New Nouveau
Brunswick

Department of Education

Gifted and Talented Students:

A Resource Guide for Teachers

Educational Services Division (Anglophone)
1997

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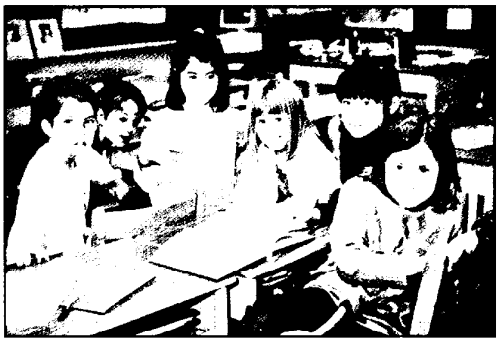
Introduction

All students require opportunities to learn, grow, and be challenged to strive for excellence. Students with exceptional talents and learning potential have needs, that require special attention. Gifted learners are often thought of as a population who will survive, and even thrive on their own; yet, in many ways, they are seen as "different." Through careful nurturing and appropriate education, gifted students have the potential to provide answers to many of society's challenges. They have a unique contribution to make to the future development of their communities and the world.



At present, some gifted learners are in classrooms with their abilities unrecognized and their needs unmet. While they may be able to satisfy their intellectual, creative or artistic needs outside of the school system, educators and the community have a responsibility to provide a meaningful education for these learners. Without an appropriate education, there will be "lost academic growth, lost creative potential, and sometimes lost enthusiasm for educational success and eventual professional achievement" (Davis and Rimm, 1994, p. 1).

What can educators in New Brunswick do to help develop the learning potential of gifted and talented students? How can programs best serve their needs and also enhance what is done for others? **It is the intent of this document to offer information and ideas that will assist in providing more challenges for the gifted while also creating a more stimulating environment for all students.**

Department of Education Position Statement

The mission of public education in New Brunswick is to have each student develop the attributes needed to become a life-long learner, to achieve personal fulfilment and to contribute to a productive, just and democratic society. This requires an education system that is responsive to the differing needs, interests, abilities, and aspirations of the entire student body. Providing services to the gifted presents a special challenge but is consistent with the belief that each child is entitled to appropriate educational opportunities.

Gifted students require the same essential components of programming as other students, but they also require curricular differentiation that varies in breadth, depth, and tempo from regular programs. A combination of challenging curriculum, enrichment and practical experiences will enable students to develop their potential in meaningful ways. Strategies for adapting curriculum and delivering instruction must take into account the special needs of the individual student. In addition, it is imperative that these strategies address content, learning processes, creative and critical thinking skills, research skills, and student-developed products.

Definition

Gifted students excel or show the potential to excel beyond their age peers in areas such as general intellectual ability, specific academic aptitude, creative and productive thinking, visual and performing arts, leadership capacity and kinesthetic competence.

Characteristics of Gifted Students

The first step to serve gifted students better in our classrooms is identification. The intent of the identification process is not to label students but to assist teachers in recognizing those individuals who require a differentiated program and to provide students with appropriate activities that parallel their abilities. Researchers have identified that gifted students differ from their peers in two significant ways:

- *the rate at which they learn - Gifted students learn at a quicker pace than their peers.*
- *the depth of understanding - Gifted students question more and show greater insight into issues and problems (Carroll and Laming, 1974).*

Gifted students also have many characteristics which can signify exceptional ability.

Gifted students often:

- attain developmental milestones earlier than other children.
- tend to learn more rapidly and with less practice.
- are alert, curious, and perceptive of nonverbal cues.
- are able to construct, handle abstractions, and draw inferences earlier than their peer group.
- display special talents in one or more areas; e.g., reading, writing, mathematics, science, art, music, and in leadership activities.
- can sustain long periods of concentration and attention and are willing to commit time and energy to areas of interest.
- demonstrate a keen interest in humour and play with words.
- are interested in philosophical, social, and ethical issues.
- are fluent, original, flexible, and elaborative thinkers.
- entertain complexity and appear to thrive in problem situations.
- display intellectual playfulness.

Alberta Education, 1986
Manitoba Education and Training, 1989

To assist with the identification of gifted individuals, characteristics of the intellectually gifted and the artistically talented are listed in Table 1. It is important to realize that an individual student may not exhibit all of the indicators, and a single indicator should not be used as an example of giftedness. A combination of several indicators in varying degrees should always be considered.

Table 1

Summary of Categories of Giftedness and Corresponding Observable Student Characteristics

Categories of Giftedness	*Observable Student Characteristics*
General Intellectual Ability	• Unusually advanced vocabulary for age. • Large storehouse of information about a variety of topics. • Quick mastery and recall of factual information. • Rapid insight into cause-effect relationships. • Makes valid generalizations about events, people, and things. • Keen and alert observer. • Great deal of independent reading. • Readily sees logical and common sense answers.
Specific Academic Aptitude	• Demonstrates inordinate strengths in a given area. • Ability to grasp underlying principles in the talent area. • Persistent in talent area and is motivated internally. • Prefers to work independently. • Can relate to older students in the talent area.
Creative or Productive Thinking	• Displays unusual curiosity about many things. • Generates a large number of ideas and/or solutions to problems. • Uninhibited in expressions of opinion. • High risk taker. • Demonstrates intellectual playfulness. • Displays a keen sense of humour and perceives humour in unlikely situations. • Sensitive to beauty.

Middle school student Alex is keenly interested in world affairs, loves to write, is witty, perceptive and extremely well liked by his peers. However, in math he works slowly and his performance is average. He expresses an interest in journalism or international development as possible careers.

- Nonconforming.
- Criticizes constructively.

Leadership Ability

- Carries out responsibility well.
- Self-confident.
- Is well liked by classmates.
- Expresses ideas well.
- *Adapts readily to new situations.*
- Enjoys being around other people.
- Tends to dominate others.
- Participates in most social activities at school.
- May excel in athletic activities.

Visual and Performing Arts Ability

Visual:

- Enjoys art activities.
- Displays interest in other students' art work.
- Elaborates on ideas from other people.
- Tries a variety of media.
- Is critical of own work.

Performing Arts

Music:

- Sustains interest in music.
- Readily remembers melodies.
- Displays keen awareness and identification of a variety of sounds heard at a given moment.
- Perceives fine discriminations in musical tone.
- Plays a musical instrument.

Drama:

- Volunteers to participate in classroom skits and plays.
- Tells stories or renders accounts of *experiences.*
- Uses appropriate gestures and formal expressions to communicate feelings and thoughts.
- Handles body with ease and poise.
- Holds the attention of a group when speaking.
- Creates original plays or plays from stories.

Kinesthetic Ability

- Demonstrates good control of body movements.
- Has excellent eye-hand coordination.
- Manipulates objects and puzzles with ease.
- *Able, with ease, to complete complex mazes* and word searches.
- Learns new gross motor activities readily.
- Has good sense of rhythm.

Adapted and used with permission from Alberta Education, as presented by the Minister of Education and the Special Education Branch.

It is important to realize that an individual's demonstration of these characteristics depends on many factors, only one of which is aptitude. Some other conditions which should be considered are motivation, self-esteem and socio-economic factors. Gifted students who are not identified and who do not have the opportunity for individualized programming may become at-risk students. "They can become bored, withdrawn, depressed, frustrated or aggressive; their uniqueness becoming defined in negative ways" (Manitoba Education and Training, 1989, p. 7). See Appendix A for sample of positive and negative behaviours associated with characteristics of gifted students.

Current research pertaining to the identification of gifted students focuses on a broader definition of giftedness that goes beyond academic ability. Gardner's (1983) concept of multiple intelligences challenged the narrow definition of intelligence by proposing the existence of at least seven basic intelligences (Armstrong, 1994). The seven intelligences include: linguistic (verbal) intelligence, logical-mathematical intelligence, spatial intelligence, musical intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, and lastly, intrapersonal intelligence. Gardner's multiple intelligence theory has led to a realization that intelligence is more than a single dimension such as an IQ score. Consequently, it is critical that the identification strategies are flexible and multidimensional.

> ***In summation, educators today should be adopting a broad definition of giftedness so that the needs of a divergent range of talented students are met within the school setting.***
>
> *(Manitoba Education and Training, 1989, p. 7)*

Jeff is twelve and small for his age. He has always had trouble socializing with his peers; because of this, the decision was made for him to repeat grade one. As he progressed through elementary school, his interpersonal skills slowly improved to the point where it was decided he should be accelerated from grade four to grade six. Jeff's report card results in grade six continued to be above average and his displays of temper decreased.

Identification Process

A process should be in place, on a regular basis, to allow for the identification of gifted individuals, as there is a developmental component to the blossoming of many gifts and talents. Clearly written guidelines should be developed by school districts regarding the identification of students and their selection for special programming.

Identification of strengths and talents should be ongoing and should involve using multiple methods. This increases the possibility that underachievers and students with disabilities will be examined more closely. Several of the following sources of information should be used as part of the identification process:

- results of standardized tests in the areas of cognitive ability, general achievement, and creativity,
- teacher observations including anecdotal reports and informal assessments,
- checklists and inventories (samples in Appendices B and C),
- samples of student progress and achievement,
- nominations by parents, peers and self,
- interviews of students and parents.

In addition, a high level of interest and task commitment in a particular area of learning should be given strong consideration. Some individuals have the ability, commitment and creativity to be, not only consumers, but producers in the domains of knowledge, or the visual and performing arts.

Gifted Students and Curricula

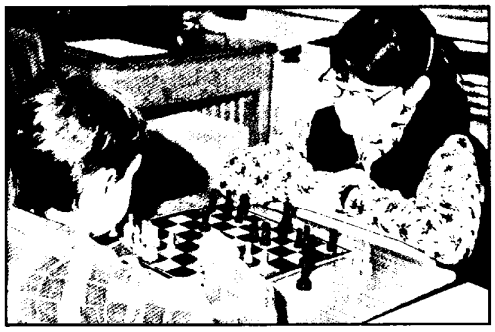
The teaching of a meaningful curriculum is essential to good education for all students. Professionals in the field of education must continually examine the appropriateness of curriculum for individual students. Differentiation is one aspect of curriculum adaptation that has emerged as essential. Very simply stated - differentiation means appropriately fitting the curriculum to meet the needs of the learner.

Responding appropriately to students' exceptionalities makes it imperative that the curriculum be differentiated. When

differentiating curriculum, educators take into account the following needs of gifted learners:

- the opportunity to learn at faster rates,
- the opportunity to work on all aspects of problem-solving,
- the opportunity to deal with the abstract.

Adapting curriculum to meet these needs is an area which requires careful thought. Just as gifted students differ in ability from their age peers, variations exist within the population itself. VanTassel-Baska (1988) states that because of differences among individual learners, "it is the role of the teacher to intensify or slacken the curriculum experience that has been planned in order to accommodate these individual differences" (p. 55).



Because of characteristics such as the ability to learn more rapidly, a more intense need to know, and the possession of superior abstract thinking skills among gifted learners, appropriate content must be selected. Among the issues to be addressed in considering content are complexity, relevancy, interest to the student, and ability of the teacher. Students must be given challenges significant enough to hold their attention and motivate them to pursue topics with discipline.

It is also important to focus on higher level thinking skills. Gifted students often seek new ways to do things and have the ability to see unusual relationships. They investigate and question common ideas. Educators must teach skills which respond to these needs and allow students the opportunity to solve many different types of problems in many different settings. Learning the skills of creative and critical thinking and problem-solving enables the learner to transfer these school-learned skills to real-life situations. Educators must prepare students to address, in creative as well as practical ways, the many personal and societal issues they will encounter. See Appendix E for publications that offer teaching strategies to develop thinking skills (de Bono, 1985 and 1986; Paul, 1989; Dantonio, 1990).

Gifted students have the ability to produce work that is unique; educators, therefore, must teach students the skills to produce products which are both meaningful and creative. These students often possess superior communication skills, are more imaginative, and have more intense interests than their age peers.

Product development speaks to these characteristics because it is the instrument by which the student communicates ideas. It is also a vehicle through which the consolidation of ideas occurs. Gifted students must be given the opportunity to decide upon the appropriateness of products for a variety of projects and/or situations. The decision-making skills involved in the creation of products will certainly contribute to the making of sound choices later in life.

According to VanTassel-Baska (1988), "the quality and character of a school's curriculum is a vital ingredient to the eventual realization of a child's capacity" (p. xiii). When considering curriculum for gifted students, it is imperative that attention be given to the content of that curriculum, the processes by which the curriculum can be made interesting and relevant, and the development of products by which students can express what they have learned.

Programming Strategies for the Gifted

Prior to a discussion of programming strategies, there are some fundamental questions which need to be considered.

What do we want gifted and talented students to be or do as an outcome of their education?

Is the purpose of education for the gifted and talented to promote the development of self or the contributions they can make to society?

Is learning how to learn more important than what is being learned?

Is quantity or quality the focus of a program?

Should learning emphasize the assimilation of information or the development of thinking processes?

Is the progress of the gifted and talented measured against the group, the average or the self?

Is the winning of prizes, scholarships, and "A's" an indicator of program success?

(Kaplan, S., 1974, p. 27)

It is a defensible education system which has at the heart of its beliefs the premise that all children can learn and provides the means to ensure that all children are learning. Nonetheless, strategies for the gifted are "hard to plan, implement, defend, sustain, and improve" (Borland, 1989, p. xv). It appears, therefore, that strategies for gifted learners "should emerge from and be compatible with the settings in which they will be implemented" (p. 1). Whenever a decision is made to develop an education program, it is essential that the unique needs of each learner are met within the program. This may mean that an individual program will have to be designed.

The following descriptions illustrate various approaches to individualized programming.

Susan is a divergently gifted ten-year-old who has scored in the 99th percentile or higher in all areas of standardized testing. Although Susan achieves above average results, she has always disliked going to school. While reluctant to explore new topics, she will work for extended periods on subjects that do interest her.

Enrichment

Enrichment deals with appropriate additions to the current curriculum. Planning for enrichment should emphasize creative and experimental activities and provide opportunities for independent work in the classroom and the community. The activity must vary in depth and breadth from that generally provided. Kaplan (cited in Renzulli, 1986) identifies the following criteria:

Exposure

Students are exposed to new experiences, topics, materials, and fields of knowledge that are not ordinarily covered in the regular curriculum.

Extension

Students are provided with opportunities to elaborate and extend the regular curriculum through additional time, materials, and experiences. There may also be self-initiated related study.

Development

Students are given instruction focusing on a completely new explanation of a concept or skill which is part of a learning activity within the curriculum. For example, the concept of perspective in art could be compared with perspective in literature.

Differentiated Curriculum

A central issue in the education of the gifted is the development of programs that are appropriate for gifted learners and different

enough from regular programs to justify the expenditure or reallocation of funds. According to Passow (1981), this requires the recognition of what constitutes differentiated curriculum. Organized around a set of learning experiences that are related to a given theme, differentiated curriculum offers comprehensive and integrated opportunities. In other words, a differentiated curriculum results from the appropriate modification of three variables: content, process and product. Specifically, teachers would adapt the content of the lesson, the processes which the students are to learn, and the product which the students are to create or develop.

John's mathematical and verbal skills are several years beyond his grade nine peers, even though he has already been accelerated by one grade. He has always performed well in school but has never been the top student. He rarely does any homework, or any studying for tests and exams. When he does have an assignment or project to complete, it is done at the last minute. John is a voracious reader and can concentrate for long periods of time when something catches his imagination.

Content

To modify content, teachers begin with the question, "What do I want my students to know when we have completed this unit?" This question should lead to a list of topics, concepts, or abstractions that range from simple to complex. For example, a social studies unit on Canada could have a topic of settlement patterns (simple content) to a more abstract, transcending issue of nationalism and separation (complex content).

Process

Processes are the skills or competencies that students are expected to learn. Processes can include creative and critical thinking skills, problem-solving skills, learning-to-learn skills, and research skills. Process skills also range from simple to complex. For example, Bloom's taxonomy ranges in skill level from knowledge (simple process) to evaluation (complex process).

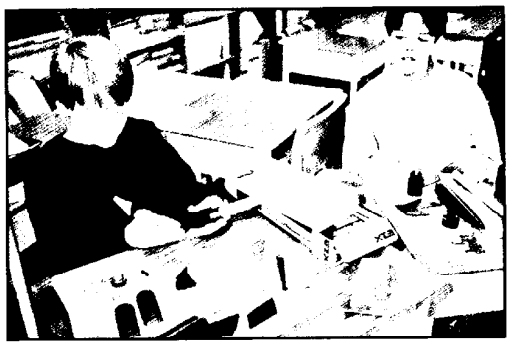
Product

The product is the student's demonstration or communication of what she or he has learned. The product can be in numerous formats including oral presentations, making a movie, writing a book, or participating in a debate. The product can be a reflection of the student's learning style or a challenge to develop a less familiar style.

By differentiating curriculum, a teacher creates varied levels of learning activities which ensure that students transform ideas and not merely reproduce ideas. (Appendix D provides an illustration of a differentiated unit.) The following guiding principles for differentiating curriculum were identified by Passow (cited in Berger, 1991).

- The content of curricula should focus on and be organized to include more elaborate, complex, and in-depth study of major ideas, problems, and themes that integrate knowledge within and across systems of thought.
- Curricula should allow for the development and application of productive thinking skills to enable students to reconceptualize existing knowledge and/or generate new knowledge.
- Curricula should enable them to explore constantly changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world.
- Curricula should promote self-initiated and self-directed learning and growth.
- Curricula should provide for the development of self-understanding and the understanding of one's relationship to persons, societal institutions, nature, and culture.
- Evaluations of curricula should be conducted in accordance with the previously stated principles, stressing higher level thinking skills, creativity, and excellence in performance and products.

Theme-Based Curriculum



A theme is an idea or subject that recurs and unifies. Survival, order, force, change, patterns, systems, exploration, and power are a few examples of themes. Thematic-based curriculum is not a curriculum in and of itself, but rather a way of incorporating regular curriculum under a large umbrella in order that students see interrelatedness between and among disciplines, topics, and information. According to Kaplan (cited in Renzulli, 1986), themes are timeless, significant, and connective. In addition, a thematic curriculum:

- makes information relevant;
- allows open-endedness;
- provides opportunity for questioning;
- encourages thinking in wholes as well as parts;
- provides opportunity for philosophical as well as practical approaches;

- encourages a general view of learning, a complement to the specific view;
- provides coherence and assists educators in searching for interrelationships in and among disciplines.

A thematic curriculum is highly appropriate for gifted students when the focus is on substantive content and the opportunity for rigor exists throughout.

Curriculum Compacting

Eight-year-old Christine is a quiet, hard working grade three student who performs well in all subjects. She tries her best at all times and gets upset when she makes a mistake. She puts more time and effort into projects than any other student in her class. While reluctant to speak out in class, Christine can be argumentative and bossy at home.

Curriculum compacting is a strategy with a two-fold purpose: first, to eliminate teaching of what students already know, and second, to "buy time" to work on an independent project, learn new material, be accelerated in a particular subject area, or work with a mentor.

In order to accomplish this, several steps are necessary.

- Determine an expected level of mastery in a unit of learning.
- Pretest students, either all students, or in some cases, students who may be likely candidates for compacting.
- Provide an opportunity for those students who have reached the predetermined level of mastery to learn any concepts they may not know.
- Provide alternative learning opportunities, such as independent study, for these students.
- Monitor students' activities and progress; keep a record of what has been compacted for individual students.
- Compacting can be used in any subject area.

A complete "how to" guide authored by Rees, Burns, and Renzulli (1992) is available from Creative Learning Press.

Acceleration

Acceleration allows students to "progress through an education program at rates faster or ages younger than is considered the norm" (Maker, 1986, p. 183). This ability to understand information at a greater depth and breadth than their age peers challenges the education system. Fearn found that "the pace of learning for both achieving and underachieving gifted children not only was double that of nongifted children, but also tended to increase over time" (cited in Howley et al., 1986, p. 136). The question of what is an appropriate educational experience for

these students must be considered. Should gifted learners remain with their age peers or should they be accelerated to a point where the level and pace of instruction is appropriate? This approach should not be chosen as an alternative to enrichment. Acceleration and enrichment are intrinsically linked, so students who have been accelerated will still require enrichment strategies.

There are generally two types of acceleration:

Grade Acceleration - The student skips a grade, usually at the elementary or middle school level.

Content Acceleration - The student moves through a subject area at a rate commensurate with their intellectual abilities and capabilities to proceed.

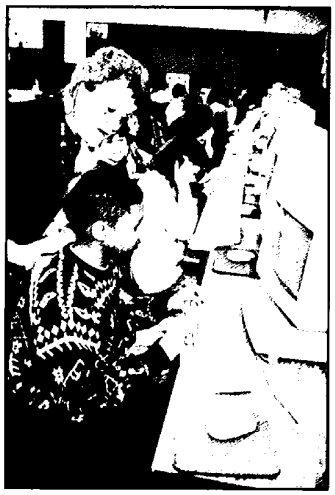
Examples of acceleration include:

- Advanced Placement and International Baccalaureate (These university entrance programs provide academic challenge through acceleration and enrichment.)
- early graduation
- early enrolment in university (Traditional entrance requirements are waived in special circumstances.)
- dual enrolment (A student may take university courses while in high school, high school courses while in middle school, or middle school courses while in elementary.)
- credit by examination (A student may challenge for credit by demonstrating appropriate prior learning. In addition to knowledge outcomes, students must show mastery of outcomes relating to social issues, processes and values. The student obtains a course credit and moves into another course or into an independent study program.)
- advanced courses through distance education
- subject acceleration (A student takes a subject at a higher level than his/her grade level.)
- telescoping (This reduces the amount of time a student takes to cover the curriculum. For example, a student may complete two grades of a subject in one year.)

Acceleration programs for the gifted **must** consider the following:

- the emotional needs of gifted students,
- the need for peer interaction,
- reorganization of the curriculum to include higher level skills and concepts,
- subject matter organized according to structure and/or theme,
- diversity of teaching strategies and learning experiences.

Research has demonstrated that students do benefit from acceleration and are not beset with problems as was previously believed (Howley, Howley and Pendarvis, 1986).



Computer Technology

The computer, with its vast range of applications from word processing and spreadsheets to graphic design and music composition, has found its place in the classroom. This opens unprecedented opportunities in education. As a powerful tool for enrichment, the computer is used for writing, research, and communications. Capable students are producing sophisticated pieces of creative and research writing using word processors. School collections of CD-ROM's enable students to acquire an extensive range of information. School hookups to Internet provide access to worldwide databases as well as access to human resources through e-mail.

Most educators agree that the best use of computers for enrichment involves using the technology as a tool for extending the powers of the mind. Teachers should seek opportunities for enrichment using the available technologies, but more importantly, they should attempt to develop self-directed students who will be alert to opportunities for the use of technology.

Independent Study

This type of enrichment provides gifted students with opportunities to pursue relevant problems and issues using research and other skills to complete an end product. Even though activities are closely monitored by a teacher, the student takes on more responsibilities for his/her own learning, acquires skills in assessing interests, establishes goals, and plans learning activities. Through this process, the student learns to self-pace and self-evaluate, and this can result in increased self-esteem. "By identifying an area of interest and pursuing a project to its

completion, gifted students take a significant step in the development of positive self-esteem, particularly as it demonstrates their knowledge and ability" (Sisk, 1987, p. 44). See Appendix E for more detailed information about Independent Study.

Mentoring

Mentorship is an arrangement whereby a gifted student and a person with an area of expertise that is of interest to the student meet regularly to develop the student's knowledge and skill. It requires a commitment from both the student and the mentor to plan a sequence of learning activities that are designed to achieve a specified goal. The mentor is often a community volunteer but can be a teacher or administrator. Careful consideration should be given to the selection of mentors and the matching of mentors with individual students.

Mini-Courses

All students need an opportunity to intensively pursue specific interests over a period of time and gifted students are no exception. These opportunities may be structured contractually with a student, may be arranged by connecting a student with outside resources, or may be part of a program offered to all students in a particular school. Some examples of mini-courses are Elizabethan theatre, short story writing, and aeronautics.

Special Events

In addition to the previously noted approaches, there are a variety of ways to provide students with opportunities to develop particular abilities. Examples are:

- Special lectures in the form of periodic high interest presentations that will stimulate individual study
- Student performances and presentations
- Field trips
- Artists-in-Schools/Writers-in-Schools (Professionals are brought in for workshops, seminars, and performances on a regular basis.)

Cooperative Learning

Cooperative learning is the practice of assigning a common task to a group of students who work together to accomplish a common goal. Its purpose is to teach students to interact with and

value others of varying ability levels and personalities. Its potential benefit to the individual, school, community, and society cannot be overstated.

The use of cooperative learning in the classroom can be an effective way to manage a heterogeneous class when the teacher is sensitive to meeting the individual needs of all group members. Gifted students are at-risk, however, in some cooperative learning situations because they can be used by others to do all of the work, they can find the pace too slow and become bored, or they can "turn off" other group members with their need to control. The following should be given consideration when cooperative learning is used with gifted students.

Tanya is a grade eleven student with many and varied talents - academic, musical, athletic, leadership. She has always excelled at everything and is an enthusiastic learner. Although she realizes that at some point in her education she will have to begin to focus on an area of study, she is not looking forward to this. Tanya is not the type of student who is seen as a guidance counsellor's first priority, but she would like to be able to share her dilemma with an empathetic professional.

- Cooperative learning and ability grouping are two separate issues. Cooperative learning is not a replacement for ability grouping.
- Cooperative learning is one teaching strategy for a heterogeneous classroom or for any classroom.
- Cooperative learning should not be used all of the time and should be balanced with individual and whole class assignments.
- High achieving students should not always work in heterogeneous cooperative groups. **There are times when gifted students should be grouped for fast-paced accelerated work.** (Robinson, 1991)

Instruction Outside the Regular Classroom

Instruction outside the regular classroom is offered to gifted students in addition to classroom-based programs, and it can encompass any or all of the enrichment strategies described in this document. It should be noted that it cannot and should not replace classroom-based programs where gifted students spend the majority of their time. Students who have completed the stated outcomes for the regular curriculum benefit from more advanced kinds of studies. A meta-analysis of this strategy showed substantial improvements in achievement, critical thinking, and creative thinking for gifted students (Vaughn, Feldhusen, & Asher, 1991). There appeared to be greater achievement gains when grouping for instruction was an extension of the regular classroom curriculum.

The Invisibly Gifted Child

The Gifted Underachiever

"Traditionally, the gifted underachiever has been defined as a child who cannot or will not perform at a level of academic achievement commensurate with indicators of his or her ability" (Emerick, 1992). Underachievement is clearly one of the most pressing issues facing educators of gifted students. All teachers encounter the following types of students in the classroom at some point in their career.

The student who:

- has exceptional intellectual ability but will not participate in the gifted/talented program or honors course because of the fear of getting less than straight A's.
- pursues interests intensively out of school but seems completely disinterested in school.
- only tackles assignments which are of personal interest or creatively challenging.
- seldom finishes anything.
- challenges authority.
- spends an inordinate amount of time avoiding assignments, and when completed, they are messy and full of careless errors.
- reads constantly throughout the day regardless of what else is happening in the classroom.

Anya is a grade four student who has recently moved to Canada. She is very shy and has not yet mastered English, although she is very observant. She draws continuously - mostly elaborate and complex designs and people. Anya has no formal training in art and her family is not in a position to provide this outside of school.

The frustrations caused by each of these situations is significant. It is commonly thought that patterns of underachievement are well in place by fourth grade and intensify if they are left unaddressed. Simple solutions do not exist, but there are a number of strategies which can be utilized over time to assist gifted underachievers in overcoming this problem.

Whitmore (1980) suggests the following as some of the instructional strategies which can be effective with under-achieving students.

- Invite, in a sincere way, students to participate in school; let them know you care.
- Establish a relationship of mutual respect and trust.

- Help them understand themselves and the nature of their giftedness and underachievement through talking about it with them.
- Assist them in recognizing their dissatisfaction with their underachievement and develop a belief that greater personal satisfaction will result from achievement.
- Offer more opportunities for intellectual challenge so boredom is avoided.
- Expose them to career education in order that they envision a possible future for themselves.
- Provide opportunity for successful group interaction and leadership when appropriate.

Teaching to the strengths of the underachiever will affirm the worth of that student. Recognizing ability and showing interest in what the child does away from school will create a feeling that the teacher values the student. Positive self-concept is the key to reversing underachievement patterns.

Giftedness and Disabilities

A child who is learning disabled can also be gifted. This phrase is often thought to be a contradiction in terms. Gifted students with undetected or unserved learning disabilities oftentimes fall into an underachievement pattern. Studies of this group of students have found that the gift can mask the disability and the disability can mask the gift (Baum, Emerick, Herman, & Nixon, 1989). Students such as these usually function at grade level and are unlikely to be considered for either gifted programming or other special assistance.

Like the learning disabled child, the student with physical and sensory disabilities is frequently regarded primarily in the light of the deficit area; the giftedness is overlooked. Since the options of a child in this category could be quite restricted, it is vital to recognize and develop the high potential that may be present. The development of intellectual giftedness or a particular talent is likely to expand opportunities for accomplishment and heighten self-concept (Alberta Education, 1986).

Socially/Economically Disadvantaged

When looking at the various attributes associated with gifted learners and when examining the research associated with gifted education, it is apparent that socially and economically dis-

advantaged students are usually overlooked and are seldom included in educational alternatives for the gifted. Although gifted students are "found in all economic strata, and in all racial and ethnic groups ... very small percentages of children from low-income families or minority groups are found in programs for the gifted" (Maker, 1983, p. 140).

An identification system that is flexible and that specifically focuses on students within this group is needed. The potential for superior performance can be identified formally with such tools as the Kranz Talent Identification Instrument and the Torrance Tests of Creative Thinking, and informally, from parent and teacher nominations (Borland, 1989; Davis & Rimm, 1994).

Martin is a fourteen-year-old grade twelve student. (He went directly into high school from elementary school.) Martin has a supportive family and a small circle of good friends who are like him to one degree or another. He excels in math, science and computers, but his performance in other subject areas is average. When asked what he would like to do in the future, he replies that he would like to create something but doesn't yet know what.

Guidance and the Gifted Child

The guidance and counselling needs of gifted students are similar to those of other students in many respects. From a developmental perspective, gifted students progress through the same stages as non-gifted students, except that the process may be accelerated. From a social or emotional context, gifted students may also experience some of the personally debilitating problems of our society. In addition to familial issues, gifted students are subject to the normal array of personal relationship or communication problems that other students face. These personal concerns, however, are most likely intensified by gifted students' hypersensitivity to their internal and external environment.

Gifted and talented students who demonstrate multiple interests and talents may have difficulty making decisions. Studies have shown that, for gifted students, the transition process between school and the work world is not as easily made as one might expect due to the numerous options available to these students (Kerr, 1990). Poor decision-making skills can make it difficult for them to arrive at a balance between school work and co-curricular or extra-curricular activities. In addition, this can also cause gifted students difficulty when they are faced with career planning activities such as the choice of subjects to take in high school or in post-secondary education.

Accordingly, guidance and counselling interventions at the earliest level should be aimed at helping the parents of gifted students to understand the dynamics of their children's giftedness

and the important role that parents have in both understanding and nurturing their children's talents as well as their physical, social, emotional, and career planning development. Consistent support from teachers and counsellors, as well as parents, is essential in helping gifted students to develop their full potential and a positive self-concept.

At the school level, whether in classrooms or in individual encounters, guidance and counselling interventions should also be aimed at helping the students to accept and use their abilities, to explore activities in areas outside of the academic classroom, and to handle social situations. This may take place in small group sessions or through individual discussions. Developmental guidance units or activities for all students may require some adjustments in order to meet the accelerated learning and internalization processes of gifted students. A particular emphasis on career exploration and career planning is required to help gifted students satisfy their core values.

Counsellors and teachers must help gifted students with their feelings of uniqueness and isolation. Supportive efforts will help such students to cope with their internal stress over feelings of alienation and of being "out of sync or phase." Guidance and counselling for gifted students, as for other students, should be directed at helping them to face their challenges, to learn how to make informed decisions, and to learn the skills necessary for coping with and solving their own concerns.

Resource Teachers

Resource teachers, present in most schools, can assist teachers in adapting and enriching programs for students who need more challenge. This assistance could involve collecting materials, working with the classroom teacher on adapting the learning environment to allow for more independent and small-group project work, and helping to develop a meaningful system of evaluation. Equally important, resource teachers can ensure that the adaptations and strategies selected for a student are shared with other teachers. By gaining information about a student's knowledge base, skills, and learning style, it is possible to avoid the loss of time and enthusiasm that result when students have to "learn" what they already know.

Teacher Training and In-service

It is essential that teachers receive training and ongoing professional development if they are to meet the needs of gifted and talented students. Designated university courses should provide a background in the theoretical and practical issues surrounding program development and delivery. Schools, school districts and the Department of Education should provide teachers with continuous in-service sessions. The following are professional development considerations:

- In-service activities should acquaint teachers with the philosophy of the school, school district and the province regarding the education of the gifted.
- In-service activities should inform teachers about identification policies and procedures.
- In-service activities should familiarize teachers with program development.
- In-service activities should assist teachers with curriculum adaptations.
- In-service activities should provide teachers with specific teaching strategies and evaluation methods.
- In-service activities should help teachers develop an understanding of the social and emotional needs of gifted students.
- School district consultants should be available to support in-service activities.

Measuring Program Success

Evaluation is an integral part of programs for gifted and talented students. A well-planned evaluation provides information that shows the extent to which the program objectives are being achieved. Methods of evaluation should be considered in the planning and implementation stages, and the evaluation results should be examined for program modification.

Two types of evaluation are needed to document the successes and weaknesses of education programs:

Formative or process evaluation - Does the program do what it proposes to do?

Summative or outcome evaluation - To what extent are the program's goals being met?

A program evaluation should provide a description of the program including the schools involved, the number of children enrolled, the objectives, and the activities. Student progress should be reported. This can be determined by self-evaluations, product ratings, teacher observations and criterion-referenced tests. Perceptions of parents and other community members, administrators, school staff, program coordinators and students provide valuable information regarding how well a program's goals are being achieved. Rating scales, tally systems, case studies, anecdotal records, and questionnaires may be used for evaluation purposes.

Program Delivery

An effective program begins with an assessment of the students' needs. The program goals and the program format are determined concurrently. As flexibility is crucial, and as there is no one program format that serves all students, it is recommended that effective programs include the following components: a resource room, regular classes with vertical and horizontal enrichment, independent study, and mentorship. Finally, a well-founded evaluation system is essential to maintaining the integrity of the program. "Evaluation is one of the most critical facets of program development, but it is also one of the least employed" (Alexandera and Muia, cited in Borland, 1989, p. 195). It is expected that through this combination of practices, effective programs can be provided for gifted students.

Borland (1989) identifies several factors to consider when selecting or developing a delivery system. These include:

- What did the needs assessment reveal concerning the nature and instructional needs of gifted students?
- What resources does the school or school district possess that will enable a response to these needs?
- What limitations with respect to resources are likely to be encountered?
- What are the attitudes of teachers and other educational partners regarding such issues as taking students out of regular classroom, homogeneous grouping, acceleration and enrichment, elitism, and so forth? (p. 123)

Once these questions are thoroughly examined and a satisfactory response is determined, it is possible to begin considering how the program will be delivered. It is important, moreover, to realize that no single approach is appropriate to the diverse population of gifted learners; program flexibility is critical to the success of the students.

Conclusion

Gifted and Talented Students: A Resource Book provides an overview of some of the considerations in developing learning experiences for gifted learners. Many facets of gifted education are presented: definition, identification, and strategies. In order to create challenging learning environments for all students, this document acknowledges that a range of effective approaches are essential. The successful implementation of these approaches is dependent upon the commitment of students, parents, teachers, principals, school districts, and the Department of Education.

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Appendix A

Positive and negative behaviours associated with some of the general characteristics of gifted students

The following is a list of positive and negative behaviours that are associated with some of the general characteristics of gifted students. A single characteristic should not be used as an indicator of giftedness. A combination of several characteristics in varying degrees should always be considered.

Characteristic	Positive Behaviour(s)	Negative Behaviour(s)
Creativity	+ seeks new ways to do things + sees unusual relationships + comes up with own ideas + produces work that is unique + able to think abstractly	- has difficult time focusing - has difficulty finishing projects - intolerant of everyday ideas - obsessed with being different - prone to extended fantasy; unrealistic
Curiosity	+ investigative + questioning + intrinsically motivated + intellectually curious	- asks too many questions - lack of attention to task at hand - easily bored in school
Attention to Detail	+ requires few instructions + can be accurate & neat when topic is of interest	- impatient with detail & repetition - bored with routine tasks - won't attend to topics which aren't of interest
Ability to Concentrate	+ easily focuses on task + completes tasks regularly	- difficulty changing direction
Ability to Think Clearly	+ evaluates ideas + questions common ideas + self checking	- critical attitude towards others - overly self-critical
Sensitivity	+ innate sense of social justice + concerned with welfare & rights of others	- feels criticism deeply - self-critical

Appendix B

Diagnostic Inventory of Cognitive, Creative, and Affective Skills and Characteristics*

Name _____ Grade _____ Age _____

School _____ Teacher Completing This Form _____ Date _____

Please indicate by using the rating scale, the degree to which each student exhibits each of the skills and characteristics listed below:

1. if you have rarely or never observed this skill,
2. if you have observed this skill occasionally,
3. if you have observed this skill almost all of the time.

Cognitive	Creative	Affective
I Problem Identification ____ Keen powers of observation ____ Interest in complex matters ____ Thinks abstractly	____ Sensitive to problems ____ Defines problems	____ Adjusts to new situations ____ Sensitive to social values
II Information Gathering (Fact and Feelings Finding) ____ Keen powers of observation ____ Makes inferences	____ Questioning attitude	____ Risk taker
III Hypotheses Information (Idea Seeking) ____ Combines ideas	____ Vivid imagination ____ Tolerance for ambiguity ____ Has many ideas ____ Sees things in varied ways ____ Offers unique or unusual ideas ____ Concerned with adapting, improving, modifying ____ Ability to make hypotheses	____ Risk taker
IV Hypotheses Testing (Solution Findings) ____ Makes judgements and decisions ____ Reasons things out		
V Decision-Making ____ Recognizes relationships, cause/effect ____ Reasons things out ____ Plans and organizes information ____ Transfers learning to new situations ____ Generalizes	____ Sees implications or consequences ____ Adds details	____ Sensitive to social values

Anecdotal Comments

Ability to concentrate: _____

_____

Advanced vocabulary: _____

_____

Good memory: _____

_____

Ability to find subtle humor, paradox, or discrepancies: _____

_____

Self-confidence: _____

_____

Ability to influence others: _____

_____

Ability to work independently: _____

_____

Ability to communicate effectively: _____

_____

Enthusiasm: _____

_____

Task commitment: _____

_____

Persistence: _____

_____

Ability to assume and discharge responsibility: _____

_____

Additional Information:

A. Parents, peers, self, other school personnel: _____

B. Past records: _____

C. Summary: _____

D. Recommendations: _____

* **Permission granted to use the inventory by:**
Madge T Craig, Ph. D.
Assistant Professor
Teacher Education and Administration
University of North Texas

Appendix C

Teacher Checklist - Screening Phase

Please check outstanding characteristics

	Student's Name					
Characteristic						
Intellectual Curiosity						
Risk Taking						
Sensitivity						
Ability to Concentrate						
Persistence/Ability to Sustain Involvement						
Ability to Attend to Detail						
Flexibility of Thought						
Ability to Think Logically						
Imagination.						
Independence in Work Habits						
Independence in Thought						
Originality.						
Verbal Facility.						
Perception Beyond Years						
*						

*If a student could be mistakenly excluded from the gifted program, please check this box. Some examples include a child who is disadvantaged, disabled, or unmotivated.

Appendix D

Differentiating a Unit

The following steps, along with the accompanying grid, serve as a guide for differentiating curriculum. A science unit, *Face-lifting a Planet,* has been selected to illustrate the process.

Step I

A teacher begins to differentiate the unit (*Face-lifting a Planet*) by first determining the learning experiences that students will be offered. The content should range from simple (kinds of features that change the face of the earth) to complex (continental drift). Some of this content will be required information for all students; whereas, other content may only be for those students who select a more sophisticated level of information.

Step II

The teacher now decides the processes available to students for acquiring the information in the content domain. In this example, the process selected by the teacher was Bloom's Taxonomy of Thinking Skills that ranges from simple (knowledge) to complex (evaluation).

Step III

The teacher works with the students to determine the types of products that students will create when learning about the content and the research skills students will need to develop the product.

Step IV

In this step, the teacher and students create the learning experiences. They begin by determining an activity (learning experience) that students may complete at the simplest content level (kinds) and simplest process level (knowledge). For example, students could list two ways that mountains, earthquakes, and volcanoes change the face of the earth. The teacher and students then develop learning experiences for simple content (kinds) and the comprehension process. Learning experiences are developed along the continuum simple content (kinds) to complex processes (analysis, synthesis, evaluation). Moving through the content continuum toward complex content, learning experiences are developed for the various cells. For example, the complex content *future* and the complex process *synthesis* could result in the learning experience *design a map of earthquake activity in NB 1000 years from now.*

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Step V

The type of research skill a student uses and the type of product the student produces to complete a learning activity may be recorded in each cell. This is illustrated by the letters and numbers in the various learning experience cells of the sample that is provided here.

The differentiation grid has empty learning experience cells entitled *independent study.* These cells are for students who have been compacted in this unit, and therefore, able to "buy time" to study this concept (face-lifting a planet) independently. The teacher and student agree on the depth of content and complexity of the process for the independent study, thus creating a learning experience of interest and of an appropriate level of challenge.

Differentiating a Unit

Simple ← Process → Complex

Simple ← Complex

Facelifting a Planet	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Kinds: Mountains Earthquakes Volcanoes	List two ways that mountains, earthquakes, and volcanoes change the face of earth.	Summarize notes on how earthquakes, mountains, and volcanoes change the face of earth. (a - 1, 10)		What would be the consequence of an earthquake in NB? (f - 11)	Compare and contrast the effects of earthquakes in NB and BC and BC. (f - 5)	Decide which kind of facelifting is more detrimental to people. (h - 7,8,10,11)
Formation: Mountains Earthquakes Volcanoes	Read the text on folds and faults.	Explain how mountains can be built through the action of earthquakes and volcanoes. (c - 10,11)	Demonstrate to the class how folds and faults build mountains. (p)	What would happen to San Francisco if the San Andreas fault slipped?	Hypothesize if the San Andreas fault would influence earthquakes in BC.	Infer how the Rocky Mountains were created.
Influences: Mountains Earthquakes Volcanoes	Read the text and list four ways that mountains, earthquakes, and volcanoes influence us.	Explain how mountains, earthquakes, and volcanoes influence climate. (b - 2)	Read about the Mt. St. Helen Volcano. Write a newspaper article of the event. (e - 8,10,11,)	Determine why volcanoes occur only in certain places.	Design a filmstrip on the influences of mountains, earthquakes, and volcanoes on environment/ climate.	Set up a panel discussion debating the issue of Continental Drift. (h - 3,5,7,8,11)
Future: Mountains Earthquakes Volcanoes	Find three examples where plate boundaries are closing and plates are in collision.	Prepare a report on the future of earthquake activity in NB. (h)	On a map, group the data found on plates in collision. (j - 9)	Predict what will happen in regions where plates are in collision.	Design a map of earthquake activity in NB 1000 years from now. (j)	Justify your map to the class.
Theory: Continental Drift /Plate tectonics)	Explain what plate tectonics is.	Prepare a report on plate tectonics.	Construct a model of the continental plates.	Determine how you can use the theory of plate tectonics to recreate the map of earth 10 M years ago. (j - 8,11)	Predict the face of earth in 10 million years. (f - 7,8,11)	Write a story on life in NB in 10 million years.
Independent Study						
Research Skills	1. note-taking 2. skimming 3. card catalogue 4. index	5. library (internet, CD-ROM, ERIC, microfiche) 6. interview 7. stating a premise 8. making inferences			9. outlining 10. summarizing 11. drawing conclusions 12. writing a report	
Products	**Written** a. notes b. report c. test d. story e. editorial	**Oral** f. report g. debate h. panel discussion i. interview	**Visual** j. map k. table l. display m. chart	**Kinesthetic** n. model o. puzzle p. demonstration q. filmstrip		

Appendix E

Independent Study

Independent study allows a student to follow a self-selected area of interest. Planning of an independent study program should always be conducted with the close supervision of the teacher. Dialogues between student and teacher are essential throughout, and opportunities for sharing the product with peers should be an integral part of the project.

Parke (1989) offers guidelines for conducting independent study projects with gifted students:

1. Limit the topic to an area that can be easily studied. Particularly with young children, choose topics about which information is readily available, but not so much that the student is swamped. The topic of computers is too large for a student of any age - information is endless and the student will have trouble deciding what is germane to the study. Computer languages, choosing software, or computerized simulations are topics that will lead the students to the information they seek.
2. Complete a planning form with the student. This form should include the topic to be studied, questions to be answered, resources to be used, ways to report the data, and methods to evaluate. This can be referred to during follow-up meetings to see if revisions are necessary.
3. Put a time limit on the study; do not allow it to go on indefinitely. Six weeks is too long for a first-grade student to be studying a topic on her own. For younger children and others who are not experienced in this type of program, it is best to keep the time frame relatively short. As students become more accomplished, the studies can become more complex and extensive in length.
4. Assist students with locating and accessing various resources; e.g., people to interview and audio-visual aids. Before they start, help students to plan the resources that can be used. Developing the strategies needed to procure information is one of the outcomes from this program, thereby making it an excellent way to teach students how to learn.
5. Keep the students thinking about a product for their studies. Encourage divergent products that go beyond the usual report and picture or map.

Appendix F

Resources

Journals and Magazines

Journal for the Education of the Gifted (Fall, Winter, Spring & Summer)

JEG
University of North Carolina Press
P.O. Box 2288
Chapel Hill, NC 27515-2288

Parents as well as educators are provided with a balanced presentation of theory and practice to address the unique psychological and educational needs of gifted, talented, and creative people. Research papers, innovative program descriptions and instructional practices are included.

Gifted Child Quarterly (January, April, July & October)

National Association for Gifted Children
1155 15th Street N.W., Suite 1002
Washington, D.C. 20005.

This journal includes articles concerning recent research in the field of gifted education as well as practical articles for those working with the gifted. From time to time, theme issues are published on a particular topic. Book reviews are normally given at the end. A nice feature, "Putting the Research to Use," is included with many of the research articles and details actual classroom applications.

Gifted Child Today Magazine

P.O. Box 8813
Waco, TX 76714-8813

Contains very readable, practical information in a magazine format on various subjects concerning the gifted. Recent research findings are reported and advertisements for publications (manuals, teaching aids, etc.) are included. Good information for classroom teachers.

Gifted Education International (3 issues annually)

A B Academic Publishers
P.O. Box 42
Bicester, Oxon OX6 7NW ENGLAND

This journal features articles as well as book reviews, students' contributions, and news from around the world. The articles are well researched but the approach is essentially a practical one dealing with problems relevant to teachers, parents and students.

Roeper Review (published quarterly)

P.O. Box 329
Bloomfield Hills, MI 48303

This journal, one of the most highly respected publications on gifted education, is a mixture of research and practical articles, book reviews, letters and announcements.

Magazines that publish student work

Chickadee Magazine

Suite 306
56 The Esplanade
Toronto, ON
M5E 1A7

Claremont Review, The

4980 Wesley Road
Victoria, BC
V8Y 1Y9

Child Life

Box 567
1100 Waterway Boulevard
Indianapolis, IN 46206

Children's Album

Box 6086
Concord, CA 94524

Children's Digest

Box 567
1100 Waterway Boulevard
Indianapolis, IN 46206

Creative Kids

GCT Incorporated
Box 6448
Mobile, AL 36660

Flip Magazine

Art Center
265 Emmett Street
Battle Creek, MI 49017

Highlights For Children

803 Church Street
Honesdale, PA 18431

Kid City

1 Lincoln Park
New York, NY 10023

Listen

"Graffity"
6830 Laurel Street, NW
Washington, DC 20012

McGuffey Writer, The

5128 Westgate Dr.
Oxford, OH 45056

Odyssey

Kalmback Publishing Company
1027 North 7th Street
Milwaukee, WI 53223

Prism

1040 Bayview Drive
Suite 223
Fort Lauderdale, FL 33304

Scholastic Scope

Student Writing
730 Broadway
New York, NY 10003

Spinoff: Gifted Children Monthly

Box 115
Sewell, NJ 08080

Stone Soup

Box 83
Santa Cruz, CA 95063

Wombat

365 Ashton Drive
Athens, GA 30606

Young Authors ' Magazine

Theraplan, Incorporated
3015 Woodsdale Boulevard
Lincoln, NE 68502

Other Resources

Shad Valley

Shad Valley is a four-week summer program held at eight different universities across Canada and sponsored by the Canadian Center for Creative Technology. It is a program to develop leadership and entrepreneurial skills. The format consists of lectures, workshops, project development, and some recreational activities.

For more information, contact:

The Canadian Center for Creative Technology
8 Young St. East
Waterloo, ON N2S 2L3

Association for Bright Children

This is an Ontario-based association of parents and teachers interested in the education of bright children. It publishes a quarterly newsletter with articles and information about programs, conferences and meetings (local, national and international.) It also provides resources and advice for parents of bright children and functions as an advocacy group.

For more information, contact:

Ontario ABC
Box 156, Suite 100, 2 Bloor St. West
Toronto, ON M4W 2G7

Confratute

Confratute is an annual institute on the education of gifted and talented students. The institute is held at the University of Connecticut during the last two weeks of July. Between four and five hundred participants attend from all over the world. There are full-day workshops, keynote speakers, and evening sessions. The majority of participants stay in residence, thereby increasing the overall time spent discussing gifted education.

For more information, contact:

Centre for Professional Development
University of Connecticut
U-56D, Room 128
Storrs, CT 06269-4056

Talents Unlimited

Talents Unlimited is a thinking skills program for students from grades K-12. It focuses on the following areas: Productive Thinking, Decision Making, Planning, Communication, and Forecasting. Talents Unlimited is not an add-on program; it fits within each subject/curricular area.

For further information, contact:

Talents Unlimited
Mobile County Public Schools
1107 Arlington Street
Mobile, AL 36605

Future Problem Solving

The Future Problem Solving (FPS) program is a year-long enrichment activity that begins with the registration of student teams in one of three grade divisions - Juniors (grades 4-6), Intermediate (7-9), and Seniors (10-12). The teams are sent three practice problems which they solve using a model based on Creative Problem Solving (CPS).

In addition to the regular three FPS divisions, there is the Primary Division for grades K-3. These children are introduced to the problem solving process in a purely non-competitive atmosphere.

For more information, contact:

Ann Crabbe
Box 98, 115 West Main Street,
Aberdeen, NC 28315

Odyssey of the Mind

Odyssey of the Mind (OM: formerly Olympics of the Mind) is another vehicle for teaching creative thinking and problem solving. Using a team approach, this program helps students to develop self-confidence, a positive self-image and social and communication skills.

For further information, contact:

Odyssey of the Mind
National Academic Games
Box 214, Newhall, CA 91322

Junior Great Books

In a two-day workshop, the Junior Great Books Foundation trains teachers to ask

questions requiring interpretation of carefully selected literature.

For further information, contact:

Junior Great Books Foundation
40 East Huron
Chicago, IL 60611

CTY (Center for Talented Youth)
Study of Exceptional Talent - Johns Hopkins University

This centre publishes *Imagine*, a newsletter for gifted youths (grades 7-12) and their families worldwide. The newsletter provides information about colleges, study abroad, accelerated programs, talent search programs, academic summer programs, academic competitions and other related topics of interest.

For further information on the center, contact:

CTY
3400 N. Charles Street
Baltimore, MD 21218

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