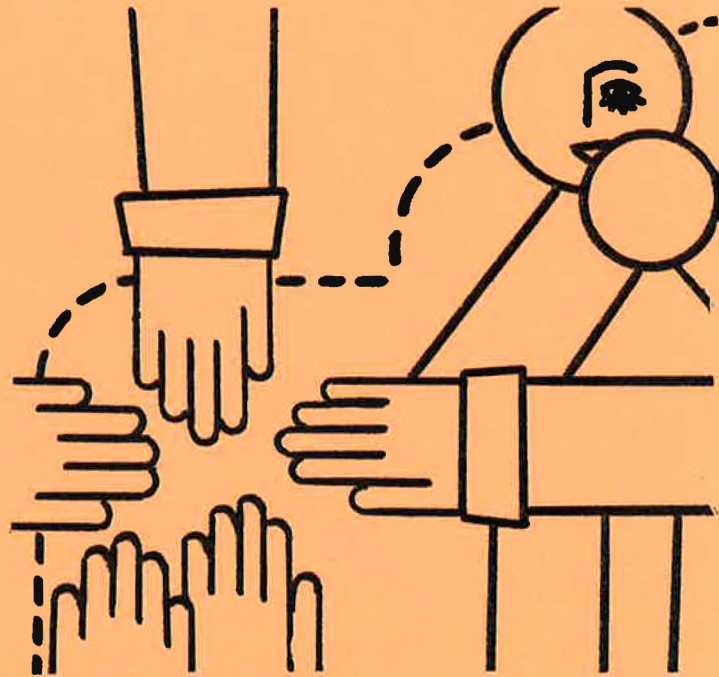


* Based upon ideas from a chart by Dr. Robert Kelley, the University of the State of New York, Albany.

SCHOOL DISTRICT ROLES AND RESPONSIBILITIES

COORDINATOR	TEACHER	STUDENT	PRINCIPAL	CENTRAL OFFICE STAFF
<ul style="list-style-type: none"> -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. 	<p><u>Classroom:</u></p> <ul style="list-style-type: none"> -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. <p><u>Itinerant:</u></p> <ul style="list-style-type: none"> -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. 	<ul style="list-style-type: none"> -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. 	<ul style="list-style-type: none"> -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. 	<ul style="list-style-type: none"> -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.

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	GROUPING	ACCELERATION	GUIDANCE
AS AN ELEMENT OF A PROTOTYPE	Experiences which replace, supplement, or extend learnings	Provisions which facilitate the student's access to learning opportunities	Activities which promote learning beyond regularly prescribed experiences	Experience which promote understanding of the self and others
AS A KIND OF PROTOTYPE	<ul style="list-style-type: none"> -Within the regular class -Tutoring -Correspondence -Community mentors -Independent study -Visitation of "experts" 	<ul style="list-style-type: none"> -Cluster grouping within the class -Special regular classes -Part-time groups before, during, after school or Saturdays -Seminars -Mini-courses -Team teaching -Alternative schools -Resource centers 	<ul style="list-style-type: none"> -Early entrance -Double grade promotion -Advanced placement classes -Ungraded situations -Tutoring -Correspondence -Extra classes for extra credit -Credit by examination 	<ul style="list-style-type: none"> -Individual conferences -Group meetings -Career Counseling -Educational counseling

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 which is relevant 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.

SUBJECT-RELATED

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.

PROCESS-ORIENTED

DOING-CENTERED

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

STUDENT-SELECTED

Open-Ended Application

Learning activities should allow for varied and personalized responses.

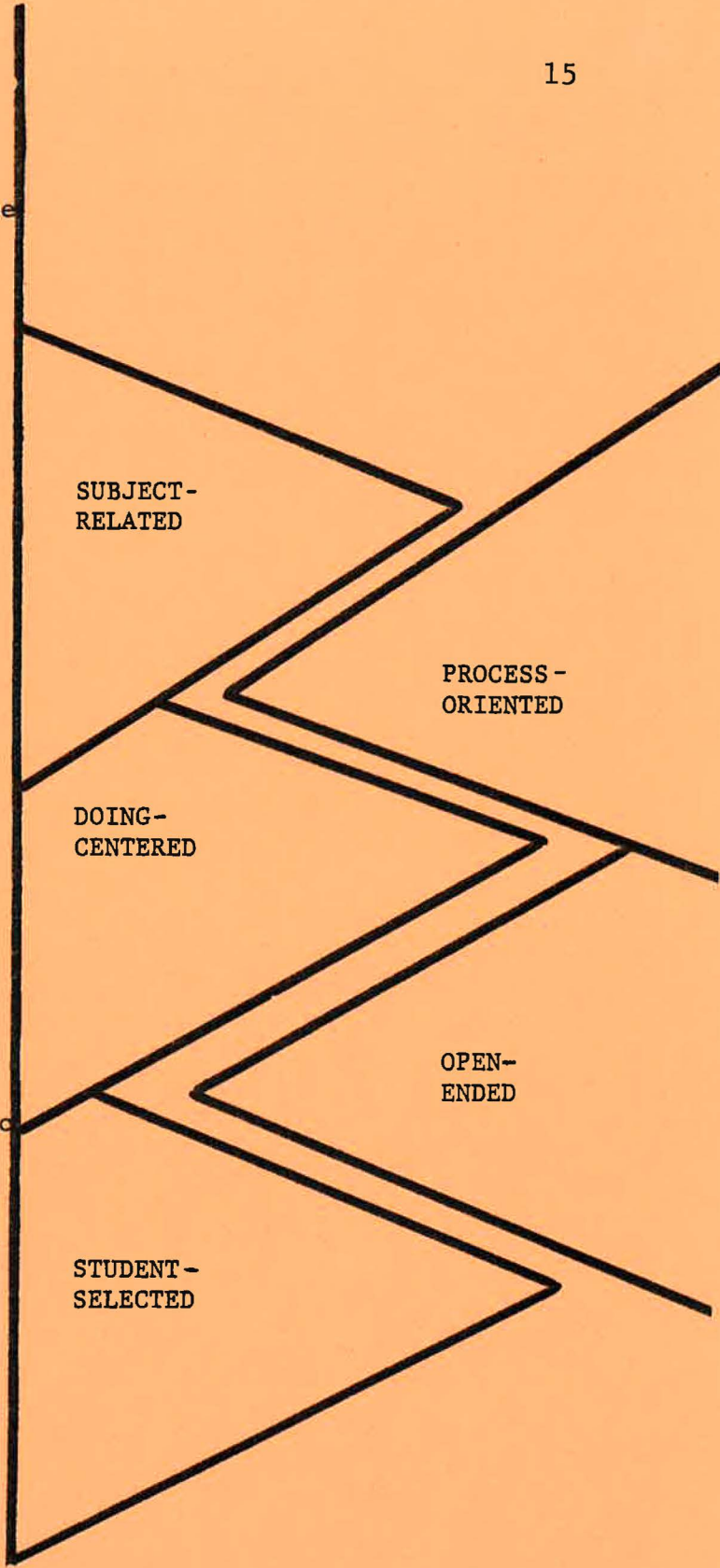
Example: Compare the parts of any insect to the parts of any vehicle.

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 differences and selection.



The curriculum is a product of integrating the elements illustrative of content with those that indicate 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 intra-relationships of information within a content area and the inter-relationships 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 become 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

Elements of Curriculum

content

- Student readiness determines inclusion
- Stress on concepts and generalizations
- Focus on relationships
- Use of present knowledge to learn past knowledge
- Emphasis on learning in depth

process

- Learning through discovery and inquiry
- Finding and solving problems
- Generating new information
- Analyzing and evaluating information
- Transferring information

TYPES OF CURRICULA

The curriculum which is a composite of various learning-teaching 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 York 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

EXTENDED LEARNING

Program Goals

1. Each student will develop an intrinsic motivation for excellence and individual responsibility in an atmosphere conducive for exploration and discovery.
2. Each student will accept and maximize unique gifts and talents.
3. Each student will develop competencies in areas of study beyond those prescribed in the regular classroom, especially in the areas of divergent, abstract, and evaluative thinking.
4. Each student will develop a positive self-concept.
5. Each student will develop the attitudes and skills necessary to interact acceptably and comfortably with others.
6. Each student will become self-directing in
 - (a) independent study,
 - (b) problem-solving,
 - (c) planning, and
 - (d) critical and creative thinking skillswith the teacher as a facilitator and an assistor.
7. Each student will receive support and guidance.
8. Each student will develop an awareness of the humanities.
9. Each student will receive directed experiences in physical effectiveness.
10. Each student will have no opportunity to interact with other gifted and talented students.

CURRICULUM STRUCTURE

The Extended Learning Program curriculum is structured in six general areas around a central core of INDEPENDENT STUDY.

1. SOCIAL EFFECTIVENESS (Affective Domain)

Affective education refers to the emotions, feelings, attitudes, and values in a child's development. It has been called psychological education, self-knowledge, confluent education, and humanistic education. The learner's needs, feeling, and attitudes and the classroom climate become critical in the learning process.

The Extended Learning Program encourages a positive attitude toward learning, a healthy self-concept, pride in the gifts and talents of self and others, a sense of responsibility to society and a willingness to consider the rights and needs of others - through instruction in effective discussion skills and group dynamics.

2. HUMANITIES

The purpose of this area of the curriculum is to develop students' awareness of humanity's beliefs and contributions through the centuries, as reflected in certain basic themes and styles in literature, drama, music, art and architecture.

3. INTELLECTUAL EFFECTIVENESS (Cognitive Domain)

Thinking Skills sessions are designed to develop mental abilities in bright kids and to encourage them to use them. Some higher level thinking processes include application, analysis, syntheses, evaluation.

* * * * *
 * INDEPENDENT STUDY: THE CORE OF THE EXTENDED LEARNING *
 * CURRICULUM *
 * *
 * The test of the students' proficiency in thinking - at *
 * both basic and higher levels - is their ability to *
 * function effectively as independent learners. *
 * *
 * The ultimate goal of the Extended Learning curriculum *
 * is to help bright youngsters to become active, self- *
 * motivated, life-long learners, able to cope effectively *
 * with the glut of new information and unfamiliar problems. *
 * * * * *

4. CREATIVITY

Exercises in fluency, flexibility, and divergent thinking are designed to develop the creative and productive thinking essential for dealing with conditions in a rapidly changing world. These activities should lead, as well, to more depth and greater sophistication in the visual and performing arts.

5. PHYSICAL EFFECTIVENESS (Psychomotor Domain)

All children need to develop competence in the psychomotor domain. The Extended Learning program encourages this through instruction in general movement, as well as in specific psychomotor skills involving visual, auditory, and tactile discrimination and eye-hand coordination. Techniques of body control and relaxation are also stressed.

6. RECREATIONAL INTEGRATIVE ACTIVITIES

The Extended Learning Curriculum provides students with the opportunity to gain skill in playing such games as chess, checkers, Mastermind, Clue, and Scrabble. Students may also choose to spend some time working with arts and crafts or may take part in special projects in art, dance, drama, and music.

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STATING BEHAVIORAL OBJECTIVES FOR CLASSROOM INSTRUCTION

TABLE I. Major Categories in the Cognitive Domain of the
 Taxonomy of Educational Objectives (Bloom, 1956)

Descriptions of the Major Categories in the Cognitive Domain

1. **KNOWLEDGE.** Knowledge is defined as the remembering of previously learned material. This may involve the recall of a wide range of material, from specific facts to complete theories, but all that is required in the bringing to mind of the appropriate information. Knowledge represents the lowest level of learning outcomes in the cognitive domain.

2. **COMPREHENSION.** Comprehension is defined as the ability to grasp the meaning of material. This may be shown by translating material from one form to another (words to numbers), by interpreting material (explaining or summarizing), and by estimating future trends (predicting consequences or effects). These learning outcomes go one step beyond the simple remembering of material, and represent the lowest level of understanding.

3. **APPLICATION.** Application refers to the ability to use learned material in new and concrete situations. This may include the application of such things as rules, methods, concepts, principles, laws, and theories. Learning outcomes in this area require a higher level of understanding than those under comprehension.

4. **ANALYSIS.** Analysis refers to the ability to break down material into its component parts so that its organizational structure may be understood. This may include the identification of the parts, analysis of the relationships between parts, and recognition of the organizational principles involved. Learning outcomes here represent a higher intellectual level than comprehension and application because they require an understanding of both the content and the structural form of the material.

5. **SYNTHESIS.** Synthesis refers to the ability to put parts together to form a new whole. This may involve the production of a unique communication (theme or speech) a plan of operations (research proposal) or set of abstract

relations (scheme for classifying information. Learning outcomes in this area stress creative behaviors, with major emphasis on the formulation of new patterns or structures.

6. EVALUATION. Evaluation is concerned with the ability to judge the value of material (statement, novel, poem, research report) for a given purpose. The judgments are to be based on definite criteria. These may be internal (organization) or external criteria (relevant to the purpose) and the student may determine the criteria or be given them. Learning outcomes in this area are highest in the cognitive hierarchy because they contain elements of all of the other categories, plus conscious value judgments based on clearly defined criteria.
-
-

TABLE III. Major Categories in the Affective Domain of the Taxonomy of Educational Objectives (Krathwohl, 1964)

Description of the Major Categories in the Affective Domain

1. RECEIVING. Receiving refers to the student's willingness to attend to particular phenomena or stimuli (classroom activities, textbook, music, etc.). From a teaching standpoint, it is concerned with getting, holding, and directing the student's attention. Learning outcomes in this area range from the simple awareness that a thing exists to selective attention on the part of the learner. Receiving represents the lowest level of learning outcomes in the affective domain.

 2. RESPONDING. Responding refers to active participation on the part of the student. At this level he not only attends to a particular phenomenon but also reacts to it in some way. Learning outcomes in this area may emphasize acquiescence in responding (reads assigned material), willingness to respond (voluntarily reads beyond assignment), or satisfaction in responding (reads for pleasure or enjoyment). The higher levels of this category include those instructional objectives that are commonly classified under "interests" that is, those that stress the seeking out and enjoyment of particular activities.

 3. VALUING. Valuing is concerned with the worth or value a student attaches to a particular object, phenomenon, or behavior. This ranges in degree from the more simple acceptance of a value (desires to improve group skills) to the more complex level of commitment (assumes responsibility for the effective functioning of the group). Valuing is based on the internalization of a set of specified values, but clues to these values are expressed in the student's overt behavior. Learning outcomes in this area are concerned with behavior that is consistent and stable enough to make the value clearly identifiable. Instructional objectives that are commonly classified under "attitudes" and "appreciation" would fall into this category.
-

4. ORGANIZATION. Organization is concerned with bringing together different values, resolving conflicts between them, and beginning the building of an internally consistent value system. Thus the emphasis is on comparing, relating, and synthesizing values. Learning outcomes may be concerned with the conceptualization of a value (recognizes the responsibility of each individual for improving human relations) or with the organization of a value system (develops a vocational plan that satisfies his need for development of a philosophy of life) would fall into this category.

5. CHARACTERIZATION BY A VALUE OR VALUE COMPLEX. At this level of the affective domain, the individual has a value system that has controlled his behavior for a sufficiently long time for him to have developed a characteristic "life style." Thus, the behavior is pervasive, consistent, and predictable. Learning outcomes at this level cover a broad range of activities, but the major emphasis is on the fact that the behavior is typical or characteristic of the student. Instructional objectives that are concerned with the student's general patterns of adjustment (personal, social, emotional) would be appropriate here.

Divergent Questioning Models -

QUESTIONS TO USE IN YOUR CLASS

QUANTITY QUESTIONS

1. List all of the _____.
2. List as many _____ as you can think of.
3. How many ways can you come up with _____?

REORGANIZATION QUESTIONS

1. What would happen if _____ were true?
2. Suppose _____ (happened), what would be the consequences?
3. What would happen if there were no _____?

SUPPOSTION QUESTIONS

1. Suppose you could have anything you wanted in working on this. What ideas could you produce if this were true?
2. You can have all of the _____ in the world. How could you use it to _____?
3. You have been given the power to _____. How will you use it?

VIEWPOINT QUESTIONS

1. How would this look to a _____?
2. What would a _____ mean from the viewpoint of a _____?
3. How would _____ view this?

INVOLVEMENT QUESTIONS

1. How would you feel if you were _____?
2. If you were _____ what would you (see, taste, smell, feel)?
3. You are a _____. Describe how it feels?

FORCED ASSOCIATION QUESTIONS

1. How is _____ like _____?
2. Get ideas from _____ to improve _____.
3. I only know about _____. Explain _____ to me.

PARENT INVOLVEMENT

Suggestions of what parents might do include:

1. Provide the child a home with as much stimulation and challenge in as many areas as possible.
2. Get involved with groups to promote programs for gifted. Try to influence legislation, school board, principals and teachers.
3. Support programs for gifted. Become a member of a Parent Advisory Council or other decision-making group.
4. Give direct assistance to the school's program, such as providing transportation, teaching a short-term course, serving as a teacher aide, sponsoring or coordinating events, publishing newsletters, and establishing a core of resource persons.
5. Be a childrens' advocate by supporting their right to be themselves as persons. Allow them to be honest and maintain their integrity.
6. See children as valuable in and of themselves, not primarily for their intelligence or talents. Avoid discussion with others which label the child as "gifted." Parents who boast guarantee resentment. Avoid comparison with other children in the family. Evenly distribute love and affection. Recognize the various accomplishments of all children. Discuss the particular contribution of each individual.
7. Aid the child who has developed an unrealistic sense of his/her own importance by asking him/her to assess the impact on others of this specific behavior. Let the child provide the analysis and suggest ways to improve the relationship.
8. Express appreciation when school personnel give special attention to strengths of children rather than weaknesses.

SUGGESTIONS FOR PARENTS OF ABLE CHILDREN

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1. They are still children. They need love but controls; attention but discipline; parental involvement, yet training in self-dependence and responsibility.
2. Consonance of parental value systems is important for their optimum development. This means that there should not be wide disagreements over values between parents.
3. Parental involvement in early task demands, such as training them to perform tasks themselves, to count, tell time, use correct vocabulary and pronunciation, locate themselves, and get around their neighborhood, do errands and be responsible are all important.
4. Emphasis on early verbal expression, reading, discussing ideas in the presence of children, poetry and music are all valuable. Parents should read to children. There should be an emphasis by parents on doing well in school.
5. The lack of disruption of family life through divorce or separation, and the maintenance of a happy, healthy home is an important aspect in raising able children, as well as other children.
6. Since able children often have vague awareness of adult problems such as sex, death, sickness, finance, war, etc., which their lack of experience makes them unable to solve, they may need reassurance in these areas.
7. Parents can see to it that the gifted child, age six or above, has a playmate who is as able, even if he has to be "imported" from some distance.
8. The role of good books, magazines and other aids to home learning, such as encyclopedias, charts, collections, etc., is important.
9. Parents should take the initiative in taking able children to museums, art galleries, educational institutions or other historical places where collections of various sorts may enhance background learning.
10. Parents should be especially careful not to "shut up" the gifted child who asks questions. In particular, he should not be scolded for asking, nor should it be

inferred that this is an improper or forbidden subject. The parent may, however, insist that questions not be asked at inappropriate times, and he may require the child to sharpen or rephrase his question so as to clarify it. Sometimes questions should not be answered completely, but the reply should itself be a question which sends the child into some larger direction. When the parent cannot answer the question, he should direct the child to a resource which can. Sometimes questions call for clarification of concepts, as with the young child who asked, "Why aren't all those rockets liable to shoot down God?"

11. There's a difference between pushing and intellectual stimulation. Parents should avoid "pushing" a child into reading, "exhibiting" him before others or courting undue publicity about him. On the other hand, parents should seek in every way to stimulate and widen the child's mind, through suitable experiences in books, recreation, travel and the arts.
12. The gifted child usually has a wide and versatile range of interests, but he may be somewhat less able to concentrate on one area for a long time. Parents should encourage children who have hobbies to follow through on them, to plan and strive for creditable performance and for real mastery, rather than "going through" a lot of hobbies or collections in a short time.
13. Parents should avoid direct, indirect or unspoken attitudes that fantasy, originality, unusual questions, imaginary playmates, or out-of-ordinary mental processes on the part of the child are bad, "different" or to be discouraged. Instead of laughing at the child, laugh with him and seek to develop his sense of humor.
14. Parents should avoid overstructuring children's lives so that they don't have any free time. Sometimes parents are concerned that gifted children spend some time in watching TV or reading comic books. While they should not spend all their time in doing so, they cannot be expected to perform at top capacity at all times.
15. Respect the child and his knowledge, which at times may be better than your own and impatient of authority. Assume he means to do right, and the deviations are not intentional. Do not presume on your authority as a parent except in crises. Allow much liberty on unimportant issues. Try to give him general instructions to carry out in his way rather than specific commands to carry out in yours.

16. Gifted children are sometimes impatient of conventions. Have a frank talk with your child about the importance of conventions, such as driving on the right hand side, where he can see the social advantages, and then point out that other conventions of politeness, manners, courtesy and regard for others have similar bases in experience.
17. Whenever possible, talk things out with him where there has been a disciplinary lapse. He is much more amenable to rational argument than are many children and usually has a well developed sense of duty.
18. Give him the stimulation of private lessons in some skill in which he excels. See that he has social membership in worthy groups. Foster special experiences outside the home by his traveling alone, or visiting friends overnight. Try to facilitate his chance to talk alone with an adult authority in some line that interests him.
19. Try to improve his sense of taste in mass media, TV, radio, cinema, newspapers, comics, reading, arts, etc. Discuss the basis for taste and give him some experience with new forms of expression in the arts.
20. Take time to be with him, to listen to what he has to say, to discuss ideas with him.
21. Be a good example yourself, and try to find worthy adult model figures of both sexes outside his family for him to know.
22. Support the school efforts to plan for able children. Help to interest the PTA in the problem. Support study groups on gifted children. Form with other parents into cooperative endeavors.
23. Investigate scholarship programs of your community for other gifted children and help provide them.
24. Work to provide better community understanding of, and appreciation of, the role of the able child in society and the importance of community planning.
25. Support community action for able children, including bonds and school taxes for extra educational advantages. Advocate more guidance and special education for the gifted.

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APPENDIX A

Worksheet -- Personal (Personnel) Evaluation

APPENDIX A

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:

Indicate your response 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.	<hr/> <hr/> <hr/> <hr/>
2. The utilization of individualized instruction abolishes the need for separate programs for the gifted and talented.	<hr/> <hr/> <hr/> <hr/>
3. Overemphasizing the gifted and talented through special programs creates an elitist population.	<hr/> <hr/> <hr/> <hr/>
4. What is good for the gifted and talented is good for all children.	<hr/> <hr/> <hr/>
5. If classroom teachers were doing their job, there would be no need to offer a special program for the gifted and talented.	<hr/> <hr/> <hr/> <hr/>

APPENDIX B

Survey Sheet for the Classroom Teacher

APPENDIX B

1. How many children do you have in your room who you consider gifted? _____
2. Would you like a special program for those gifted children? _____
3. What curriculum areas would you like to be stressed in a gifted program? _____

4. What non-curriculum areas would you want stressed? (example; performing arts, music, leadership skills, creative thinking, etc.)

5. Please rank the information you would want in the screening/identification of gifted students. Place a "1" next to the most important information, a "2" next to the second most important, etc.
 - a. _____ Previously demonstrated accomplishments
 - b. _____ Group intelligence test scores
 - c. _____ Classroom teacher observations and nominations
 - d. _____ Group achievement test scores
 - e. _____ Judgment of specialists
 - f. _____ Individual intelligence test scores
 - g. _____ Other (please specify) _____
6. Please rank (1, 2 and 3) the three primary instructional strategies you would like employed in your school.
 - a. _____ Grouping (counts as one specific strategy but please check as many specific sub-areas as apply).

Separate self-contained classroom - 1/2 day - twice a week.

Separate self-contained classroom 1 day - once a week.

Cluster grouping (this means the intentional grouping of three or more gifted students in a classroom).

Special "Interest Fridays."

Minicourses (special-interest courses; students are drawn from one or more classes).

Small groups meeting with specialists (i.e., librarian, reading teacher).

Other _____

7. Prioritize the emphasis of the gifted program 1-5. One being high.

Visual or performing arts

Creative or productive thinking

Academically gifted

Leadership ability

Manipulative skills

8. Type of program; check preference

Enrichment in depth which enables a student to study more deeply the areas that are part of the regular curriculum (vertical enrichment)

Enrichment that leads the pupil to study areas that are related to but not usually included in regular course of study. (horizontal enrichment)

Combination vertical, horizontal.

9. What support services would you like from the district?

Subject specialist

Curriculum specialist

Training of staff

10. Would you be interested in a workshop for staff in any of these areas?

Teaching strategies

Material and equipment workshop

Visitations

Other _____

11. What materials would you suggest to use with gifted?
(resource books, child materials, others)

APPENDIX C

Observation Guide for Teachers Seeking to Identify
Intellectually Gifted Children

APPENDIX C

Observation Guide for Teachers Seeking to Identify
Intellectually Gifted Children

Revised 1978

Directions:

1. Read the list of characteristics carefully.
2. In the column opposite the characteristic, list those children in your class who most reveal this characteristic. There may be none or only one or two students listed. Consider each characteristic individually.
3. On the summary, list those children whose names appear most often. Then prepare a recommendation for the student(s) having most of those characteristics and academic and personal behavior consistent with these characteristics.

Characteristics:

- | | |
|--|----------------------|
| 1. Above average facility for self-expression, advanced vocabulary and/or reading level. | 1.
2.
3.
4. |
| <hr/> | |
| 2. Can move quickly from understanding the simple case to the more complex and from the concrete to the more abstract. | 1.
2.
3.
4. |
| <hr/> | |
| 3. Shows interest in and curiosity about a large number and variety of objects and ideas. | 1.
2.
3.
4. |
| <hr/> | |
| 4. Finds opportunities for initiating and creating. | 1.
2.
3.
4. |
| <hr/> | |
| 5. Is alert and keenly observant, responds quickly, has good eye for detail. | 1.
2.
3.
4. |

OBSERVATION GUIDE, page 2

6. Can draw from within self and knowledge of how the problem is solved.	1. 2. 3. 4.
7. Shows unusual persistence of interest in a topic or activity - power of concentration.	1. 2. 3. 4.
8. Creativity revealed in degree of imagination shows in writing, music, art, science work.	1. 2. 3. 4.
9. Has a broad fund of information and the ability to retrieve facts or knowledge studied earlier.	1. 2. 3. 4.
10. Reasons things out, recognizes relationships, comprehends meanings and makes logical associations.	1. 2. 3. 4.
11. Exhibits a "need to know" or a desire to excel.	1. 2. 3. 4.
12. Exhibits original or unusual ideas or approaches in problem-solving tasks.	1. 2. 3. 4.
13. Learns quickly and easily that which is important to self. Minimal presentation necessary from teachers.	1. 2. 3. 4.
14. Does mental tasks of a high degree of complexity.	1. 2. 3. 4.
15. Has unusual ability to select from learning options or establish own learning goals.	1. 2. 3. 4.

OBSERVATION GUIDE, page 3

16. Is venturesome and eager to try new things.	1. 2. 3. 4.
17. Displays a sense of humor or wit reflective of own cultural background.	1. 2. 3. 4.
18. Has ability to anticipate and skill in sensing what may happen in a story, experiment or game.	1. 2. 3. 4.
19. Needs little external motivation to follow through on work that is initially exciting.	1. 2. 3. 4.
20. Displays intellectual playfulness. Enjoys fantasy. Manipulates ideas by elaboration or modification.	1. 2. 3. 4.

Summary:

List the names below in order of number of characteristics identified. If you have listed names under characteristics in an order from top to bottom, you may give a weight of five points for each 1, four points for each 2, etcetera.

Name	Name of Characteristics	Weight

APPENDIX D
Student Data Sheet

APPENDIX D

SOUTHGATE SCHOOL

Academically Talented Program

STUDENT DATA SHEET

Student _____ Grade _____ Birthdate _____
 Referral Date _____
 Room Number _____

	3	2	1		
1. Mental Abilities Test	140+	135 139	129 134	Weighting Factor	Points

		x6	
--	--	----	--

2. Achievement Test 99 98 97

Reading Comprehension (Gr. Equiv. _____)		x2	
Language (Gr. Equiv. _____)			

20-18 17-15 14-12

3. Teacher rating characteristics		x2	
Parent rating characteristics			x2

Total Points- _____

Additional Information:

Other Test Data:

Special Problems, Concerns:

Comments:

Principal's Approval _____
45

APPENDIX E
Characteristic Checklist for Gifted Students

APPENDIX E

SOUTHGATE

CHARACTERISTIC CHECKLIST FOR GIFTED STUDENTS
Revised 12/78

Date _____

I. Student's Name _____ Grade _____ Age _____
 Parent's name _____ Telephone _____
 Address _____ Zip _____
 School _____ Teacher _____

II.	<u>Low</u>				<u>High</u>
1. Above average language development	1	2	3	4	5
2. Moves quickly from simple to complex, concrete to abstract	1	2	3	4	5
3. Interest and curiosity about many topics	1	2	3	4	5
4. Finds opportunities for initiating and creating	1	2	3	4	5
5. Aware of detail and keen observer	1	2	3	4	5
6. Draws on internal knowledge to solve problems	1	2	3	4	5
7. Unusual persistence on a topic	1	2	3	4	5
8. Imaginative in writing, music, art, science	1	2	3	4	5
9. Broad fund of information	1	2	3	4	5
10. Recognizes relationships and makes logical associations	1	2	3	4	5
11. Has a "need to know" or "desire to excel"	1	2	3	4	5
12. Unusual ideas or approaches to problem solving	1	2	3	4	5
13. Learns quickly and easily	1	2	3	4	5
14. Can deal with high degree of complexity	1	2	3	4	5
15. Can select learning options or set goals	1	2	3	4	5
16. Eager to try new things	1	2	3	4	5
17. Keen sense of humor	1	2	3	4	5
18. Can anticipate outcomes and results of experiments	1	2	3	4	5
19. Needs little external motivation	1	2	3	4	5
20. Enjoys fantasy, manipulating or elaborating ideas	1	2	3	4	5
	Total				_____

III. Special talents or interests of student:

Use back of sheet for additional comments and/or observations.

CHAPTER FIVE

Summary, Conclusions, Recommendations

Summary

The FOCUS project operated successfully for two years. Feedback was solicited periodically from students in the program, their parents, and teachers. It was strongly felt that communication was the key to broadening the scope of the program, preventing misconceptions, and in keeping all involved parties informed on the progress of individual students and the program in general. One advantage that the FOCUS project enjoyed was being geographically close to the Hanford area. Several FOCUS students had parents who were scientists and engineers employed at Hanford, which provided numerous mentoring opportunities along with stimulating interest and involvement in the program. After making Batelle Northwest aware of the scope of the inquiry approach in the FOCUS science strand, that company donated a \$500.00 microscope for use in the program. This was just one example of community support and encouragement.

Conclusions

At the conclusion of the first year of operation, the Kennewick School District began the KOG (Kennewick Opportunities for the Gifted) program. Students who qualified were pulled from their home schools and bussed

to one elementary school where they were organized into self-contained classrooms. Due to limits of staff and funding, the I.Q. cut-off requirement for this program was 142. FOCUS students at Southgate between the I.Q. scores of 130 and 142 continued to remain unserved so, as the result, FOCUS continued a second year. Many parents and teachers felt more positively toward the pull-out model, while keeping students at their home schools, than the self-contained concept.

Recommendations

Ingredients for success of the FOCUS program can be classified into the following categories:

1. Support of the building administrator
2. Enthusiasm and expertise of the FOCUS teacher
3. On-going two-way communication with teachers and parents
4. Careful planning
5. A solid selection process.

An additional benefit worth noting once more seemed to be the continuing integration of the students into their heterogeneous classrooms when not attending FOCUS classes. Teachers felt that the leadership and enrichment to the basic curriculum that the FOCUS students added was invaluable.

Because the pilot study at Southgate was so successful, it would be highly recommended as an alternative for districts without a gifted program. The design could also be

used as a supplemental program at the building level along with an active district-wide plan. With adjustments and modifications designed to meet the needs of other districts, perhaps it could serve to prevent another group of gifted youngsters from belonging to a neglected minority.

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APPENDIX A

Characteristics of Academically Talented Students

APPENDIX A

CHARACTERISTICS OF ACADEMICALLY TALENTED STUDENTS

1. Superior physique as demonstrated by above-average height, weight, and coordination, endurance, and general health.
2. Longer attention span.
3. Learns rapidly, easily, and with less repetition.
4. Learns to read sooner and continues to read at a consistently more advanced level.
5. More mature in the ability to express himself through the various communicative skills.
6. Reaches higher levels of attentiveness to his environment.
7. Asks more questions and really wants to know the causes and reasons for things.
8. Likes to study some subjects that are difficult because he enjoys the learning.
9. Spends time beyond the ordinary assignments or schedule on things that are of interest to him.
10. Knows about many things of which other children are unaware.
11. Is able to adapt learning to various situations somewhat unrelated in orientation.
12. Reasons out more problems since he recognizes relationships and comprehends meanings.
13. Analyzes quickly mechanical problems, puzzles, and trick questions.
14. Shows a high degree of originality and often uses good but unusual methods or ideas.
15. Possesses one or more special talents.
16. Is more adept in analyzing his own abilities, limitations, and problems.
17. Performs with more poise and can take charge of the situation.

18. Evaluates facts and arguments critically.
19. Has more emotional stability.
20. Has diverse, spontaneous, and frequently self-directed interests.

APPENDIX B

The Demands of Giftedness

APPENDIX B

THE DEMANDS OF GIFTEDNESS.....Jeanne Delp

- Premise:
1. That high level intelligence makes certain demands upon the gifted individuals.
 2. Behavior of gifted individuals results from these demands.
 3. There are curriculum implications inherent in these demands.

Demands:

- A craving for knowledge, the need to feel progress in what he is learning.
- A need to focus on or devour a subject.
- A demand to make observations, to see relationships.
- The placement of high standards on himself.
- To be creative or inventive, to seek an unusual or unique approach to an assignment.
- To question generalizations.
- To be serious-minded. (Usually cannot tolerate foolishness or silliness.)
- To concentrate, to become totally absorbed in a task.
- To explore wide interests at a maturity beyond his chronological age.
- To be sensitive to honor and truth.
- To express ideas and reactions. (Sometimes seen as argumentative!)
- To resist routine, drill, the need for unique ways of pursuing drill.
- To work alone.
- To be intolerant of stupidity. (Especially when it comes in the form of authority.)
- To seek order, structure and consistency.

- To do critical, evaluative thinking. (Leads to critical attitudes towards self and others.)
- To be rarely satisfied with the simple and obvious.
- To be impatient with sloppy or disorganized thinking.
- To be sensitive and empathetic.
- To have his intelligence responded to.
- To seek out his mental peers.
- To be friendly and outgoing.
- To use his power of abstraction, to see and point out cause and effect.
- To have time for thinking...solitude.
- To pursue a learning pace of his own. (May be FAST or SLOW)
- To be outstanding in several areas, but AVERAGE in some.

APPENDIX C

Components of a Gifted Program

APPENDIX C

COMPONENTS OF A GIFTED PROGRAM

These ideas were gathered from a group of classroom teachers during the spring of 1979.

1. open-ended activities
2. left/right brain activities
3. community involvement
4. use of the community resource
5. freedom without isolation
6. additional personnel
7. guidance for gifted
8. no increase in teachers' workload
9. build on strengths
10. teach to weaknesses
11. development of organizational skills
12. higher level questioning
13. multi-discipline approach
14. student-teacher planning
15. creative problem solving
16. research skills
17. multi-sensory activities
18. small classes
19. open atmosphere
20. stimulating environment
21. independent activities
22. teacher resource center available
23. provisions for giftedness in all areas
24. a variety of experiences
25. well defined criteria for identification
26. an appropriate reporting system to teachers and parents
27. use of different learning styles
28. social as well as academic stressed
29. use of upper levels of Bloom and neglected areas of Guilford/Meeker
30. creative thinking development
31. hands-on learning combined with book learning
32. individual instruction

APPENDIX D

Synecitics

APPENDIX D

Synectics - William J. Gordon

Synectics, developed by Gordon, is a process for developing creativity based on the use of metaphorical forms.

1. Personal Analogy - This procedure involves getting students to identify with a person, plant, animal, or non-living thing. Example: How would I feel as a cloud?
2. Direct Analogy - This procedure involves analogizing the conditions of problems in new settings and using the analogy as the basis of generating a solution to a problem. It is a comparison of two objects. Example: Person grows like a plant.
3. Compressed Conflict - This procedure requires description of an object from two frames of reference. Example: Poor little rich person.

APPENDIX E

Taba's Teaching Strategies

APPENDIX E

Taba's Teaching Strategies

1. CONCEPT DEVELOPMENT
 - A. Organize and reorganize information.
 - B. Categorize information.
 - C. Label information.
 - D. List information.
 - E. Compare information.

2. INTERPRETATION OF DATA
 - A. Gather information.
 - B. Organize information.
 - C. Analyze information.
 - D. Infer and explain by:
 - concluding
 - generalizing
 - making cause/effect relationships
 - giving support or evidence

3. APPLICATION OF GENERALIZATIONS
 - A. Apply information.
 - B. Predict from information.
 - C. Judge information.
 - D. Note effects.

4. RESOLUTION OF CONFLICT
 - A. Interpret attitudes.
 - B. Interpret feelings.

APPENDIX F
Critical Thinking

APPENDIX F
CRITICAL THINKING

Definition: The correct assessing of statements.

TWELVE ASPECTS OF CRITICAL THINKING

1. Grasp the meaning of a statement.
2. Judge whether ambiguity exists.
3. Judge if contradictions exist.
4. Judge if a conclusion necessarily follows.
5. Judge the specificity of a statement.
6. Judge if a statement relates to a certain principle.
7. Judge the reliability of an observation.
8. Judge if an inductive conclusion is warranted.
9. Judge if a problem has been identified.
10. Judge if a definition is adequate.
11. Judge if a statement is credible.
12. Judge if something is an assumption.

APPENDIX G
Inquiry Training

APPENDIX G
Inquiry Training

The inquiry training model based on the work of R. Suchman identifies these process:

Confrontation With the Problem - encountering the environment

- students are presented with something to explain or assimilate.

Period of Inquiry - processing the data found

- students question and probe the thing under investigation to collect data about it.
- students analyze the acquired data and formulate principles about the casual relationship found among the data's variables.

Analyses of Inquiry Strategy -

- students and teachers evaluate the inquiry process and develop more effective strategies of investigation.
- students assimilate the explanation into their conceptual systems.

APPENDIX H
Creative Problem Solving

APPENDIX H

CREATIVE PROBLEM SOLVING

The following are some hints about the Creative Problem Solving process:

- Work with the process many times as a group before proceeding individually.
- By limiting each step, it is possible to take a class through the entire process in an hour.
- Many teachers find it very valuable to do the steps as separate activities (taking approximately 20 minutes) several times before running through the entire process.
- Fact-finding is an excellent comprehension tool for use upon completion of the story. It is also a great way to begin a unit. Each person is responsible for finding answers to a certain number of fact-finding questions during the course of the unit.
- Problem-finding is fun to use during Current Events or when studying world problems. (Student tries to restate the problem and determine if it is the real problem.)
- Idea-finding can be practiced in 1 minute or 10 minutes. The teacher or students suggest a topic for brainstorm.
- Solution-finding can be used when making a decision. It can also be fun to use in Social Studies or Language Arts. Students weigh the alternatives someone else had in a given situation.
- Acceptance-finding provides students with the opportunity to practice organizing and developing workable plans of action.
- It is easier for the student to know where they are in the process if the worksheet for each step is run on a different color.

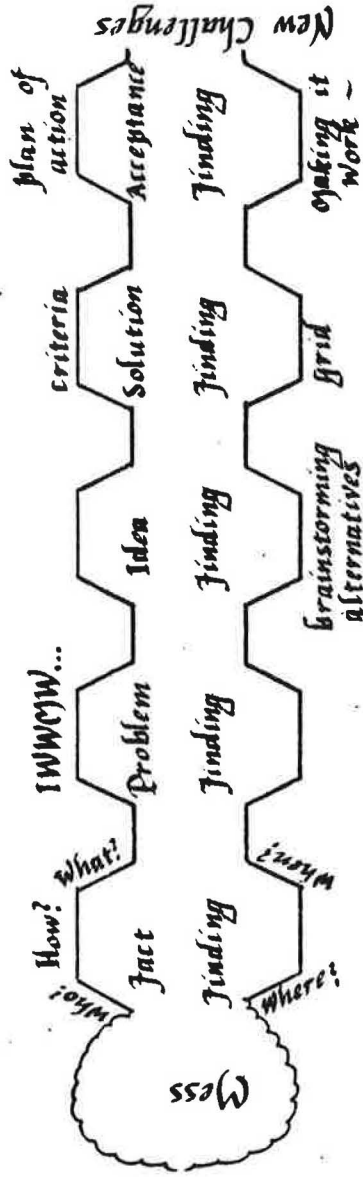
APPENDIX I
Creative Problem Solving

APPENDIX I

Creative Problem Solving

Creative Problem Solving

... Dr. Sidney Barnes



APPENDIX J

Testing

APPENDIX J
Testing

A portion of the above list was taken from the ERIC Clearinghouse on Handicapped and Gifted Children, The Council for Exceptional Children, 1975.

Please note: Content on this page was redacted due to copyright concerns.

APPENDIX K

Some Learning Characteristics of
Gifted Children

APPENDIX K

SOME LEARNING CHARACTERISTICS OF
GIFTED CHILDREN

May V. Seago
Professor of Education
University of California at Los Angeles

Characteristics

Concomitant Problems

- | | |
|--|---|
| 1. Keen power of observation; naive receptivity; sense of the significant; willingness to examine the unusual | 1. Possible gullibility |
| 2. Power of abstraction, conceptualization, synthesis; interest in inductive learning and problem solving; pleasure in intellectual activity | 2. Occasional resistance to direction; rejection or remission of detail |
| 3. Interest in cause-effect relations, ability to see relationships; interest in applying concepts; love of truth | 3. Difficulty in accepting the illogical |
| 4. Liking for structure and order; liking for consistency, as in value systems, number systems, clocks, calendars | 4. Invention of own systems, sometimes conflicting |
| 5. Retentiveness | 5. Dislike for routine and drill; need for early mastery of foundation skills |
| 6. Verbal proficiency; large vocabulary; facility in expression; interest in reading; breadth of information in advanced areas | 6. Need for specialized reading vocabulary early; parent resistance to reading; escape into verbalism |
| 7. Questioning attitude, intellectual curiosity, inquisitive mind; intrinsic motivation | 7. Lack of early home or school stimulation |
| 8. Power of critical thinking; skepticism, evaluative testing, self-criticism and self-checking. | 8. Critical attitude toward others; discouragement from self-criticism. |

CharacteristicsConcomitant Problems

- | | |
|--|---|
| 9. Creativeness and inventiveness; liking for new ways of doing things; interest in creating, brainstorming, freewheeling | 9. Rejection of the known: need to invent for oneself |
| 10. Power of concentration; intense attention that excludes all else; long attention span | 10. Resistance to interruption |
| 11. Persistent, goal-directed behavior | 11. Stubbornness |
| 12. Sensitivity, intuitiveness, empathy for others; need for emotional support and a sympathetic attitude | 12. Need for success and recognition; sensitivity to criticism; vulnerability to peer group rejection |
| 13. High energy, alertness, eagerness; periods of intense voluntary effort preceding invention | 13. Frustration with inactivity and absence of progress |
| 14. Independence in work and study; preference for individualized work; self-reliance; need for freedom of movement and action | 14. Parent and peer group pressures and non-conformity; problems of rejection and rebellion |
| 15. Versatility and virtuosity; diversity of interests and abilities; many hobbies; proficiency in art forms such as music and drawing | 15. Lack of homogeneity in group work; need for flexibility and individualization; need for help in exploring and developing interests; need to build basic competencies in major interests |
| 16. Friendliness and outgoingness | 16. Need for peer group relations in many types of groups; problems in developing social leadership |

APPENDIX L

Characteristics and Behaviors Displayed by
Gifted and Talented Children

APPENDIX L

CHARACTERISTICS AND BEHAVIORS DISPLAYED BY GIFTED AND TALENTED CHILDREN

Learning Characteristics

1. An avid reader.
2. Uses advanced vocabulary.
3. Has great storehouse of information.
4. Keen observer; gets more from story, film, etc. than others do.
5. Quickly masters and recalls facts.
6. Sees relationship among unrelated ideas.
7. Has wide range of interest.
8. Reasons things out for self; sees common sense answers.
9. Understands similarities or differences in events, people, things.
10. Rapid insight into how and why relationships.

Motivational Characteristics

11. Easily bored by routine tasks.
12. Once interested in a project does not want to stop.
13. Critical of self; not satisfied with own speed or products.
14. Works independently.
15. Interested in "adult" problems such as religion, politics, race, sex.
16. Stubborn in belief.
17. Concerned with right and wrong; judges others.
18. Venturesome, anxious to do new things.
19. Needs little outside control; disciplines self.
20. Has unusual number of interests that keep her/him busy.

Creativity Characteristics

21. Very inquisitive, curious.
22. Openly states own opinion.
23. Keen sense of humor; finds humor where others won't see it.
24. Is non-conforming; does not fear being different.
25. Accepts disorder.
26. Tells imaginative stories.
27. Sensitive to beauty and aesthetic characteristics of things.
28. Uses colorful verbal expressions.
29. Solves problems by a variety of unique ways; is innovative.
30. Intellectually playful; fantasizes.
31. Is a high risk taker; adventurous and speculative.
32. Interrupts while others talking.
33. Is excited about own discoveries.

34. More interested in overall picture than in details.
35. Criticizes constructively.
36. Frankly appraises adults.
37. Shows intense interest in artistic activity such as drawing, singing, dancing, writing, and playing an instrument.
38. Displays an unusual amount of independence.
39. Can show relationships among seemingly unrelated ideas.
40. Individualistic; likes to work by self.

Leadership Characteristics

41. Cooperates with others.
42. Is responsible; does what has promised and does it well.
43. Is self confident with peers and adults.
44. Expresses self well.
45. Adapts readily to new situations; is flexible.
46. Seems to be well-liked by classmates.
47. Enjoys being with others.
48. Organizes and directs activity in which he/she is involved.
49. Is sensitive to others and to situations.
50. Is well-coordinated and enjoys all sorts of athletic games.
- *51. Participates in most of the school activities.

Thinking (Cognitive) Behaviors Which Contribute to Creativity:

- Fluent thinking - the ability to think of the most by producing a number of questions, ideas, solutions or, alternatives.
- Flexible thinking - the ability to take different approaches by producing a variety of questions, ideas, solutions, or alternatives.
- Original thinking - the ability to think of novel or unique approaches by producing ideas, questions, solutions, or alternatives that others do not think of.
- Elaborative thinking - the ability to embellish or expand upon ideas, questions, solutions, or alternatives.

Feeling (Affective) Behaviors Which Contribute to Creativity:

- Curiosity - The thirst to be inquisitive and want to know.
To toy with an idea and try it on for size.
Willingness to question, explore and follow an inclination just to see what might happen.

*Adapted and compiled from Renzulli and Cummings check sheets.

Imagination - the power to wonder or feel intuitive about something that has never happened to the child. To visualize and build images of things or places never ventured into. The ability to dream in a world of fantasy.

Complexity - the challenge to appreciate intricate problems or ideas. To seek order out of disorder and delve into gaps that exist between how things are and how things might be.

Risk-taking - the courage to make a guess, be different or take a dare. To be able to function without structure and face failure, make mistakes and criticism.

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**Frank E. Williams, Identifying and Measuring Creative Potential: A Total Creativity Program for Individualizing and Humanizing the Learning Process.

APPENDIX M

"Creativity" - How To Teach It

APPENDIX M

"CREATIVITY" - How To Teach It

SOUTHGATE SCHOOL

Acceptance of more than one answer (divergence)

Exploration of new answers and possibilities

Appreciation for student's desires to be original or
elaboration on something

Expose students to new perspectives (e.g., pictures that
show two or three in one)

Allow them to let their imaginations flow appreciating
their products as they were relevant to them - discuss why

Example:

Redefine

Magnify

Minifaction

Rearrange

APPENDIX N

Ways to Become a More Creative Person

APPENDIX N

WAYS TO BECOME A MORE CREATIVE PERSON

SOUTHGATE SCHOOL

1. Look and really see.
2. Follow the lead of your interests.
3. Record spontaneous ideas.
4. Have lots of materials but not necessarily "store bought" ones.
5. Freely express yourself.
6. Enjoy and experience good art and music.
7. Ask questions, fantastic ones.
8. Be tolerant of your errors and of the errors of others.
9. Demand respect for your privacy.
10. Honor creativity in others.
11. Do something different--take a different way to work--avoid getting into ruts.
12. What makes you more creative?
Anything that makes you more alive.

CREATIVITY IS.....

-being FLUENT in our thinking
-being FLEXIBLE in our thinking
-having ORIGINAL thoughts
-being able to ELABORATE on thoughts

CREATIVE THINKING IS.....

.....being able to use facts--being able to apply them--being able to manipulate facts to make better decisions. So much of the time we as educators just teach isolated sets of facts. We teach how to use commas, the bell rings, we teach the "eights" times tables. The bell rings, and on to another set of facts. Students are expected to store these facts until they need to use them...but many don't. Can you remember where you put the keys to that old suitcase, the periodic table of elements, all the vice-presidents of our country?

Creativity is.....

BRAINSTORMING and creating a classroom climate. When you brainstorm you can't be wrong. There is NO ONE CORRECT answer. The more answers, the better. When brainstorming it is important not to judge/evaluate as ideas are generated. But when you are finished, then comes the time for evaluation. Diverge = quantity. Evaluate = quality. Some of the results of your brainstorming may seem silly. Some answers may seem irrelevant, but through evaluation you will be able to determine an acceptable answer, many times several acceptable answers.

Many students (and adults) have trouble being creative. So much of their previous school thinking has been memorization (coming up with the correct answer). They have met with repeated failure so they become reluctant to respond. They have been trained...they have been taught NOT to be different. Divergent questions create a learning environment. Where students do not have to worry about being correct...they can risk...they respond...they become involved...they learn...they grow.

APPENDIX O

Meaningful and Less Meaningful Learning
for the Gifted

APPENDIX O

MEANINGFUL LEARNING FOR THE GIFTED

1. Children have ready access to library and others resource materials.
2. Students are involved in independent study activities. Teacher does not dominate classroom, or run a "tight ship" but permits student freedom in selecting and pursuing problems.
3. Major emphasis on ideas of merit and structure is used to enhance these ideas.
4. Teacher's questions are openended, with an emphasis on generalization, analysis and synthesis.
5. The interests and abilities of the students are utilized in planning and implementing curriculum materials.
6. Discussion, utilizing debate and controversial issues, is freely used in the classroom.
7. Appropriately advanced content is available to the students so that there can be exploration in depth.

*Information taken from The Improvement of Teaching Procedures with Gifted Elementary and Secondary School Students, Project No. 6-1244, Ruth Martinson and Jean Weiner, Co-Directors, June 1968, p.131.

LESS MEANINGFUL LEARNING FOR THE GIFTED

1. Teacher and materials in the classroom are the main sources of information. Children do not have the freedom to utilize library frequently and to work with other resource people.
2. Class is run as a "tight ship". The topics and activities are prescribed for the students and there is little deviation from the routine.
3. The major emphasis in productions is in correct usage, neat papers, proper spacing and punctuation, etc., rather than on concepts and ideas of merit.
4. The teacher's questions are primarily closed-type questions with an emphasis on specific facts and rote memory.
5. The course of study is followed very closely, with little attention being paid to the interests of the children.
6. The lessons are carefully structured and there is little room for debate and controversy.
7. The content is based on specific facts and there are very few opportunities for exploration in depth or going beyond the grade level material.