# Twice-Exceptional Students
Gifted Students with Disabilities

An Introductory Resource Book
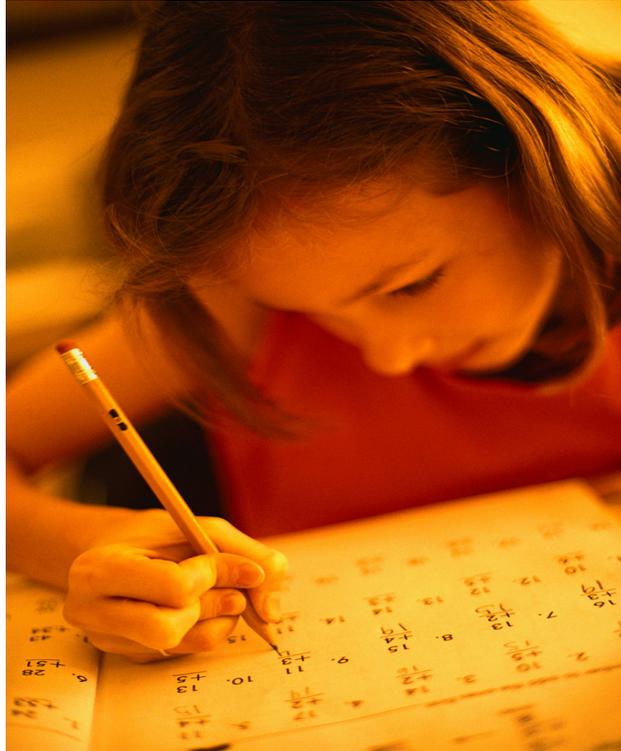
**Colorado Department of Education
201 East Colfax Avenue
Denver, Colorado 80203-1799**

Advanced by Design
REACH-Out and Nurture Exceptional Abilities

Colorado Department of Education

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Denver, Colorado 80203

William J. Moloney
Commissioner of Education
State of Colorado

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Table of Contents

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The Colorado Department of Education's Twice-Exceptional Students Gifted Students with Disabilities Introductory Resource Book is the result of a cooperative effort between Special and Gifted Educators.

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Introduction

Gifted students with disabilities are at-risk because their educational and social/ emotional needs often go undetected. The resulting inconsistent academic performance can lead educators to believe twice-exceptional students are not putting forth adequate effort. Hidden disabilities may prevent students with advanced cognitive abilities from achieving their potential. The frustrations related to unidentified strengths and disabilities can result in behavioral and social/emotional issues. For some twice-exceptional students, behavior plans become the focus of their interventions. The behaviors are managed, but the underlying disabilities are never addressed. School can become a very frustrating experience for struggling twice-exceptional students, their teachers, and parents.

A collaborative effort between classroom teachers, special educators, gifted educators, and parents is needed to identify twice-exceptional students and implement strategies to meet their diverse needs. It is essential that the disabilities are identified early so appropriate interventions can be provided at optimum times. Unfortunately, the struggles of many twice-exceptional students go unnoticed for many years, resulting in learning gaps and undeveloped potentials.

Twice-exceptional students will continue to be at-risk until educators can learn about and understand the educational and social/emotional needs of twice-exceptional students. Educators can implement strategies to develop their potential, to identify learning gaps and provide explicit instruction, to support the development of compensatory strategies, to foster their social/emotional development, and to enhance their capacity to cope with mixed abilities.

It is the intent of this resource book to provide the framework to identify twice-exceptional students and select appropriate strategies so gifted students with disabilities can achieve their full potential.

Mission

**Recognize and nurture outstanding potential
so that gifted students with disabilities
may become all that they are capable of becoming.**

Colorado Definition

Twice-exceptional students are:

1. Students who are identified as gifted and talented in one or more areas of exceptionality (specific academics, general intellectual ability, creativity, leadership, visual, spatial, or performing arts);

and also identified with:

2. A disability defined by Federal/State eligibility criteria: perceptual communicative disability (learning disability), significant identifiable emotional disability, physical disabilities, sensory disabilities, autism, or ADHD.

➲ The disability qualifies the student for an individual education plan (IEP) or a 504 Plan.

TWICE-EXCEPTIONAL STUDENTS

Strengths   Challenges

Strengths:

- superior vocabulary
- highly creative
- resourceful
- curious
- imaginative
- questioning
- problem-solving ability
- sophisticated sense of humor
- wide range of interests
- advanced ideas and opinions
- special talent or consuming interest
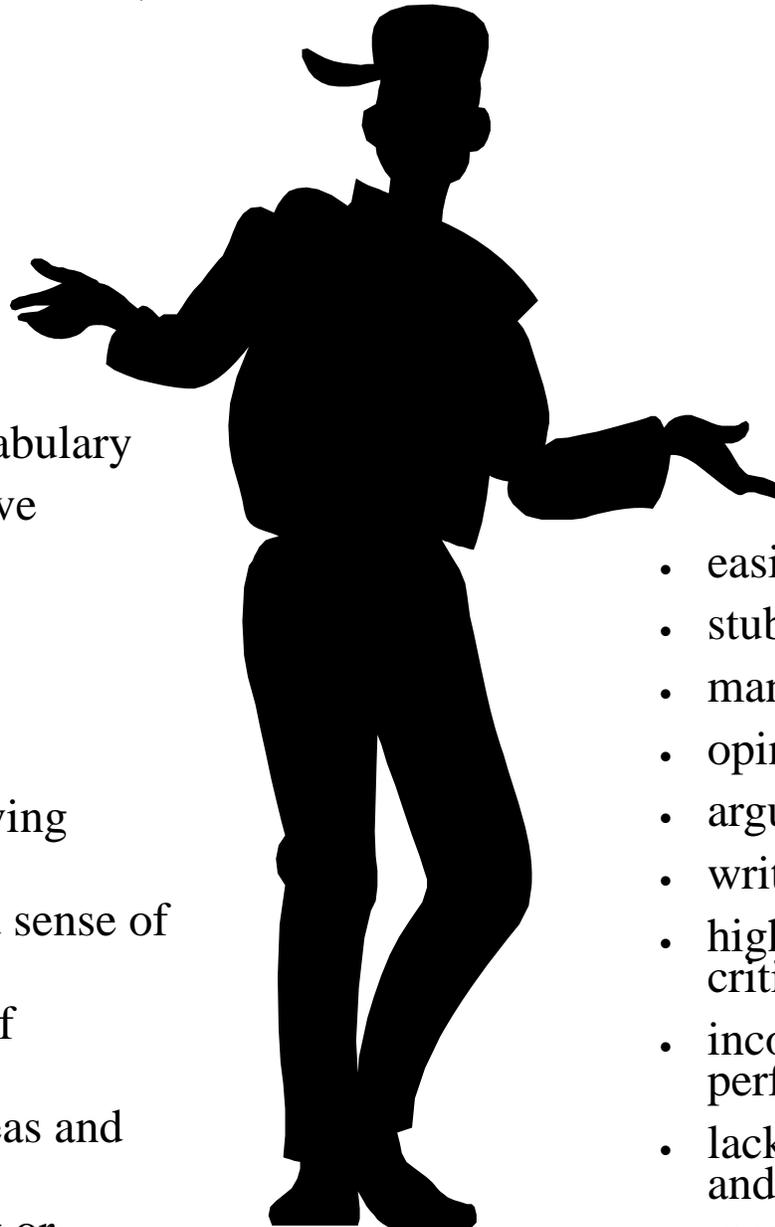
Challenges:

- easily frustrated
- stubborn
- manipulative
- opinionated
- argumentative
- written expression
- highly sensitive to criticism
- inconsistent academic performance
- lack of organization and study skills
- difficulty with social interactions

Characteristics of Twice-Exceptional Children

Elizabeth Nielsen, 1994
University of New Mexico

The following list should be viewed as characteristics which are *typical* of many children who are gifted and who also have a disability, rather than characteristics which *all* such children possess. These twice-exceptional children do not form a simple, homogeneous group; they are a highly diverse group of learners.

Indicators of Cognitive/Affective Strengths

- Have a wide range of interests that are not related to school topics or learning.
- Have a specific talent or consuming interest area for which they have an exceptional memory and knowledge.
- Are interested in the "big picture" rather than small details.
- Are extremely curious and questioning.
- Possess high levels of problem-solving and reasoning skills.
- Have penetrating insights.
- Are capable of setting up situations to their own advantage often as a coping method.
- Are extremely creative in their approach to tasks and as a technique to compensate for their disability.
- Have an unusual imagination.
- Are humorous often in "bizarre" ways.
- Have advanced ideas and opinions which they are uninhibited in expressing.
- Have a superior vocabulary.
- Have very high energy levels.

Indicators of Cognitive/Affective Problems

- Have discrepant verbal and performance abilities.
- Have deficient or extremely uneven academic skills which causes them to lack academic initiative, appear academically unmotivated, avoid school tasks, and frequently fail to complete assignments.
- Are extremely frustrated by school.
- Have auditory and/or visual processing problems which may cause them to respond slowly, to work slowly, and to appear to think slowly.
- Have problems with long-term and/or short-term memory.
- Have motorical difficulties exhibited by clumsiness, poor handwriting, or problems completing paper-and-pencil tasks.
- Lack organizational skills and study skills; often appearing to be extremely "messy."
- Are unable to think in a linear fashion; have difficulty following directions.
- Are easily frustrated; give up quickly on tasks; are afraid to risk being wrong or making mistakes.
- Have difficulty explaining or expressing ideas, "getting-to-the-point," and/or expressing feelings.
- Blame others for their problems while believing that their successes are only due to "luck."
- Are distractable; unable to maintain attention for long periods of time.
- Are unable to control impulses.
- Have poor social skills; demonstrate antisocial behaviors.
- Are highly sensitive to criticism.

Indicators of Low Self-Esteem

One of the most common characteristics of these children is low self-esteem. They frequently "disguise" this low self-esteem through the use of any or all of the following behaviors:

- Anger
- Self-criticism
- Crying

- Disruptive behaviors
- Clowning behaviors
- Denial of problems

- Withdrawal
- Daydreaming and fantasy
- Apathetic behaviors

Distinguishing Characteristics of Gifted Students with Factors

	Traditional Characteristics	Characteristics of Culturally/Linguistically Diverse Gifted Students	Characteristics of Low Socio-Economic Gifted Students	Characteristics of Gifted Students with Disabilities
Basic Skills	Ability to learn basic skills quickly and easily and retain information with less repetition	May require more repetition or hands-on experiences at an introductory level	Lack of opportunities and access to school-readiness materials may delay acquisition of basic skills	Often struggles to learn basic skills due to cognitive processing difficulties; needs to learn compensatory strategies in order to acquire basic skills and information
Verbal Skills	High verbal ability	May have high verbal ability in native language; may rapidly acquire English language skills if they possess academic skills in their home language	Lack of opportunities may delay the development of verbal skills	High verbal ability but extreme difficulty in written language area; may use language in inappropriate ways and at inappropriate times
Reading Ability	Early reading ability	May demonstrate strong storytelling ability and ability to read environmental print in home language	Lack of access to reading materials may delay acquisition of reading skills	Frequently has reading problems due to cognitive processing deficits
Observation Skills	Keen powers of observation	May display high levels of visual memory or auditory memory skills	Strong observational skills which are often used to "survive on the streets"	Strong observation skills but often has deficits in memory skills
Problem Solving	Strong critical thinking, problem-solving and decision-making skills	Strong critical thinking in primary language; often solves problems in creative ways; particularly interested in solving "real-world" problems	Excels in brainstorming and solving "real-world" problems; strong critical thinking ability; rapid decision-making skills	Excels in solving "real-world" problems; outstanding critical thinking and decision-making skills; often independently develops compensatory skills
Persistence	Long attention span – persistent, intense concentration	Long attention span – persistent, intense concentration	Persistent in areas of interest usually unrelated to school	Frequently has attention deficit problems but may concentrate for long periods in areas of interest

Distinguishing Characteristics of Gifted Students with Factors

	Traditional Characteristics	Characteristics of Culturally/Linguistically Diverse Gifted Students	Characteristics of Low Socio-Economic Gifted Students	Characteristics of Gifted Students with Disabilities
Curiosity	Questioning attitude	Some culturally diverse children are raised not to question authority	Questioning attitude which may at times be demonstrated in a confronting or challenging way	Strong questioning attitude; may appear disrespectful when questioning information, facts, etc. presented by teacher
Creativity	Creative in the generation of thoughts, ideas, actions; innovative	Often displays richness of imagery in ideas, art, music, primary language, etc.; can improvise with commonplace objects	Strong creative abilities	Unusual imagination; frequently generates original and at times rather "bizarre" ideas
Risk Taking	Takes risks	Degree of risk taking may depend upon the familiarity of the situation based on different cultural experiences	Takes risks often without consideration of consequences	Often unwilling to take risks with regard to academics; takes risks in non-school areas without consideration of consequences
Humor	Unusual, often highly developed sense of humor	Humor may be displayed through unique use of language and responses	May use humor to become "class clown," to deal with stressful situations, and to avoid trouble	Humor may be used to divert attention from school failure; may use humor to make fun of peers or to avoid trouble
Maturity	May mature at different rates than age peers	Accepts responsibilities in the home normally reserved for older children	Often mature earlier than age peers since they must accept responsibilities in the home which are normally reserved for older children or even adults; inexperience may make them appear socially immature	Sometimes appear immature since they may use anger, crying, withdrawal, etc. to express feelings and to deal with difficulties
Independence	Sense of independence	May be culturally socialized to work in groups rather than independently	Circumstances often have forced the student to become extremely independent and self-sufficient	Requires frequent teacher support and feedback in deficit areas; highly independent in other areas; often appears to be extremely stubborn and inflexible

Albuquerque Public School Gifted Task Force; developed by E. Nielsen (1999).

13

Distinguishing Characteristics of Gifted Students with Factors

	Traditional Characteristics	Characteristics of Culturally/Linguistically Diverse Gifted Students	Characteristics of Low Socio-Economic Gifted Students	Characteristics of Gifted Students with Disabilities
Emotionality	Sensitive	May be sensitive particularly to racial or cultural issues	May be critical of self and others including teachers; can understand and express concern about the feelings of others even while engaging in anti-social behavior	Sensitive regarding disability area(s); highly critical of self and others including teachers; can express concern about the feelings of others even while engaging in anti-social behavior
Social Skills	May not be accepted by other children and may feel isolated	May be perceived as a loner due to racial/cultural isolation and/or inability to speak English; entertains self easily using imagination in games and ingenious play	Economic circumstances as well as his/her giftedness may isolate the student from more financially secure peers	May be perceived as a loner since they do not fit typical model for either a gifted or a learning disabled student; sometimes has difficulty being accepted by peers due to poor social skills
Leadership	Exhibits leadership ability	May be a leader in the community but not in the school setting; demonstrates "street-wise" behavior	May be a leader among the more non-traditional students; demonstrates strong "street-wise" behavior; often excels in brainstorming and problem solving around social issues	Often leaders among the more non-traditional students; demonstrate strong "street-wise" behavior; the disability may interfere with ability to exercise leadership skills
Broad Interests	Wide range of interests	Interests may include individual culturally related activities	Wide range of interests that are often unrelated to topics/subjects addressed in school	Wide range of interests but is handicapped in pursuing them due to process/learning problems
Focused Interests	Very focused interests, i.e., a passion about a certain topic to the exclusion of others	Very focused interests, i.e., a passion about a certain topic to the exclusion of others	Very focused interests, i.e., a passion about a certain topic to the exclusion of others -- usually not related to school subjects	Very focused interests, i.e., a passion about a certain topic to the exclusion of others – often not related to school subjects

Albuquerque Public School Gifted Task Force; developed by E. Nielsen (1999). Sources: New Mexico State Dept. of Ed. (1994) *Technical Assistance Document-Gifted Education*; Fox, L., Brody, I., & Tobin, D. (1983). *Learning Disabled Gifted Children*; Torrance, E.P., Goff, K., & Neil, B. (1998). *Multicultural Mentoring of the Gifted and Talented*; Van Tassel-Baska, J., Patton, J., & Prillaman, D. (1991). *Gifted Youth At Risk*.

Identification

Twice-exceptional students are difficult to identify because they possess the characteristics of gifted students and the characteristics of students with disabilities. Gifted characteristics may mask disabilities or disabilities may mask gifted potential. Either the strengths, the disabilities, or both may not be identified. To be considered twice-exceptional, the student must be identified for gifted education and special education services or have a 504 plan. Research indicates that 2-5 percent of the gifted population will have disabilities and 2-5 percent of students with disabilities will be gifted (Dix & Schafer, 1996; Whitmore, 1980; & Maker, 1977).

Gifted Identification

When gifted students begin to struggle in school, their identification for gifted services is sometimes questioned. Just because students have disabilities does not mean they are not gifted. Many eminent people have struggled in school and later gone on to make substantial contributions to society. Not achieving commensurate with ability should raise a red flag that there is the possibility a disability may be impacting learning. Disabilities in gifted students can go unnoticed for years and valuable windows for effective interventions are missed. It is important to identify the disability as early as possible to prevent the development of behavioral and social/emotional issues.

Identification of Disability

Students identified with a disability should be screened at the district-designated assessment grade/s to provide equitable access to gifted education services for all students. Scores in the 95th percentile or higher on achievement tests (ITBS, CSAP, Woodcock Johnson), tests of intellectual ability (WISC and CogAT), observations of exceptional behaviors or motivation (Bertie Kingore Inventory), or demonstrated performance (juried performances) create the body of evidence used to identify gifted students (see page 15).

Students Who Have Inconsistent Academic Performance

Strengths and disabilities may mask each other and the student may appear to have average ability. However, inconsistent performance may indicate the presence of gifted potential and disabilities. It is important to focus on developing potential and providing strategies to help students when they struggle. Research-based strategies for twice-exceptional students can be implemented before formal identification is achieved. Continue to look for indicators of gifted behaviors or behaviors that suggest a disability.

Identification and Programming for Twice-Exceptional Students

Identification
Twice-exceptional students are difficult to identify because their strengths and weaknesses may mask each other, creating a unique learner profile atypical of a gifted student or a student with disabilities.

Student is identified as gifted using district procedures and an advanced learning plan is written.

+

Student behavior or performance suggests the possibility of a disability. The classroom teacher initiates a referral to school's study team.

+

Student is identified with a disability using district procedures and an IEP or 504 is written.

Student's strengths and weaknesses mask each other.

Student is identified with a disability using district procedures and an IEP or 504 is written.

+

Student behavior or performance suggests gifted traits. Special educator and classroom teacher initiate a GT referral with GT liaison /GT resource consultant.

+

Student is identified as gifted using district procedures and an advanced learning plan is written.

Programming
In a collaborative effort between the classroom teacher, gifted educator and special educators, appropriate strategies will be implemented to:
- nurture the student's potential
- support their development of compensatory strategies
- identify their learning gaps and provide explicit instruction
- foster their social and emotional development
- enhance their capacity to cope with mixed abilities.

⇒ The GT learning plan becomes part of the IEP with review for both occurring simultaneously.
⇒ An Addendum for Twice-Exceptional is completed by classroom teacher and GT resource teacher annually and is attached to the GT learning plan.
⇒ Identified student receives a check for twice-exceptional on the GT profile form and is tracked through the GT database.

16

Identifying Gifted Students in Colorado is a Multidimensional Process

Mission

Recognize and nurture outstanding potential
so that gifted students may become all that
they are capable of becoming.

Define the Gifted and Talented Learner

The Colorado definition for Gifted and Talented Students references the Rules for the Administration of the Exceptional Children's Educational Act (I CCR 301-8, Section 2220-R-8.01 et seq.)

> Gifted children means those persons between the ages of five and twenty-one whose abilities, talents, and potential for accomplishment are so outstanding that they require special provisions to meet their educational needs. Children under five who qualify may also be served. Gifted students are capable of high performance in any or a combination of these areas:
>
> General intellectual ability
> Specific academic aptitude
> Creative, productive thinking
> Leadership and human relations skills
> Visual and performing arts

Provide Equitable Access to Screening
For Gifted Education Services

All children (at the district-designated assessment grade/s) participate in the screening process. It is more likely that exceptional abilities and evidence of potential achievement in traditionally underserved children will be recognized.

Use Multiple Sources, Tools, and Criteria for a
Body of Evidence

Multiple sources and tools allow children to reveal their exceptionalities or potential. A variety of assessment tools should be used to collect information on a student whose background or talent area makes him/her unique from others.

Intellectual Ability
Achievement
Behavioral Characteristics
Demonstrated Performance

Seek to find underachieving learners who may be identified only through ability testing; likewise, seek to find underachieving learners who may not be identified through traditional testing but whose giftedness is obvious in focused and deliberate observations of performance on problem-solving tasks. Use a balanced approach to find underachieving students with both standardized test scores and behaviors/performances.

Collect data about learners who have documented learning needs in other areas; e.g., Special Education, ELA, or 504. Ensure that gifted education personnel understand the categories of disabilities and the specific Special Education designations that impact the learning process.

Body of Evidence

INTELLECTUAL ABILITY
95th percentile and above on norm-referenced standardized cognitive tests or subtests.
Examples: WISC
Cognitive Abilities Test
Nonverbal Analogies Test

BEHAVIORS/CHARACTERISTICS
Observation of behaviors or motivation with outstanding or exceptional factors.
Examples: Bertie Kingore Inventory
Gifted Evaluation Scale

Body of Evidence (BOE)

ACHIEVEMENT
95th percentile and above on norm-referenced or criterion-referenced standardized tests. Advanced on a standards-based test.
Examples: ITBS, Terra Nova,
CSAP

DEMONSTRATED PERFORMANCE
Distinguished level of performance.
Examples: Juried performance
Advanced portfolio

For additional information about the importance of using a Body of Evidence, please see the Colorado Department of Education publication—*Gifted Education Guidelines and Resources, Volume I: Identification* and refer to Component 3. The appendix offers examples of instruments in each of the BOE (Body of Evidence) categories.

Identifying Students with Disabilities
In Colorado

It is most important and relevant to students' educational success to provide the best research-based instructional interventions and support possible. For some students, early interventions will prevent the educational difficulties from becoming a disability.

- Twice-exceptional students must have a disability as defined by IDEA. Identified students with disabilities exhibit a marked difference between ability and achievement and evidence of a processing deficit.

- In addition to the current process of using the "discrepancy formula" to determine the presence of a learning disability, IDEA reauthorization allows districts to use a process that determines if the child responds to scientific research-based interventions.

Points to Consider When Identifying Gifted Students with Disabilities:

- Twice-exceptional students typically demonstrate outstanding performance in either the verbal IQ or performance IQ on the WISC. If students have a significant discrepancy between Verbal IQ and Performance IQ on the WISC, the full scale IQ will not be a true indication of their ability.

- Closely examine the scatter of the WISC subtests. Twice-exceptional students usually have higher scores on vocabulary, similarities, information, and comprehension and lower scores on arithmetic, digit span, coding, and sequencing.

- Discrepancy between verbal and non-verbal scores may be present on the Cognitive Abilities Test (CogAT).

- Achievement discrepancies can exist between oral and written expression, basic reading skills and reading comprehension, mathematical reasoning and calculation.

- Students may be performing at grade level and be eligible for twice-exceptional programming because they have a discrepancy between ability and achievement.

- Twice-exceptional students tend to struggle with executive functioning, organization, memory, written output, and sometimes reading decoding and math calculation.

IDEA and Twice-Exceptional Students

When Congress approved the Reauthorization of the Individuals with Disabilities Education Act (IDEA) in November of 2004, IDEA acknowledged the needs of twice-exceptional children for the first time. It added gifted and talented students who have disabilities to the groups of students whose needs have priority in U.S. Department of Education grants to guide research, personnel preparation, and technical assistance.

The National Association for Gifted Children posted the section of H.R. 1350 (the reauthorization of IDEA) regarding specific learning disabilities on their web site.   Below is the text regarding specific learning disabilities, which is the type of disability with the highest incidence in the twice-exceptional population.   Although districts *may*, they are not required to accept a discrepancy between ability and performance in determining whether a student has a learning disability. The new law would allow districts to use a process that determines if the child responds to scientific, research-based interventions. Currently in Colorado, several districts and the state have begun conversations about this, and guidelines are being developed and piloted.

IDEA—SEC. 614. EVALUATIONS, ELIGIBILITY DETERMINATIONS, INDIVIDUALIZED EDUCATION PROGRAMS, AND EDUCATIONAL PLACEMENTS.

   a. *Evaluation Procedures.-*
      6. *Specific Learning Disabilities.-*

         A. *IN GENERAL.- Notwithstanding section 607(b), when determining whether a child has a specific learning disability as defined in section 602(29), a local educational agency shall not be required to take into consideration whether a child has a severe discrepancy between achievement and intellectual ability in oral expression, listening comprehension, written expression, basic reading skill, reading comprehension, mathematical calculation, or mathematical reasoning.*

         B.   *ADDITIONAL AUTHORITY.- In determining whether a child has a specific learning disability, a local educational agency may use a process that determines if the child responds to scientific, research-based intervention as a part of the evaluation procedures described in paragraphs (2) and (3).*

Learning Disabilities in IDEA

NAGC also cites Paragraphs 2 & 3 of Section 614, as well as the definition of specific learning disability - Section 602 (29) as follows:

> **Sec. 614**
>
> 2. *CONDUCT OF EVALUATION.- In conducting the evaluation, the local educational agency shall -*
>
>   A. *use a variety of assessment tools and strategies to gather relevant functional, developmental, and academic information, including information provided by the parent, that may assist in determining -*
>   i. *whether the child is a child with a disability; and*
>   ii *the content of the child's individualized education program, including information related to enabling the child to be involved in and progress in the general curriculum, or for preschool children, to participate in appropriate activities;*
>
>   B. *not use any single procedure, measure, or assessment as the sole criterion for determining whether a child is a child with a disability or determining an appropriate educational program for the child; and*
>
>   C. *use technically sound instruments that may assess the relative contribution of cognitive and behavioral factors, in addition to physical or developmental factors.*
>
>
> 3. *ADDITIONAL REQUIREMENTS.- Each local educational agency shall ensure that -*
>
>   A. *tests and other evaluation materials used to assess a child under this section*
>   i. *are selected and administered so as not to be discriminatory on a racial or cultural basis;*
>   ii. *are provided and administered in the language and form most likely to yield accurate information on what the child knows and can do academically, developmentally, and functionally, unless it is not feasible to so provide or administer;*
>   iii. *are used for purposes for which the assessments or measures are valid and reliable;*
>   iv. *are administered by trained and knowledgeable personnel; and*
>   v. *are administered in accordance with any instructions provided by the producer of such tests.*
>
>   B. *the child is assessed in all areas of suspected disability; and*
>
>   C. *assessment tools and strategies that provide relevant information that directly assists persons in determining the educational needs of the child are provided.*

Learning Disabilities in IDEA

D. *assessments of children with disabilities, including homeless children with disabilities, children with disabilities who are wards of the State, and children with disabilities in military families, who transfer from one school district to another school district in the same academic year, are -*

    i. *coordinated with such children's prior and subsequent schools as necessary to ensure timely completion of full evaluations; and*

    ii. *completed within time limits -*

        I. *established for all students by Federal law or State plans; and*
        II. *that computes the commencement of time from the date on which such children are first referred for assessments in any local educational agency.*

SEC. 602. DEFINITIONS.

    29. *SPECIFIC LEARNING DISABILITY.-*

    A. *IN GENERAL.- The term 'specific learning disability' means a disorder in 1 or 2 more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.*

    B. *DISORDERS INCLUDED.- Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.*

    C. *DISORDERS NOT INCLUDED.- Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. ***

* Although they are not included in this section of IDEA which is limited to Specific Learning Disabilities, many states, including Colorado, do include these other categories of disorders as factors when determining if a student is Twice-exceptional.
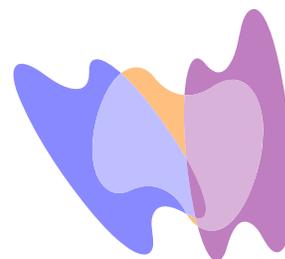
Six Steps to Strategic Planning
for Twice-Exceptional Students

1. Identify Stakeholders
The first step in implementing change is to identify the stakeholders, those people who will be impacted by the change or will play a role in implementing change. Stakeholder groups for twice-exceptional education should include representatives from gifted education, special education (special education teachers, school psychologists, social workers, occupational therapists, speech/language pathologists), classroom teachers, administrators, counselors, students, and parents.

2. Organize a Steering Committee
The steering committee must include representatives from each stakeholder group. Select members who are innovators and early adaptors. This group will guide the work in developing a plan and implementing change.

3. Build a Collaboration
A collaborative team effort is recommended to address the unique needs of twice-exceptional students. Work to develop a collaborative effort through training and discussions. Remember, each stakeholder group must have a voice and must become part of the collaboration.

4. Determine Needs and Identify Problems/Issues
Identify the concerns of each stakeholder group. What are the specific needs of twice-exceptional students and what are the problems/issues that prevent these needs from being met? A needs-assessment survey completed by representatives of each stakeholder group is a good way to identify specific needs, problems, and issues.

5. Develop an Action Plan
Having a clear understanding of what you want to accomplish unifies the commitment of the team. The action plan should include: goals, strategies to achieve goals, anticipated resistance or obstacles you may encounter, resources needed, and a way to measure progress/success.

6. Implement and Sustain Change
To sustain change it must be integrated into the educational system. Determine how identification and programming can be integrated into the system that already exists. Plan for extensive training and written documentation to support successful implementation of the plan.

Programming Strategies
for Gifted Students with Disabilities

The needs of most twice-exceptional students can be met in the regular classroom through appropriate identification and an individualized approach. However, the classroom teacher must have support from both gifted educators and special educators to implement effective strategies. The best results are achieved when there is a collaboration between the classroom teacher, gifted educator, special educator, parents, and the student.

Programming for twice-exceptional students must include strategies to:

- nurture the student's strengths and interests

- foster their social/emotional development

- enhance their capacity to cope with mixed abilities

- identify learning gaps and provide explicit instruction

- support the development of compensatory strategies

A Continuum of Services

The unique characteristics of individual students should determine the type and level of support services the student receives. Some twice-exceptional students will require more intensive services than others. Because gifted and twice-exceptional students differ in a variety of ways, their needs require appropriate placement along several continuums:

A continuum of services is the variety of delivery and programming options available to gifted and talented students for meeting educational and affective needs.

A continuum of delivery of services refers to "where" twice-exceptional students receive services: general classroom, resource room, classroom cluster groups, interest groups, magnet classrooms, special schools for gifted students, vertical team groups, learning clusters for special interests or topics, mentorships, or special education.

The continuum of learning refers to the content standards and benchmarks, K-12, that allow for continuous learning and/or acceleration based upon progress monitoring and student achievement in the content benchmarks.

A continuum of programming options refers to the curricular and affective opportunities provided through implementation of programming components (structure, content options, differentiated instruction, and affective guidance.)
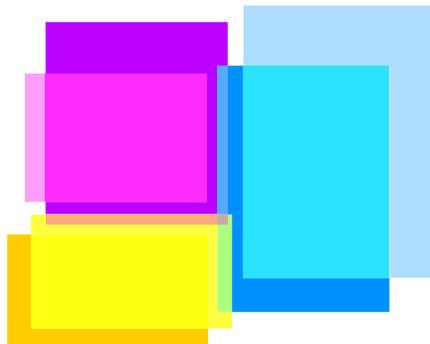
Nurture Students' Strengths and Interests

Programming for gifted education seeks to nurture and develop the strengths and interests of students. All gifted students require balanced gifted programming over time. These programming components for gifted education are based upon national standards, research, and best practices in gifted education. Implementing these strategies will improve students' motivation, develop confidence, and support student achievement.

These are the recommended programming components to nurture gifted potential in twice-exceptional students:

Acceleration

Content Extension

Strength/Interest Accommodation

Higher Order Thinking Skills

Affective Guidance & Counseling

Differentiated Instruction
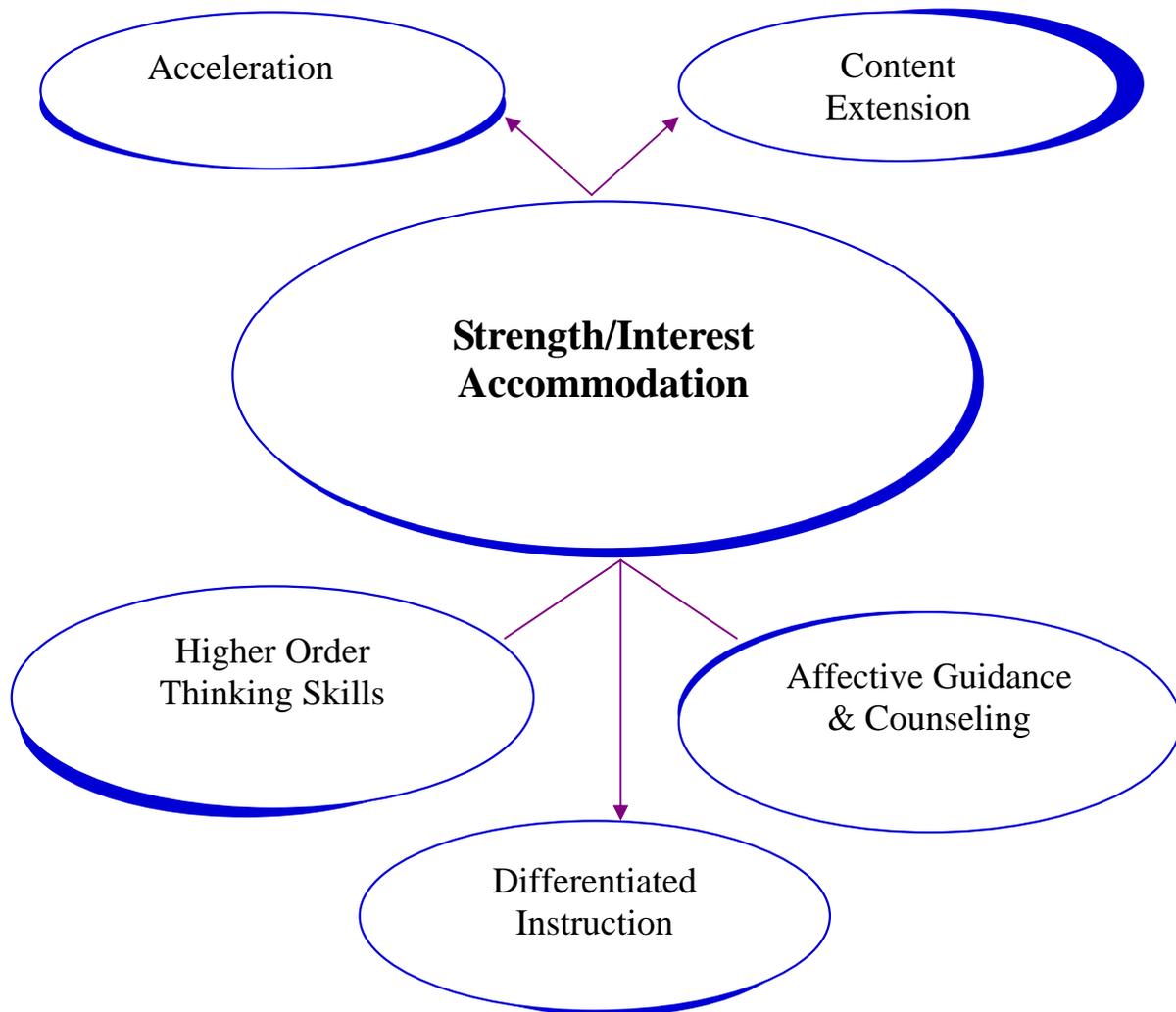
Acceleration

Acceleration is the appropriate movement of a student and/or curriculum by pace or place to match learning opportunities with student strengths, readiness, and needs.

- **Single Subject Acceleration**: The delivery of curriculum by either moving the child into a higher grade level or providing higher grade-level curriculum in age-based classrooms.

- **Concurrent Enrollment:** Attending classes in more than one grade or building. (e.g. A middle school student attends a class at the high school).

- **Post-Secondary Options:** High school students are allowed to spend part of their day attending classes at a local college or university and receive both high school and college credit.

- **Rocky Mountain Talent Search:** Students take the SAT or ACT in middle school and can qualify for advanced level courses at universities throughout the country.

- **Correspondence/Distance Learning:** Courses taken within or outside regular school time for personal interest or credit.

- **Advanced Placement/International Baccalaureate:** Students take AP or IB high school courses and take a test to qualify for college credit.

- **Independent Study:** Students pursue an area of interest in-depth or required curriculum at a pace that meets their individual needs.

Advanced by Design
REACH-Out and Nurture Exceptional Abilities

Differentiated Instructional Strategies

Strategy	Description of Strategy	Why Appropriate for 2X Students
Flexible Skills Grouping	Students are matched to skills work by virtue of readiness, not with the assumption that all need the same spelling task, computation drill, writing assignment, etc. Movement among groups is common, based on readiness on a given skill and growth in that skill.	• Exempts students from basic skills work in areas where they demonstrate a high level of performance (100% is not required). • Can allow a chance for independent work at the student's own pace.
Compacting	A 3-step process that (1) assesses what a student knows about material to be studied and what the student still needs to master, (2) plans for learning what is not known and excuses student from what is known, and (3) plans for freed-up time to spend in enriched or accelerated study.	• Eliminates boredom from unnecessary drill and practice. • Satisfies student's desire to learn more about a topic than school often allows. • Encourages independence.
Most Difficult First	Students can demonstrate mastery of a concept by completing the five most difficult problems with 85% accuracy. Students who can demonstrate mastery do not need to practice anymore.	• Honors student's mastery of a concept. • Eliminates unnecessary drill and practice. • Reduces homework load of students who can demonstrate mastery.
Orbital Study	Independent investigations, generally of three to six weeks. They orbit, or revolve, around some facet of the curriculum. Students select their own topics for orbital, and they work with guidance and coaching from the teacher to develop more expertise on the topic and the process of becoming an independent investigator.	• Allows students to develop expertise on a topic and work with complex ideas. • Builds on student interest and enables students to use their preferred learning style. • Teachers and students establish criteria for success
Independent Projects, Group Investigations	Process through which student and teacher identify problems or topics of interest to the student. Both student and teacher plan a method of investigating the problem or topic and identifying the type of product the student will develop. The product should address the problem and demonstrate the student's ability to apply skills and knowledge to the problem or topic.	• Builds on student interest and encourages independence. • Teacher provides guidance and structure to supplement student capacity to plan. • Uses preset timelines to zap procrastination and logs to document the process involved. • Teachers and students establish criteria for success.
Problem-Based Learning	The student is placed in the active role of solving problems as a professional would.	• Utilizes varied learning strengths, allows use of a range of resources, and provides a good opportunity for balancing student choice with teacher coaching.
Agendas	A personalized list of tasks that a particular student must complete in a specified time.	• Teacher moves among individual students, coaching and monitoring their understanding and progress.
Learning Centers, Interest Centers	Centers are flexible enough to address variable learning needs. Interest centers are designed to motivate student exploration of a topic. Learning centers are a collection of activities designed to teach, reinforce, or extend a skill/concept.	• Materials and activities address a wide range of reading levels, learning profiles, and student interests. • Activities vary from simple to complex, concrete to abstract, structured to open-ended.
Choice Boards, Tic-Tac-Toe RAFT	Students make a work selection from a certain row or column. Teachers can target work toward student needs while giving students choice.	• Well suited to dealing with readiness, interests, and learning style preferences among students.
Portfolios	A collection of student work that can be a powerful way of reflecting on student growth over time.	• Portfolios are motivating because of emphasis on student choice and focus on readiness, interests, and learning profile.
Assessment	Assessment is ongoing and diagnostic. It provides the teacher with day-to-day data on students' readiness, interests, and their learning profile. Assessment has more to do with helping students grow than with cataloging their mistakes.	• Assessment is used to formally record student growth. • Varied means of assessment is used so that all students can fully display their skill and understanding.

Adapted from The Differentiated Classroom: Responding to the Needs of All Learners by Caron Ann Tomlinson

Differentiated Curriculum Meets the Needs of Twice-Exceptional Learners

Curriculum Component	Build on Strengths	Adaptations for 2X Learner Needs
Content: What students should know, understand, and be able to do as a result of the study.	• Focus on broad–based issues, themes, or problems. • Pretest to find out what a student knows and eliminate unnecessary drill and practice. • Student readiness, interest, and learning profile-shape instruction. • Guide students in making interest-based learning choices. • Explore the topic in greater depth; issues and problems should be complex and multi-faceted. • Combine ideas or skills being taught with those previously learned.	• Key concepts, ideas, and skills the teacher wants students to learn remain constant. The way students access this information is varied in response to student's readiness, interest, and learning profile. • Use multiple texts and supplementary print resource materials to accommodate students' 'reading level. • Use varied computer programs, audio/video recording, highlighted print materials, and digests of key ideas. • Provide support mechanisms such as note-taking organizers to help students organize information. • Time allocation varies according to student needs.
Process: Activities designed to help students make sense of the content.	• Teacher facilitates students' skills at becoming more self-reliant learners. • Encourage students to develop independent learning skills. • Respectful (engaging, high-level) tasks for all learners. • Focus on key concepts, principles/generalizations, and skills versus coverage. • Tasks should be based on readiness, interests, and learning profiles of students. • Encourage creativity and skills of fluency, flexibility, originality, and elaboration.	• Encourage students to make sense of an idea in a preferred way of learning (multiple-intelligence assignments). • Match the complexity of the task with the student's level of understanding. • Give choices about facets of topic to specialize and help link a personal interest to sense-making goal. • Vary the amount of teacher/peer support or scaffolding. • Provide graphic organizers to help students synthesize information. • Teach investigation and research skills. • Promote cognition and metacognition.
Product: The vehicles through which students demonstrate and extend what they have learned.	• Product assignments should cause students to rethink, apply, and expand on key concepts and principles. • Multi-option assignments are used allowing students to use their strengths to demonstrate their knowledge. • Use products as a way to help students connect what they are learning to the real world. • Set clear standards of high expectations. • Encourage self-evaluation based on agreed-upon criteria. • Use formative (in-process) and summative (end-of-process) evaluation by peers, self, and teachers to promote growth and success. • Excellence is defined by student growth: continually model and talk about what constitutes personal excellence.	• Support the use of varied modes of expression, materials, and technologies. • Balance clear directions that support success, with freedom of choice that supports individuality of interest and learning profile. • Provide templates or organizers to guide students' work. • Help students break down projects into manageable steps and develop a timeline. Stress planning, check-in dates, and logs so students use all the time allocated. • Help build passion for the ideas being pursued. • Product assignments should necessitate and support creativity. Help students develop skills needed to create authentic products.

Adapted from The Differentiated Classroom: Responding to the Needs of All Learners by Carol Ann Tomlinson.

Content Extension

Content Extension is providing greater depth or breadth to the educational experiences through enhanced curriculum or academic programs and competitions. Content Extension should be a systematic plan for extending students' learning in the following ways:

- Opportunity for real-life research and independent study

- Academic programs and competitions
    - ⇒ Math Olympiad
    - ⇒ Future Problem-Solving
    - ⇒ Destination Imagination
    - ⇒ Junior Great Books
    - ⇒ JASON Project

- Mentors

These programming models provide beneficial opportunities for twice-exceptional students:

- ***Autonomous Learner Model for Optimizing Ability***, developed by George Betts and Jolene Kercher, has five dimensions to develop students' potential:

    - ⇒ Orientation
    - ⇒ Individual Development
    - ⇒ Enrichment
    - ⇒ Seminars
    - ⇒ In-Depth Study

- Renzulli's Enrichment Triad has three levels of enrichment:

    - ⇒ Type 1 Enrichment—General Exploratory Experiences
    - ⇒ Type 2 Enrichment—Cognitive and Affective Development
    - ⇒ Type 3 Enrichment—Individual and Small Group Investigations

Higher-Order Thinking Skills

Curriculum for twice-exceptional students should challenge their thinking and problem-solving skills. The Socratic questioning method helps students formulate questions and think through problems. Twice-exceptional students often struggle with executive processes. They have a difficult time organizing, prioritizing, and generalizing information.   Teachers can help by modeling and teaching metacognitive skills. Use "think aloud" to help students develop their thinking language.

Higher-Order Thinking Skills include:

- Analytical Thinking Skills—Various cognitive processes that deepen understanding of knowledge and skills.

- Critical Thinking Skills—Various thinking skills that are used to analyze and evaluate in order to respond to an argument or position.

- Executive Processes—Various cognitive skills involved in organizing, synthesizing, generalizing, or applying knowledge.

- Creative Thinking Skills—Various cognitive skills that are involved in creative production.

- Creative Problem Solving—Provides an excellent structure for helping twice exceptional students learn how to creatively solve problems.

Social/Emotional Support

Twice-exceptional students need a nurturing environment that supports the development of the students' potential. An encouraging approach is recommended over implementing measures from a punitive perspective.

Teachers provide a nurturing environment when:

- they value individual differences and learning styles;
- the development of student's potential is encouraged;
- students' readiness, interests, and learning profile shape instruction;
- excellence is defined by individual growth;
- flexible grouping is used for instruction;
- students are assessed in multiple ways;
- instruction includes activities for multiple intelligences.

Social/Emotional Issues

Making friends can be difficult for twice-exceptional students. They may need help developing peer relationships and opportunities to work with peers of similar abilities and interests. Friendship groups help twice-exceptional students learn how to make and keep friends.

Twice-exceptional students can be very self-critical and this can lead to dysfunctional perfectionism. Counseling is needed to address their unique needs and should be available on an as-needed basis.

Developing an awareness of their strengths and challenges is beneficial for twice-exceptional students. Role playing can help students learn how to become a self-advocate and how to ask for help when it is needed.

Lack of organizational, time management, and study skills can have a negative impact on the emotional well-being and school performance of twice-exceptional students. They need explicit instruction to develop those skills and specialized intervention services related to challenge areas.

Learning how to set personal goals and how to develop sequential steps or a series of short-term goals to achieve long-term goals can be beneficial for twice-exceptional learners. Career and college guidance is essential for these students.

Steps to Create an Individual Plan

The focus of the individual plan must be to develop the student's strengths. Success in the strength areas promotes the development of a strong self-concept and self-efficacy. Instruction that builds on the student's interests can motivate them to persevere when learning challenges cause them to struggle in school. Appropriate assessments must be used to identify hidden disabilities and learning gaps. Twice-exceptional students need explicit instruction in their specific deficit areas. Teaching students compensatory strategies helps them learn strategies they can use independently to be successful.

Identify Students' Strengths, Interests, and Challenges.

Use the template on the next page and identify the strengths with a (s), the interests with an (i), and challenge areas with a (c). Place a check in the columns to the right to identify specific areas where strength/interest-based strategies will be implemented to develop the student's potential. Select accommodations that will help the student access learning, and identify areas where explicit instruction will be provided to teach compensatory strategies.

Select Specific Strategies Based on Student Needs.

- Strength/Interest-Based Accommodations

- Accommodation to Access Learning

- Explicit Instruction for Compensatory Strategies

- Explicit Instruction for Intervention/Remediation

Complete the Twice-Exceptional Strategies Plan.

Educational Planning for a Continuum of Abilities

S - Student Strength C - Student Challenges I - Student Interest	Strength/Interest-Based Accommodations	Accommodations: to Access Learning	Explicit Instruction: Compensatory Strategies	Explicit Instruction: Intervention/ Remediation
Cognitive Processing/General Intellectual Ability ___ Visual Processing ___ Auditory Processing ___ Sequential/Rational Processing ___ Conceptual Holistic Processing ___ Processing Speed ___ Attention ___ Memory ___ Executive Functioning ___ Organization				
Specific Academic ___ Reading ___ Reading Fluency ___ Writing ___ Writing Fluency ___ Math ___ Math Fluency ___ Science ___ Social Studies				
Creativity ___ Creative Thinking ___ Creative Productivity ___ Creative Problem Solving ___ Risk Taking				
Visual, Spatial, Performing Arts ___ Visual ___ Spatial ___ Musical/Rhythmic ___ Bodily/Kinesthetic				
Physical/Psychomotor ___ Sensory Integration ___ Hearing ___ Vision ___ ADD ___ ADHD ___ Bodily/Kinesthetic ___ Athletics				
Interpersonal/Leadership ___ Communicating ___ Understanding Others ___ Peer Relations ___ Self Advocacy				
Intrapersonal/Social/Emotional ___ Understanding Self ___ Introspection/Reflection ___ Perfectionism ___ Coping ___ Resiliency ___ Behavioral Issues				

Educational Planning for a Continuum of Abilities

S – Student's Strength I—Student Interest C – Student's Challenges	Strength/Interest Based Accommodations	Accommodations: to Access Learning	Explicit Instruction: Compensatory Strategies	Explicit Instruction: Intervention/Remediation
Cognitive Processing/General Intellectual Ability ____ Visual Processing ____ Auditory Processing ____ Sequential/Rational Processing ____ Conceptual Holistic Processing ____ Processing Speed ____ Attention ____ Memory ____ Executive Functioning ____ Organization				
Specific Academic ____ Reading ____ Reading Fluency ____ Writing ____ Writing Fluency ____ Math ____ Math Fluency ____ Science ____ Social Studies				
Creativity ____ Creative Thinking ____ Creative Productivity ____ Creative Problem Solving ____ Risk Taking				
Visual, Spatial, Performing Arts ____ Visual ____ Spatial ____ Musical/Rhythmic ____ Bodily/Kinesthetic				
Physical/Psychomotor ____ Sensory Integration ____ Hearing ____ Vision ____ ADD ____ ADHD ____ Bodily/Kinesthetic ____ Athletics				
Interpersonal/Leadership ____ Communicating ____ Understanding Others ____ Peer Relations ____ Self Advocacy				
Intrapersonal/Social/Emotional ____ Understanding Self ____ Introspection/Reflection ____ Perfectionism ____ Coping ____ Resiliency ____ Behavioral Issues				

Educational Planning Tool for a Continuum of Abilities: Example

S – Student Strength I—Student Interest C – Student Challenges	Strength-Based Accommodations	Explicit Instruction: Accommodations to Access Learning	Explicit Instruction: Compensatory Learning Strategies	Explicit Instruction Intervention/Remediation
Cognitive Processing/General Intellectual Ability __C__ Visual Processing __C__ Auditory Processing __C__ Sequential/Rational Processing ____ Conceptual Holistic Processing __C__ Processing Speed ____ Attention ____ Memory ____ Executive Functioning ____ Organization	• Use "most difficult first" strategy and "pre-testing" to allow student to demonstrate mastery of concepts and reduce work load	• Give student a conceptual framework or overview of new material • Extended time • Preferential seating • Nonverbal cues • Copies of overheads	• Create self-talk to accompany visual input • Use color-coding & high-lighting for visual focus • Incorporate organizational activities into classroom	• Teach verbal mnemonics, rhyme for automaticity • Teach organizational skills • Assist student in creating a "To Do List" and help him prioritize homework • Ask student to talk through the steps he will use when completing assignment
Specific Academic __C__ Reading __C__ Reading Fluency __S__ Writing __C__ Writing Fluency __S__ Math __C__ Math Fluency ____ Science ____ Social Studies	• Opportunities for developing oral and written communication • High level, open-ended problem solving like Math Olympiad	• Copies of text for high-lighting	• Master keyboarding • Use computer to increase productivity	• Use systematic multisensory approach to word de-coding/encoding • Choral reading
Creativity __S__ Creative Thinking ____ Creative Productivity ____ Creative Problem Solving __C__ Risk Taking	• Opportunities for brainstorming & creative thinking	• Create a safe environment where risk taking is encouraged		
Visual, Spatial, Performing Arts ____ Visual ____ Spatial __I.S__ Musical/Rhythmic ____ Bodily/Kinesthetic	• Create a series of key elements in a rap			
Physical/Psychomotor ____ Hearing ____ Vision ____ Sensory Integration ____ ADD/ADHD ____ Athletics ____ Bodily/Kinesthetic				
Interpersonal/Leadership ____ Understanding Others ____ Communicating ____ Peer Relations ____ Self Advocacy	• Provide opportunities to develop leadership skills			
Intrapersonal/Social/Emotional ____ Understanding Self ____ Introspection/Reflection __C__ Perfectionism ____ Coping ____ Resiliency ____ Behavioral Issues	• Seek opportunities to compliment student on effort rather than ability		• Help student view mistakes as a valued part of the learning process • Encourage student to equate effort with success	

Educational Planning
for a Continuum of Abilities

Strength/Interest-Based Accommodations

These are instructional strategies that provide a stimulating educational environment emphasizing high-level abstract thinking, creativity, and a problem-solving approach. They build on intrinsic motivation and promote active inquiry, experimentation, and discussion. Emphasis is placed on students' readiness, interests, and learning profiles. Teachers shape instruction with multi-option assignments that enable students to use their strengths to demonstrate their knowledge.

Examples: Pre-testing and compacting the curriculum to eliminate unnecessary drill; orbital studies related to some facet of the curriculum that allow students to investigate a topic in greater depth and become the class expert.

Accommodations to Access Learning

These are instructional and/or behavioral strategies that, when implemented, provide students with access to the curriculum. Accommodations do not change the content of the curriculum being taught. Rather, they change <u>how</u> the content is presented and/or <u>how</u> a student demonstrates mastery.

Examples: Shortened assignments, providing copies of notes during a lecture, providing extra time, and teacher-read directions.

Explicit Instruction: Compensatory Strategies

These are skills taught to students that, when implemented by the student, will allow them to complete tasks independently. The goal is to teach a student compensatory learning strategies so they will learn to initiate the strategies independently in order to be successful in the learning environment.

Examples: Use of spell checker, re-read aloud when editing written work, color-coding for organization, etc.

Explicit Instruction: Intervention/Remediation

Utilize recommended assessments to identify learning gaps and then provide explicit instruction/remediation in the specific deficit area(s).

Examples: Identifying phonological core deficits and providing explicit instruction in segmenting and blending speech sounds.

Twice-Exceptional Strategies Plan

Name:_____   Grade:_____

School:_____   Date:_____

Strengths:	Interests:	Challenges:

Strength/Interest-Based Accommodations

Accommodations to Access Learning

Explicit Instruction: Compensatory Strategies

Explicit Instruction: Interventions/Remediation

Examples of Accommodations and Explicit Instruction
for Cognitive Processing/General Intellectual Ability

Strength/Interest-Based Accommodations	Accommodations to Access Learning
- Provide fast-pace instruction and provisions for progress through curricula at the student's personal learning rate. - Place emphasis on higher level abstract thinking and problem solving. - Utilize pre-testing to identify what students know and eliminate unnecessary drill. - Use instructional planning that anticipates diverse learning needs and characteristics of individual students. - Use inter-disciplinary instruction and application of learning content to aid students in making connections. - Place emphasis on student's interests, learning styles, and strengths. - Provide opportunities for independent and small group projects and investigations. - Create a conceptual framework or overview of new material for conceptual/holistic processing. - Utilize concept-based thematic instruction.	- Extend time for students with slow processing and fluency issues. - Allow audio taped or verbal responses instead of written response. - Use technology to increase productivity. - Provide preferential seating away from distracting noises (radiators, projectors). - Chunk new learning into manageable subtasks. - Use FM system for a student with auditory processing or hearing problems. - Create visual graphs/charts to support learning and demonstrate relationships. - Incorporate organizational activities into classroom activities. - Make sure students understand the homework by having them retell what they are to do. - Team disorganized student with a well-organized student for collaborative project, making sure each student can contribute from a strength area.
Explicit Instruction: Compensatory Strategies	**Explicit Instruction: Intervention/Remediation**
- Teach students to create flow charts, graphic organizers, and cognitive webs. - Train students how to identify important facts or concepts and to create outlines or webs. - Use self-talk to accompany visual input. - Coach students in the use of mnemonics to enhance memory. - Teach meta-cognitive/mental scripts that emphasize self-regulation. - Demonstrate and teach task-analysis and prioritization strategies. - Teach strategies to maintain attention, like sitting up straight and leaning upper body toward speaker. - Highlight and color-code to organize and prioritize new information. - Provide instruction in self-directed learning skills with emphasis on study skills, time management skills, organizational skills etc.	- Coach students in setting realistic long-term and short-term goals. - Teach students to chunk or break down project into steps and talk through steps. - Instruct in systematic multi-sensory approaches. - Teach students how to rephrase key ideas and link to key words. - Teach strategies to group and categorize information. - Provide direct instruction in organization, time management, and study skills. - Provide explicit instruction in phonological awareness, phonics, and decoding. - Teach verbal mnemonics and rhyming to increase automaticity. - Use games to encourage fact memorization and continued practice using dice rolls, spinners, and game cards.

Examples of Accommodations and Explicit Instruction for Specific Academics

Strength/Interest-Based Accommodations	Accommodations to Access Learning
• Use flexible, non-permanent instructional grouping practices designed to facilitate accelerated/advanced academic learning (cluster groups, cross-age groups, interest groups, etc.) • Provide content learning that requires gifted and talented students to be engaged in higher-level thinking, abstract thinking, and problem-solving. • Use challenging reading program/materials (*Jr. Great Books* or *William & Mary Curriculum*). • Provide high-level materials, activity and product options that include analytical and critical thinking skills. • Accelerate vocabulary development through a variety of strategies and materials. • Encourage participation in creative writing opportunities, debate, or advanced literacy activities. • Pretest in math to identify material already mastered and replace with enriched and accelerated material. • Use high-level problem solving approaches that emphasize open-ended problems with multiple solutions or multiple paths to solutions.	• Provide books on tape for students who struggle with readings and high-level discussions. • Use advanced organizers or provide outlines. • Utilize computer spell check, thesaurus, grammar checker, and calculator. • Display fact charts or have fact charts available for student use. • Reduce number of problems required or increase amount of time for assignment. • Provide adequate space for students to work out solutions. • Cut the worksheet in half or in fourths, and require the completion of one section at a time. • Use matrix paper as a physical guide to keep the numbers aligned. • Provide copies of notes and overheads. • Shorten directions and make them clear and concise. • Encourage neatness rather than penalize for sloppiness. • Clearly segment instruction and plan 20 minute instructional segments.
Explicit Instruction: Compensatory Strategies	**Explicit Instruction: Intervention/Remediation**
• Teach *Inspiration* software to aid students in organizing information, writing, and projects. • Instruct students in how to break new learning into manageable subtasks. • Teach students how to keep an idea journal. • Instruct students in the use of highlighters to note key information. • Highlight the mathematical sign for operation to be performed. • Use manipulatives and arrays to help students understand mathematical processes. • Provide instruction for a wide range of technology to increase productivity. • Estimate amount of time an activity will take and determine how long it actually took. • Use software programs. • Teach research strategies and skills essential for in-depth study and advanced learning.	• Use systematic multi-sensory approaches to teach decoding/encoding. • Provide instruction in organization/strategies for written language, computation, problem solving. • Utilize choral reading to increase fluency. • Teach typing and word processing. • Use activities to increase rate and fluency (flash cards, computer games, etc.) • Teach students to prioritize homework. • Encourage three-finger tracking. • Provide direct instruction in comprehension strategies, connecting, inferencing, predicting, etc. • Teach and model webbing, storyboarding, and flow charting. • Teach students to use checklists, keep logs, or mark their progress on a chart.

Examples of Accommodations and Explicit Instruction for Creativity

Strength/Interest-Based Accommodations	Accommodations to Access Learning
• Provide opportunities for "real world" investigations and experiences (in-depth study of real problems, career exploration, etc.) • Encourage fluency, flexibility, originality, and elaboration through open-ended classroom activities and products. • Provide opportunities for creative problem-solving and divergent thinking techniques. • Utilize biographies of creative/talented individuals to promote success and to provide awareness of characteristics. • Provide opportunities for students to connect prior knowledge to new learning experiences and to establish relationships across the discipline. • Utilize think, pair, share strategies • Integrate creative thinking skills and problem-solving strategies with solid learning content. • Emphasize mastery of concepts and minimize home practice.	• Provide creative choices when students process information or develop products. • Provide opportunities for creative and critical thinking. • Assess specific content in spelling, writing skills. • Allow multiple ways for students to demonstrate knowledge. • Provide a stimulating educational environment where there are opportunities for critical and creative thinking and problem-solving. • Emphasize time management in the classroom and give notice for deadlines, tests, etc. • Allow time at the end of the day for students to get organized before they leave school. • Encourage students to learn compensation strategies to bypass their disabilities. • Celebrate effort, completion of homework, and attainment of goals.

Explicit Instruction: Compensatory Strategies	Explicit Instruction: Intervention/Remediation
• Instruct students in the multi-steps of creative problem-solving to identify problem, explore data, generate ideas, develop solutions, and build acceptance. • Coach students in SCAMPER technique to substitute, combine, adapt, modify, put to other use, eliminate, and rearrange. • Teach technique of brainstorming so students can generate numerous and innovative ideas or alternatives in a safe environment where judgment is withheld. • Coach students in generating ideas or alternatives with fluency, flexibility, originality, and elaboration. • Encourage students to start a homework session by planning what will be accomplished during the session. • Ask students to jot down how long they think an assignment will take and ask them to record how long it actually took.	• Teach idea-generation and brainstorming. • Instruct students in paraphrasing. • Coach students in how to break down and chunk projects into multiple steps with realistic short-term goals. • Promote success as the ability to achieve realistic short-term goals. • Provide opportunities for students to explore career and college opportunities. • Teach students how to solve problems using creative problem-solving steps. • Encourage students to talk through the steps they will use when completing assignments and projects. • Help them break down tasks into manageable segments and use a calendar to plan steps needed to complete project. • Provide specific instruction on organization. • Teach students how to study, prepare for tests, and organize reports and projects.

Examples of Accommodations and Explicit Instruction
for Visual, Spatial, and Performing Arts

Strength/Interest-Based Accommodations	Accommodations to Access Learning
• Provide exposure and access to advanced ideas, research, and works of eminent producers in many fields. • Embed multiple intelligence strength areas into instruction. • Create story boards. • Learn and use visual-spatial strategies in the content areas. • Use visual-spatial activities/products to improve performance in weaker academic area(s). • Help students transfer abstract thinking into a variety of forms of expression. • Use graphic organizers to help students organize and process information in content areas. • Offer choice in student assignments and assessments so students can use their strengths to demonstrate their knowledge.	• Offer options for acquiring information and communicating what is learned using multiple intelligences and learning styles. • Provide connections to real world and build on students' intrinsic motivation. • Allow students to vary assignments. • Provide adaptive physical education. • Allow students to vary assignments and use alternative ways to demonstrate knowledge, such as oral presentation, tape-recorded or video response, create a poster or book jacket, etc. • Accept oral responses in lieu of written. • Match teaching style to students' learning styles. • Provide opportunities for students to demonstrate achievement and excellence through competitions, exhibitions, performances, presentations, etc. • Provide environmental modifications to allow for movement, flexibility of workspace, etc.

Explicit Instruction: Compensatory Strategies	Explicit Instruction: Intervention/Remediation
• Use musical chants, raps, rhymes, melody, and rhythm to help students learn. • Teach students to use visual imagery. • Create visual graphs/charts to support new learning and demonstrate interrelationships. • Teach grouping and categorizing strategies. • Teach and model creating flow charts, graphic organizers, and cognitive webs. • Anticipate/predict when and where difficulties may occur. • Draw the solution to a problem to capitalize on visual strengths. • Make everything as visual as possible. Use graphic organizers, charts, graphs, timelines, maps, pictures, or videos. • Teach problem-solving strategies. • Encourage struggling readers to listen to books on tape so they can participate in class discussion. • Teach visual approach to spelling.	• Provide direct instruction in use of *Inspiration* software • Teach how to use visual imagery. • Guide students through long-term projects designed to demonstrate good planning and time allocation. • Teach students to use nonverbal cues and environmental cues. • Educate students in organizational techniques and study skills. • Teach a variety of strategies to plan, organize, and manage daily routines and meet personal goals. • Teach self-monitoring strategies. • Teach students to use meta-cognitive strategies to monitor their thinking in the learning process. • Teach the meaning of prefixes, suffixes, and root words in order to teach new words. • Provide explicit instruction in phonological awareness, phonics, and decoding.

Examples of Accommodations and Explicit Instruction for Physical/Psychomotor/Athletics

Strength/Interest-Based Accommodations	Accommodations to Access Learning
• Pre-test and compact the curriculum when students have mastered concepts to eliminate unnecessary drill and practice. • Provide hands-on experiential learning opportunities so students can enhance learning by making mind/body connections. • Use "most difficult first" strategy (see page 25) and pre-testing to allow students to demonstrate mastery of concepts and eliminate unnecessary drill. • Provide a great deal of structure and consistency in daily schedule with clearly defined rules and consequences. • Incorporate high-interest topics or activities to enhance the likelihood students will initiate and sustain work on assignments. • Create opportunities for students to build a model or a 3D display. • Encourage students to pursue writing in their area of interest and share with appropriate audiences.	• Provide opportunities for movement with a purpose such as sharpening a pencil or running an errand. • Allow use of manipulatives (silly putty, balls, clay, etc.) to help sustain attention. • Eliminate excessive copying from the board or book to paper. • Provide preferential seating away from distractions. • Provide adaptive physical education. • Provide clear, concise directions, expectations. • Grade papers for ideas, not handwriting. • Provide grading rubric and/or show an example of what is expected. • Record homework on voicemail or web site so student can access assignments from home. • Give positive feedback and re-direction when attention wanders. • Build lots of movement into learning tasks for those students who learn better when they are moving.

Explicit Instruction: Compensatory Strategies	Explicit Instruction: Intervention/Remediation
• Classroom teacher collaborates with special educators. • Teach keyboarding skills. • Teach students how to create and give a multi-media presentation. • Use audio tape instead of handwriting notes. • Learn to use oral input software. • Teach strategies for dealing with change. • Introduce creative writing activities where the student can have fun while practicing correct letter formation. • Break down writing into smaller tasks whenever possible. • Teach visual approach to spelling. • Brainstorm ideas prior to writing. • Alert students when important information is being shared. • Provide clear, concise directions, expectations, and rules that are limited in number.	• Encourage students to think about training to study and do school work the same way they train for a sport. • Provide instruction in proper sequencing of hand writing specific letters. • Provide practice to improve visual motor control with activities where students coordinate what they do with what they use (i.e.: use of easels, chalkboards, playing jacks, pick up sticks, etc.) • Teach students to create a "To Do List" and prioritize homework. • Teach reading and writing strategies like outlining, mapping, and editing. • Teach students self-management skills like strategies for staying on task, skills for thinking and waiting before acting, and skills for sustaining attention. • Provide practice tracing shapes and letters, especially similar letters such as l, j, t, etc. • Teach keyboarding and word processing skills.

Examples of Accommodations and Explicit Instruction
for Interpersonal/Leadership

Strength/Interest-Based Accommodations	Accommodations to Access Learning
• Provide opportunities in the classroom for students to develop their leadership skills. • Encourage a social climate within the classroom that fosters acceptance and appreciation for the strengths of all students. • Read, analyze, and discuss biographies of famous leaders. • Ask students to develop a list of qualities of a leader of their choice and then have students compare or contrast their own qualities with those of the leader. • Provide learning opportunities for students to work cooperatively with peers of like ability and interests. • Use hypothetical situations, bibliotherapy, and moral dilemmas to foster an accepting environment for all students. • Search for strengths of students and build on those strengths.	• Constantly search for opportunities to promote and encourage appropriate social interactions for socially challenged students. • Provide preferential grouping or pre-select teams of students — don't permit students to choose and reject others. • Set clear expectations for behaviors. • Do not tolerate intolerance. • Provide preferential seating. • Encourage students to develop interpersonal and leadership skills. • Clearly state and consistently implement expectations and consequences. • Develop behavior plans to address problem situations. • Avoid power struggles, pick your battles, and maintain a calm, neutral response. • Communicate with peers or experts online.

Explicit Instruction: Compensatory Strategies	Explicit Instruction: Intervention/Remediation
• Teach skills needed to participate successfully in group work. • Provide groups with checklists of social skills needed for group work and have students evaluate their group. • Teach empathy. • Provide positive reinforcement when students use the skills they were taught. • Teach leadership skills and provide in-school leadership opportunities. • Encourage and teach students how to become self advocates. • Help students learn to value diversity. • Provide opportunities for structured group work. • Develop high-level effective communication, collaboration, and self-advocacy skills • Support a positive environment where students respect and compliment others.	• Provide friendship groups where students can learn and practice interpersonal skills. • Assist students in learning social skills and appropriate interactions. • Provide opportunities for students to practice self-advocacy and have students role play to develop advocacy skills. • Teach students how to develop and maintain friendships. • Help students learn how to resolve issues that occur as friendships grow. • Encourage the development of effective skills to interact with peers. • Provide support services for students with trained counselors or social workers. • Teach students to work as part of a team. • Teach skills for resolving conflicts. • Coach students in understanding body language and reading social cues.

Examples of Accommodations and Explicit Instruction
for Intrapersonal and Social/Emotional

Strength/Interest-Based Accommodations	Accommodations to Access Learning
• Provide a nurturing environment that values and respects individual differences. • Include activities which will help the student explore his/her attitudes, opinions, and self-awareness. • Teach knowledge of self including learning abilities, learning styles, interests, nature of giftedness, etc. • Help students view mistakes as a valued part of the learning process. • Seek opportunities to compliment students on effort rather than ability. • Encourage students to equate effort with success. • Provide students with frequent opportunities to work cooperatively in a group. • Teach awareness and expression of different feelings. • Teach meta-cognition and sensitivity to others. • Provide access to scholars, expert practitioners, and gifted role models.	• Allow breaks for physical activity to reduce mental fatigue. • Maximize success and minimize failures. • Offer counseling and guidance strategies specifically designed around the unique affective needs of GT students (feelings of being different, effects of uneven development, motivation, coping with learning barriers). • Provide career exploration and career counseling programs including future education planning, counseling, and guidance. • Focus attention on the development of strengths, interests, and intellectual capabilities rather than disabilities. • Encourage the development of strength areas by allowing time and resources to explore interests. • Ask students to become resident experts for the class in their areas of strength or interest.

Explicit Instruction: Compensatory Strategies	Explicit Instruction: Intervention/Remediation
• Teach students to use self-talk/meta-cognitive cues to accompany processing. • Help students understand that mistakes are a part of the learning process. • Work with students to develop a grading rubric before a project begins. • Teach students how to evaluate their own work. • Encourage students to set realistic goals and to evaluate their progress. • Help students learn to set realistic goals and develop a plan to achieve those goals. • Teach knowledge and skills necessary to manage potential difficulties in learning such as perfectionism, risk-taking, stress, heightened sensitivities, pressure to perform, and high expectations of self and others. • Help students deal with fear of failure, fear of success, procrastination, and paralyzing anxiety.	• Provide support services with counselors, school psychologist, or social worker. • Teach mental scripts that emphasize self-regulation. • Teach strategies to manage anger. • Promote and teach positive coping strategies. • Work at building resiliency. • Help them to use positive self-talk about studying and to develop positive self-monitoring strategies. • Teach how to identify and manage feelings. • Develop personal behavior management skills. • Teach the student to label, control, and express his/her emotions appropriately. • Assist students in developing positive coping strategies such as seeking support, positive reappraisal, and accepting responsibility.

Parenting Gifted Students with Disabilities

- Create a home environment that nurtures your child's strengths and interests.

- Build a working relationship with your child's school and keep the lines of communication open between home and school.

- If your child is depressed, dislikes school, underachieves, or develops behavior problems, communicate your child's problems and needs to the school.

- Work in partnership with the school to identify your child's learning and/or social/ emotional problems.

- Collaborate with the school to develop a suitable educational plan for your child that addresses his/her needs.

- Create a supportive, stress-free environment for homework and designate a set time and place to study.

- Help your child learn skills needed to be successful in school. Assist with homework and projects, but do not assume responsibility.

- Remember that the role of parents changes as the child reaches different ages.

- Equate success with effort, not ability, and view mistakes as a valued step in learning.

- Help your child learn how to become a self-advocate.

- Encourage your child to develop the skills necessary to become independent life-long learners.

- Advocate for your child, but don't overprotect him/her. Hold your child accountable for his/her behavior and achievement.

Parent Advocacy

- Build a working partnership with your child's school.

- Work with the school's staff to improve educational opportunities for all students.

- Support the positive efforts of teachers and school staff to meet the individual educational needs of students.

- Participate on school committees like the school's accountability committee and school enrichment or activity committees.

- Volunteer your time to assist with activities or help in the classroom, media center, computer lab, etc.

When Children Experience Problems in School

1. Know the child.
   - What are his/her special interests, strengths, and struggles?
   - How does the child interact with peers, older children, younger children?
   - How does the child feel about trying new things or making mistakes?

2. Clarify the issues and try to get a sense of the real problems by discussing them thoroughly with the child.

3. Schedule a meeting with the classroom teacher.
   - Approach the teacher with care and sensitivity.
   - Plan the meeting and topics to discuss.

4. During the conference:
   - Keep the conversation a positive learning exchange.
   - Start with positive comments about the school and the teacher. Thank the teacher for …………..
   - Communicate expectations and share specific examples of the child's work, feelings, strengths, struggles, interests, and after-school activities.
   - Listen carefully to what the teacher has to say.
   - Express willingness to help resolve the problem and work collaboratively toward a positive solution.
   - Decide together what the child, you, and the teacher will do.
   - Determine a reasonable timeline and establish when the effort will begin and when progress will be evaluated.

5. After the conference:
   - Keep the lines of communication open.
   - Schedule a follow-up meeting to assess progress.

6. If the child continues to struggle, ask that he/she be referred to the school's student study team. This team will develop a plan to meet individual educational needs and recommend specific intervention strategies. If problems persist, the student study team will refer the child to special education for assessment.

Case Studies

Twice-Exceptional
Case Study
Brandon
13 years old—8th grade

In school:
Brandon was referred because there were significant concerns regarding a discrepancy between CSAP scores and academic grades. Brandon has a strong desire to be successful in school. Teachers describe Brandon as having many good ideas. He is polite, respectful, and enjoys reading. Brandon seems to enjoy school, but sometimes gets anxious. He has difficulty meeting the expectations in a general classroom setting. Concerns include difficulty following directions, remembering assignments, and struggling with work completion. He is sometimes neglectful, forgetful, and very disorganized. Difficulty with organization is evident by how he struggles to keep his binder organized, locate assignments, and keep track of due dates. It also takes Brandon a significant amount of time just to organize his thoughts. This need for extra time for understanding and processing information is very evident. In the classroom, he often does not understand what is expected. Brandon's struggle with understanding directions negatively impacts his completion of assignments. A teacher noted that frequent comprehension checks have been helpful.

At home:
Mom describes Brandon as brilliant, charming, attractive, insightful, and a hard worker. He is talented in music and plays four instruments. Brandon is first chair in his school band. Primary concerns include: disorganization, poor grades, and misunderstanding information. He seems unmotivated and doesn't seem to make the connection between effort and poor grades. Lack of work completion and difficulty turning in completed work is the main cause of poor grades. Brandon is very emotional (cries every day), overly sensitive, and frequently "gets ill" when an assignment is due. He struggled with gross and fine motor coordination from an early age. He did not learn how to ride a bike until he was nine years old, and his handwriting continues to be extremely difficult to read. He has a history of severe allergies and sinus infections. As a result he missed an entire month of school last year.

In his own words:
Overall, Brandon describes this year as very frustrating. Brandon has a strong desire to be successful in school. He is frustrated with how hard school has become for him, because he knows he is capable of earning A's. Primary concerns at the moment include world events he sees on the news. "There is scary stuff happening like SARS, terrorism, and war," he said. Additionally, he admitted to being worried about his grades, but stated that he works very hard. Brandon thinks that his teachers give too much work and he feels overwhelmed. He reports the work isn't too hard, just too much. He said extra time would be helpful especially with big long-term research projects. He said he does much better seeing directions on assignments instead of just hearing them. He says he tends to collect a lot of research, but it takes him a long time to read and sort the information. When asked why he completes assignments, but doesn't hand in the work, he stated that if he didn't understand the assignment or feels it's not up to par, he doesn't hand it in so he can add to it and make changes.

Testing:

During the testing Brandon was very cooperative and he tried very hard. On the math calculation test he was able to complete problems that he had just learned to do that week. He did sometimes struggle with setting up the problems. For example, on a multiplication question, he tried writing the problem in three different ways before he was able to complete it. He did get the problem correct, but it took him a significant amount of time just to organize his thoughts. This was also true with the fluency subtests. Brandon was highly accurate, but just was unable to work at a rate that would be expected given his tested abilities.

Strengths:	Weaknesses:
General information	Organization and planning
Vocabulary	Auditory processing
Pre-algebra	Inability to sequence
Superior oral language	Visual memory
Academic skills	Visual motor coordination
Detail oriented	Cognitive flexibility
Interpersonal skills	Transitions

WISC

Verbal	S.S	%tile	Performance	S.S.	%tile
Information	16	98	Picture Completion	11	63
Similarities	16	98	Coding	06	09
Arithmetic	14	91	Picture Arrangement	09	37
Vocabulary	17	99	Block Design	11	63
Comprehension	13	84	Object Assembly	08	25
Digit Span	14	91	Symbol Search	10	50
Verbal Score	131	98	Verbal Comprehension	131	98
Performance Score	94	34	Perceptual Organization	99	47
Full Scale Score	114	82	Freedom from Distractibility	124	95
			Processing Speed Index	91	27

Woodcock-Johnson Test of Achievement

	S.S.	%tile
BROAD READING	101	53
Letter/Word Identification	102	54
Reading Fluency	101	53
Passage Comprehension	110	75
BROAD WRITING	113	81
Spelling	122	93
Writing Fluency	93	31
Writing Samples	127	97
BROAD MATH	117	88
Calculation	130	98
Math Fluency	97	41
Applied Problems	111	76

Twice-Exceptional
Gifted/LD Case Study
Alicia
9 years old

In school:
Alicia is a nine-year-old and passionate about her love of horses. She can discuss almost any aspect of her passion in great detail including: characteristics and history of various breeds, history of the domestication, and training and riding methods. Alicia is a talented artist and has a wonderful portfolio of her horse drawings, paintings and sketches.

Alicia contributes to many class discussions and frequently relies on her visual memory, advanced vocabulary, and unique sense of humor. Teachers comment on Alicia's ability to remember so much detail.

Alicia struggles with reading and writing. Her oral reading is not fluent, characterized by word-by-word reading with many decoding errors. She relies on sight words, contextual cues, and her advanced abilities in reasoning skills to comprehend and predict text. Alicia is very self-conscious about her oral reading and hates when she is called on to read in class.

Alicia's writing is characterized by many wonderful and creative ideas that are very loosely organized. Her writing has many spelling and grammatical errors.

Alicia has always struggled with the weekly spelling tests. She works hard daily and practices each night, but still only manages to average B- or C on the weekly tests.

At home:
Alicia lives with her mother and younger brother. She spends much of her time doing homework, studying for spelling tests, or working on the computer researching horses. She will also work on her portfolio, adding to her sketches and drawings. Weekends are usually devoted to riding and doing extra work around the stables.

In her own words:
Alicia is very frustrated by her inability to read and write as well as most of her classmates. She says this makes her feel "stupid." She is particularly upset by the teasing she sometimes receives during spelling bees at school. She says she never gets picked to be on a team. Alicia does not see herself as well-liked by her peers and does not go out of her way to include herself in socializing at school. She claims that no one shares her interest in horses and she has nothing in common with anyone.

Twice-Exceptional
Gifted/EBD Case Study
Doug
12 years old – 7th grade

In school:

Doug has been receiving special education services for his emotional/ behavior disorder since he was 8 years old. His behaviors were characterized by extreme and sometimes unpredictable outbursts which included throwing objects, tearing papers or books, and hitting people. Despite his excellent vocabulary, love of reading, and ability to problem solve, Doug was not identified as "gifted" until recently. His overall IQ of 147 was a great surprise to most of his teachers. Doug's history teacher stated, "How can he be gifted if he is identified as EBD? … he can't keep up with the gifted kids!"

Doug likes to identify himself as "cool." He spends time with a group of students who have gained a local reputation as troublemakers. A few of his friends have had recent run-ins with the law.

Doug loves music and drawing. Although he does not play any instrument, he talks about joining a rock band when he gets older. He combines his love (and fantasy) of joining a rock band with his artistic skills by designing CD covers and sketching out scenes from the music videos he wants to create and produce.

Doug is clearly a leader – although he may be demonstrating his leadership skills inappropriately at times. He knows how to draw people into his inner circle and motivate them to collaborate with him on any number of tasks.

Doug's performance in academic areas is sketchy at best. When he is involved in a creative project of some kind, his interest will keep him motivated enough to complete the task. Doug excels in creative writing and talks about writing music lyrics. He is also a very talented artist. Much depends on his relationship with his teacher. If he likes his teacher, he is more likely to live up to the expectations. If not, he does not care.

At home:

Doug lives with his mother and younger sister. His parents divorced when Doug was 5. Doug's father lives out of state. Doug speaks to his father regularly and sees him during school holidays and the summer months. Doug's mother is very concerned. She is afraid that Doug's friends are a bad influence on him and that he will soon have problems with the law. She recognizes her son's intelligence and creativity but does not know how to nurture that or how to advocate for her son. Her biggest concern and fear is Doug's involvement in potentially illegal activities (including rumors of his friends using drugs).

In his own words:

"I go to school because I have to. Once I am legally able, I want to quit school and start a rock band." When asked to identify his greatest challenge, Doug said, "People think I'm crazy because I get into a lot of fights at school. I don't care what people think about me." When asked what were his strengths, Doug's response was, "I don't know . . . Maybe I'm just really good at causing trouble."

Twice-Exceptional
Gifted/ADD Case Study
George
7 years old

In school:

George is a seven year old child in 2nd grade. He is a good friend to his classmates and often volunteers to help them with their work (even when he has not finished his own). George is a high-level thinker. He loves to ask or answer the "why" or the "what if" questions about most subjects, but particularly for science related themes. He has a passion for investigating UFOs and extraterrestrial beings. He has daily stories to share with the class about the most recent UFO sightings or new discoveries about life on other planets.

George's teachers report extreme difficulty with his ability to pay attention in class, particularly when doing large group instruction or during less structured activities (independent work time). During these times, George will look out the window, fidget with anything available, play with his clothing, dig through his desk, etc. He has great difficulty finishing assignments and staying on task for more than a few minutes at a time. This causes him great frustration and anxiety. He becomes frustrated when he sees his peers are finished with their work and he is not; he becomes anxious if he knows he'll have to stay in during recess or lunch to complete an assignment. George's concentration is greatly improved when he is working in small cooperative groups (no more than 3 students) or with individual teacher attention.

George can't seem to keep up with his belongings. Although this may be typical for many 2nd graders just learning these skills, for George it is much more severe. He loses clothing, books, papers, and homework. Just about anything given to George is lost during the day.

At home:

George's parents are committed to helping their son but often become very frustrated with him. They report having to repeat requests or demands several times before he acknowledges that he has heard them. George's mother said, "It is almost as if he is off in his own little world and never heard a word I said. Before they diagnosed ADD, I thought they were going to tell me he was deaf!"

Although there has been some improvement since a new medication has been tried, there are still the same old problems. George forgets his homework (or jacket, lunchbox, notes, etc) in school and needs commands or requests repeated several times. George's parents are worried that his self-esteem is being diminished as he becomes more aware of his challenges.

In his own words:

When asked what he sees as his biggest challenge, George said, "I'm just stupid . . . I forget everything and never finish anything!" When asked what he sees as his strengths, his response was, "Nothing. I am not good at anything."

Twice-Exceptional
Gifted/Physical Disabilities Case Study
Jason
10 years old

In school:
Jason is a very bright and curious child. He loves small group discussions where he can thrive on asking provocative questions and enchanting his audience with his ability to play with words. He loves reading novels, watching movies, writing or watching plays, writing or reading poetry, and just about anything that involves language and drama.

Jason's cerebral palsy has become more challenging as he gets older. He is now confined to a wheelchair all day, which has really been an emotional setback for him. He has undergone many surgeries over the last few years including procedures to correct blocked shunts and increasing problems with his s-curve scoliosis. His speech is impaired (although he is intelligible) and he has difficulties with most gross and fine motor control.

Jason is currently working on or above grade level in most academic areas. Although he was initially identified for his physical disability and receiving special education and related services for speech and physical therapy, he was only recently identified as "gifted" based on his superior capacity with language. Jason is learning to use various assistive technology devices to help him with his writing.

At home:
Jason lives with his parents and older brother. Jason spends much of his after-school time going from doctor to therapist. He has few friends outside of school and spends most of his free time on the computer, watching movies, or reading plays.

Jason's parents have been strong advocates for their son. They were thrilled when the school finally saw their son as a "gifted" child and not *just* a child with a disability. They always knew Jason was special in many ways, including his unique abilities with words and word play.

Jason's parents' biggest concern, aside from mounting medical bills and problems with medical insurance, is what will happen to their son as he gets older and his medical needs become greater, and who will take care of him when they are gone.

In his own words:
When asked about his strengths, Jason said, "I love going to the gifted class with Mrs. Francetti. She really knows how to make me think! I guess I think of myself as someone who can make people laugh because I know how to tell jokes. I like to write plays. Someday I want to write plays or be a famous actor." When asked about his challenges, Jason said, "I guess my biggest challenge is that I am not great with numbers! I hate math. I don't know how to think with numbers – How do they do it? I guess I also have a challenge because of being in a wheelchair. Although I can get around OK, it still makes things hard for me sometimes. I miss a lot of school because of doctor appointments or having to go in for surgery – I hate that. The doctors and nurses are nice and I get to do my schoolwork while I'm there, but I miss being in school."

Twice-Exceptional
Gifted/Sensory Impaired (Visually Impaired) Case Study
Wilfredo
12 years old

In school:
Wilfredo has been described by his teachers as a "natural leader . . . he has a keen sense of people and social perceptiveness – overall, very strong interpersonal and intrapersonal intelligences exhibited." Wilfredo has some difficulty with logically thinking through solutions. This may in part be due to the fact that many of the logical thinking activities are visually based dilemmas; however, given time and a partner to work with, Wilfredo can usually come up with some creative solutions.

This student excels in situations that need a leader. He is the first to volunteer to coordinate just about any activity or social service project – particularly those dealing with animal abuse, justice, discrimination, or issues dealing with poverty or homelessness.

Wilfredo is working on grade level for all academic subjects, although his writing composition and vocabulary are very advanced. Wilfredo does have some difficulty with mathematics, although cooperative learning activities seem to help with concept and skill development.

Due to Wilfredo's visual impairment, he is learning to use various assistive technology devices. He uses the computer with special voice recognition software, text reader devices, and enlarged text. He also uses many of these devices for writing and creating multimedia presentations.

At home:
Wilfredo lives with his mother, father, and two siblings. Wilfredo spends much of his free time at the local Humane Society where he is responsible for feeding the animals and socializing the dogs and cats. He loves this responsibility and has been very influential in raising money in the community and organizing food drives for the animals.

Although Wilfredo has friends in school, he rarely sees them on weekends or during vacations. Wilfredo generally gets along well with his siblings, although according to his mother, he knows how to get under everyone's skin from time to time!

In his own words:
When asked about his strengths, Wilfredo said he knows he is a leader, "or at least that is what my teachers tell me (as he laughs) . . . I guess I could use those leadership skills doing something positive when I get older – maybe I can get involved in politics, government, or something like that." When asked about his weakness, Wilfredo said, "I know you expect me to talk about my visual impairment – but that is not my weakness! My weakness is that I do not know how to play a musical instrument – aren't *all* visually impaired or blind people supposed to be musicians (again said with a laugh) . . . You know . . . Ray Charles, Stevie Wonder?"

Twice-Exceptional
Gifted/Hearing Disability Case Study
Jerry
15 years old

In school:
Jerry is a 15-year-old freshman at the local high school. He uses a sign language interpreter for most of his classes, but has begun using a form of Computer-Assisted Notetaking (CAN) in his social studies class to see if that gives him access to all of the communication in a lecture-based class. The teacher of the deaf consults with Jerry's general education teachers and provides him instructional support once a week during his study hall. During that time, the teacher of the deaf introduces vocabulary and concepts of upcoming new units and reinforces or expands on vocabulary and concepts of recently completed units.

Jerry is generally a cheerful young man. He plays a variety of sports and loves to tell jokes. In class, Jerry performs very well on individual assignments but sometimes struggles in group projects because the other students do not know sign language and the interpreter sometimes can't keep up with the verbal barrage of brainstorming or fast-paced discussions. Jerry excels at math and is currently taking Geometry and is breezing through it. He also loves to read but is a reluctant participant in any oral presentations in school. He maintains a 3.6 grade-point average.

Jerry memorizes facts very easily and often seeks additional information about class topics on the Internet or from library books. His parents and teachers have always commented on how intelligent Jerry is, but it took a few years before he received services as a gifted student because his assessment profile showed inconsistent results, which is typical of students with a hearing disability. He performed well on non-verbal tests and relatively poorly on verbal and timed tests. As he has matured and his English skills have improved, his verbal scores have improved and his assessment profile shows more consistency across subjects/domains. He occasionally uses incorrect grammar or mispronounces sophisticated vocabulary, but overall his language skills are much better than when he was younger.

Jerry knows most of the other students at school and has many brief casual conversations throughout a school day, but he doesn't have a best friend or a small group of close friends. He would like to have more friends to spend his free time with but isn't sure how to make that happen in a comfortable way.

At home:
Jerry was born with a severe/profound hearing loss in both ears. When Jerry's hearing loss was detected when he was 2 years old, the family began receiving weekly services from a parent advisor in an early intervention program for families of children who are deaf or hard of hearing. He was only saying random vowel sounds when they started with the early intervention program. The family decided that using sign language would be the best way to communicate fully with Jerry. Before long, he knew and used many signs and began learning to pronounce some words. Since that time, Jerry's language skills have continued to improve, especially since he

learned to read. Jerry had hearing aids but stopped wearing them when he turned 13. He reports that they are not that helpful to him.

Jerry's parents and his sister are fluent in sign language, so they are able to communicate fully with each other. The family is very close and often goes camping, hiking, biking, or snowboarding together on weekends or holidays.

Jerry has played recreation league soccer, football, and baseball. He loves being active and enjoys the challenge of playing sports. He has expressed interest in trying out for one of the school teams, but is unsure if he would like having the interpreter there or if he would be able to function well without the interpreter there.

In his own words:
When asked what his strengths are, Jerry replies, "I'm good at math and sports. When I'm working a math problem or playing a sport, I am equal to hearing kids." When asked what his weaknesses are, Jerry hesitates and then says, "Sometimes I'm not very good with new words, and writing takes some extra time to be sure I don't make any errors." When asked if he likes school, he laughs and says, "Sure, I like to learn, but sometimes I get bored." Jerry plans to attend the National Technical Institute of the Deaf and major in microelectronics or telecommunication engineering.
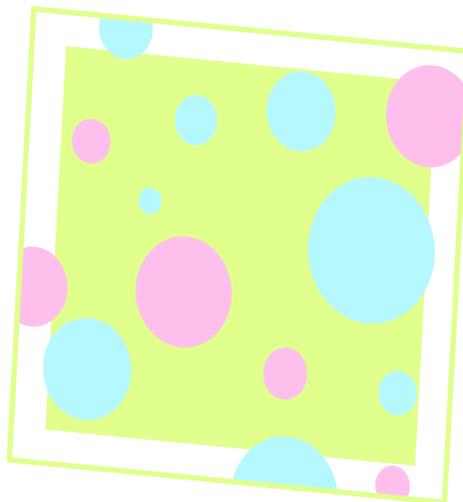
Recommendations for Case Studies

Some Recommendations for Brandon's Educational Team:

Addressing Strengths

Brandon has some significant strengths and should be allowed to use them as much as possible. For example, because he has strong verbal skills he should be allowed to give oral presentations and to use oral assessment. Brandon enjoys reading, so he should be allowed to have choice in his reading material. Choice will help Brandon to maintain his enjoyment of reading.

Additionally, he would benefit from group work where he where he can use his strong interpersonal skills. The remaining group members may have strengths that could balance out Brandon's weaknesses.

In mathematics, Brandon should be pre-assessed to determine what he already knows and should then be provided with more advanced levels of instruction. The Most Difficult First strategy should be a regular part of Brandon's assignments. This will help him to receive appropriate credit for what he has learned while eliminating the opportunity for him to lose his work before he can turn it in. Curriculum compacting and acceleration in mathematics will allow Brandon to continue his learning in the content area of his talent.

Addressing Challenges

Brandon is the type of student most likely to be labeled lazy. Because he has such a large discrepancy between what it seems like he should be able to do, and what he actually does, teachers may struggle to understand why accommodations are necessary. First and foremost, all of his teachers need to understand that, while his verbal reasoning skills are quite strong, he will need support in the classroom.

To support Brandon with following directions, several steps should be taken. All directions should be provided both in writing as well as verbally. Before directions are given, Brandon should be cued that something important is coming. This could be a hand signal, teacher proximity, an announcement with wait time, etc. Directions should be given in a step-by-step manner (first, next, last, etc.) when possible. The teacher should also have Brandon (or other students) clarify directions in their own words (for example, "what will you do first?" or "turn to your partner and explain in your own words what you should do.") Frequent check-ins at the beginning of an assignment would also be beneficial.

In terms of organization, Brandon and a trusted adult should come up with a plan for keeping him organized, and should meet regularly to evaluate the system. Brandon needs to have a voice in how this occurs or he will be less likely to buy into the plan. Also, Brandon should be included in order to empower him. Teachers should ask "where are you going to put this?" and "how will you remember where it is?" frequently until this becomes routine for him.

It would seem that working memory is also a weakness for Brandon. As much as possible, strains on working memory should be alleviated. In writing, the sooner he can be taught to keyboard, the better. While this may take a long time and be frustrating in the beginning, it will be worth it in the

long run. Also, Brandon should be taught to write in a process. First he should organize his thoughts—this could be dictating a brainstorm into a tape recorder or using a graphic organizer. His first draft should focus just on getting ideas on paper. Next he should edit for organization only. Then he should edit for conventions, and so on. This frees up his brain to focus on only one thing at a time. For math, he should be allowed to write the steps to problem-solving on an index card so that it can help speed up this process. He knows how to do them, but gets overwhelmed with too many steps. Having them on paper allows him to be more efficient. Also, Brandon should be allowed to use paper that helps organize space. Graph paper, for example, helps to keep problems lined up.

Whenever possible Brandon should also be taught how concepts relate to each other. Because cognitive flexibility is a weakness, he needs to be directly taught generalization skills.

Brandon should also be allowed extra time to complete assignments or he should have shortened assignments. Any time a long term project has been assigned to Brandon, a teacher or other adult should sit with him to sub-task it into smaller parts in order to make it more manageable. Timelines should be established with a checklist so that Brandon can monitor his progress and determine whether or not he will finish in a timely manner.

Lastly, Brandon has some emotional concerns that need to be addressed. He should have a safe person he feels comfortable talking to when he gets overwhelmed. He should be allowed to go to this person or a safe place when he feels he is losing control. He may need a hand signal or sign to let his teachers know when he needs to get himself together. He should also be taught coping strategies that will enable him to manage his emotions in the classroom better.

Advanced by Design
REACH-Out and Nurture Exceptional Abilities

Some Recommendations for Alicia's Educational Team:

Addressing Strengths

Allowing Alicia to use oral expression for demonstration of learning will be beneficial. With her advanced vocabulary and excellent memory, she could be encouraged to further develop her presentation skills. Perhaps this could include observing public speakers and television news personalities.

Research conducted on the computer has been successful for Alicia. Thus, this method should be encouraged in lieu of methods more tedious for her. She should also use the computer or other similar keyboarding mechanism to word process her writing, which already exhibits creativity and good ideas. Her writing talent should be even further developed in the areas of voice, perspective, and word choice. She should be writing in a variety of styles and for a variety of purposes and audiences. As she develops her confidence in her writing ability, the grammatical and spelling difficulties can be addressed by the teacher, or other individual, acting as her editor.

Alicia should be allowed to use her passion for horses whenever she chooses to do so as she learns other skills. Alternate assessments that incorporate choice for Alicia to use her artistic ability would provide an appropriate means to demonstrate learning.

Addressing Challenges

Alicia's phonemic awareness should be tested. Given her trouble with decoding and spelling there is a strong possibility that Alicia does not have strong letter-sound correspondence. With a systematic, structured approach to provide instruction at her level, such as a multi-sensory phonemic awareness program, Alicia should be able to overcome this.

Alicia's teacher should help her to understand herself as a learner and as an individual. Talking with her about the fact that she is not stupid, but that she simply needs to be taught in another way, will help.

Alicia should be given opportunities to read texts at her instructional level. In content areas, she should not be required to read aloud in front of the class. The teacher could have the students choral read, read with partners, pre-read, and then read as a class. During this process, the teacher should make sure Alicia is able to figure out all the words before the final step. This will alleviate a lot of stress for Alicia. Also, whenever possible, the teacher should pre-teach vocabulary. This would allow the students, and Alicia in particular, to become more familiar and comfortable with vocabulary before reading it in a passage.

In writing, Alicia should be taught how to use graphic organizers for pre-writing activities. She should be encouraged to write in stages (get thoughts and ideas down first, then go back to edit for spelling, then go back to edit for organization, and so on). Because Alicia relies upon and is successful using her visual memory, she can be taught to practice her spelling words using visual methods (colored marker, word shape, etc.).

It may be helpful for Alicia to have a lunch group so that she can learn how to interact better with her peers. This should be facilitated (at least in the beginning) by an adult, and she should be taught some strategies on how to initiate conversations with peers, and how to find out what they might have in common.

Some Recommendations for Doug's Educational Team:

Addressing Strengths

Matching Doug with a mature mentor/professional in the field of music could benefit him in many ways. The mentor could assist Doug to develop his skill in writing musical lyrics and could even help him explore career opportunities and college pathways. Doug should identify the skills necessary and ideal level of education for his future aspirations. He might be interested in learning about graphic design or directing. He should "discover," with guidance, why skills in school are important for his aspirations. Finally, this mentor should be someone Doug can look up to as a positive leadership example.

A natural leader, Doug should be offered opportunities to develop this talent in a positive manner. Specific leadership instruction in a small focus group could be provided. At the appropriate time, Doug could be encouraged to start an after school club, sponsored by a teacher, for students interested in starting a rock band or learning an instrument.

Finally, his artistic talent should be encouraged by an art teacher. He should be allowed to use his artistic and musical talent in products to show learning and as alternate assessments.

Addressing Challenges

Educators should take the time to get to know Doug—not with regard to school topics, but what he does for fun, what bands he likes, what instrument he wants to play; they should ask to see his CD designs and his artwork. Doug needs to have a connection to his teachers and to feel important and valued.

Doug would benefit from small group projects where he could use his talents. Making him a group leader, and talking to him privately about how well he is expected to perform, would be helpful.

During instruction, the teacher's use of examples that connect to Doug's interests will help him to become engaged (for example, CD sales in a math lesson). This does not have to be daily, but from time to time.

Doug would also benefit from being allowed choice in his learning and in activities. This can help him feel empowered. However, the teacher must always make clear the expectations and parameters.

Doug will need frequent positive feedback with regard to his strengths and what he has done well. This should be specific and genuine. He will see through artificial attempts, and this could damage any rapport an educator would have established with him.

Some Recommendations for George's Educational Team:

Addressing Strengths

As with many gifted learners, George enjoys learning to greater depth, as evidenced by his "why" and "what if" questions. Thus, complexity and higher-order thinking skills should be embedded in his instruction and in his activities. Lessons should be designed that allow George to delve into a topic in more depth.

Special attention should be given to George's areas of strength. Utilizing the body of evidence that has been compiled for his gifted identification should reveal some of these areas.

George has an interest in science-related themes and is already beginning to investigate UFOs and extraterrestrial beings. Allowing George to utilize this topic for writing, for research, and for investigating mathematics when he so chooses may help him to maintain interest in his work.

Addressing Challenges

Because George works so well in small groups, he should be given opportunities to do this often. During independent work time, it would be helpful to use a timer for George. Start small—ask him to work for 5 minutes. Then allow a short break to get a drink, stand and stretch, or run an errand. Using a timer will help George to focus for a set amount of time that he can see. Give him goals such as "I want you to finish 3 sentences before the timer goes off."

When giving directions, give the big idea first, such as what the outcome will be, or the purpose of the assignment, and then provide the details. George is a big-picture thinker, and would greatly appreciate this. Use nonverbal cueing such as close proximity, standing in a specific spot in the room, a hand on George's shoulder, etc. Directly instruct what to look and listen for when important information is about to be given; identify students doing the right thing and call the class's attention to it. Change tone of voice during large group instruction; sometimes a quiet voice is more powerful than a loud one. Positively reinforce the small things that George does right, being specific and genuine. After giving directions, have him restate them in his own words or through choral response by having several students do this. Provide important information both in writing and verbally.

During transition times, prompt George with cues about his belongings. For example, "George, we are going to gym class now. What will you do with your math paper?" or "Good morning George. That's a nice jacket. Where could you put it so you won't forget it at the end of the day?" Reinforce positively the occasions that George does keep track of his belongings.

Some Recommendations for Jason's Educational Team:

Addressing Strengths

Acceleration may be appropriate for Jason, given the fact that he is working above grade level in some academic areas. Thorough and ongoing assessment should be conducted in order to make appropriate decisions regarding the correct instructional level for Jason.

His obvious strength in the language arts seems to be encouraging him toward a life goal of becoming a writer or actor. Thus, an instructional focus to help Jason further develop this writing talent should part of his educational plan. He should be guided to explore careers in this field and to engage in early college planning, particularly given the fact that Jason can likely be accelerated in this content area. Providing access to competitions and opportunities for publishing will provide an authentic audience.

Addressing Challenges

Jason should be asked to identify a student with whom he feels he has something in common. Ideally, it would be a student from Mrs. Francetti's class. This student, or several students, can be his buddy—he or she can help Jason to figure out what he missed in school and to keep up. It might even be nice if arrangements could be made for the buddy, or buddies, to go to a doctor's appointment with Jason, if Jason and his parents agree. Or, the buddy could visit him after a surgery to learn what Jason goes through, to befriend him through his recoveries, and to foster the friendship.

Jason should be encouraged to research successful people who also have disabilities. He and his parents would benefit from learning how they overcame their difficulties to take care of themselves and to be successful. Perhaps he could even find a mentor in his community with cerebral palsy with whom he can share successes and frustrations.

Finally, Jason should be given opportunities to shine while he is in school. Projects where he can work with other students and use his creativity and humor would help him to get to know other students and to continue to feel proud of himself.
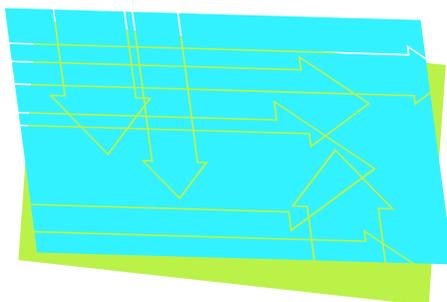
Some Recommendations for Wilfredo's Educational Team:

Addressing Strengths

Wilfredo should be encouraged to continue to use his leadership skills and to improve them through service learning opportunities, leadership conferences, being part of a Destination Imagination team, etc. He should be allowed to work with other students as often as appropriate. He should explore careers that interest him and incorporate his strengths. Early college planning will ensure that he has taken the advanced classes that he needs in order to pursue a career in his chosen field.

With strength in writing, he should develop his skill through writing for various purposes, for a variety of audiences, and in various styles. He could even use advanced standards to provide a continuum of learning. He should be encouraged to utilize this talent in connection with his leadership pursuits. For example, he could write a script for his Destination Imagination team.

Wilfredo might benefit from starting an after-school club or activity. If he truly is interested in music, he may want to start a "beginning band;" or he could be encouraged to start a newspaper to build on his advanced writing composition and vocabulary. Wilfredo might like a "Quiz Bowl" team or other such activity that would allow him social time with students who have similar interests.

Addressing Challenges

Reading materials, and other texts, should be immediately available in appropriate alternative media. For math, Wilfredo may benefit from a homework buddy. He could be paired with a student with whom he could do the first few problems to ensure he understands concepts. Manipulatives may be helpful as he learns mathematics.

Wilfredo should continue to learn to use various assistive technology devices. He should be taught how to keep up with the latest technology and where to find it.

It might be helpful to have Wilfredo study other successful people with vision impairments, or even find a mentor who is visually impaired. This would help him to realize how other persons perform various tasks, particularly in their chosen career.
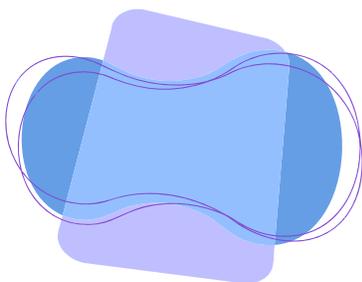
Some Recommendations for Jerry's Educational Team:

Addressing Strengths

Scrutinize each subject Jerry is taking and determine if there are ways to differentiate his learning experiences through content extension, adding depth and complexity, and by adjusting the instructional pace so that he doesn't get bored. Mathematics is an area of strength for Jerry, so attention should be given to ensuring the appropriate instructional level.

Investigate a variety of course options with Jerry for the rest of his high school career, such as accelerated curriculum, advanced placement, online courses, internships, college courses, etc. College planning should be done early with Jerry to be certain that the appropriate university is selected and that necessary classes have been taken for admissions requirements.

Explore some mentoring options for Jerry, such as deaf role models and math experts.

Addressing Challenges

Use the Colorado Communication Plan to its fullest extent in planning Jerry's educational options. See CDE Fast Facts about the Communication Plan at http://www.cde.state.co.us/cdesped/download/pdf/FF-DHH_Communication_Plan.pdf. Be creative while thinking of access to his full school day and co- or extra-curricular opportunities rather than simply thinking of his grades or other smaller aspects of his educational experience.

Even though Jerry appears to be doing well at a surface level, it is still advisable to ask him how he thinks it is going and look at providing some common accommodations. Often students who are deaf or hard of hearing and bright figure out ways to accommodate themselves, but these accommodations are sometimes not very efficient. Simply needing to be visually aware of everything going on and not being able to use your hearing to clue you in to pay attention can be very fatiguing. The educational team should also check on the amount of time Jerry is spending on homework compared to his peers. It might also be helpful to have a private conversation with Jerry about what works well for him in his classes and what doesn't. Then this information can be used to help teachers know what approaches work best for Jerry. These pieces of information can be compiled and used to custom-build a set of accommodations that will help him thrive. One accommodation checklist that many people use in Colorado can be found at the Hands & Voices website at http://www.handsandvoices.org/resource_guide/IEP_Checklist.pdf

Consider ways to support Jerry's social growth and peer interactions both in and out of school; discuss ways to teach general educators and peers sign language over time so they can directly and more fully communicate with Jerry. Conduct inservice training for all of the general educators (and other school staff) about hearing loss and how best to communicate, change the pace of instruction and activities, and provide visual support of instruction. For example, the team should discuss ways to adjust group projects and discussions so Jerry has access. Perhaps Jerry would like to plan and/or conduct some or all of this training with

the teacher of the deaf and/or one of his general education teachers. Ask Jerry if he would like to join a school team and help him plan for joining one at the next opportunity. Be sure the coaches receive basic inservice and communication information as well as tips for successfully communicating with or without an interpreter.

Consult a technology expert to determine what other technology options there might be for Jerry. Using an interpreter can work well in some classes, but sometimes it can be limiting. Just as hearing something doesn't necessarily mean understanding it, seeing an interpreter sign something doesn't necessarily mean knowing it. Many college students who are deaf or hard of hearing use Computer Assisted Notetaking (CAN) or some kind of voice recognition software. Therefore, not only do students get the full benefit of what's being said during class, but they also have the copy of the "transcript" later so they can refer to it. It is a good idea for high school students to try out various access options prior to attending college. Someone on the educational team (maybe Jerry?) should contact National Technical Institute of the Deaf (NTID) right away for suggestions that will help him prepare for college, whether it is working on academic content knowledge, skill development in the use of technology, or other access skills.
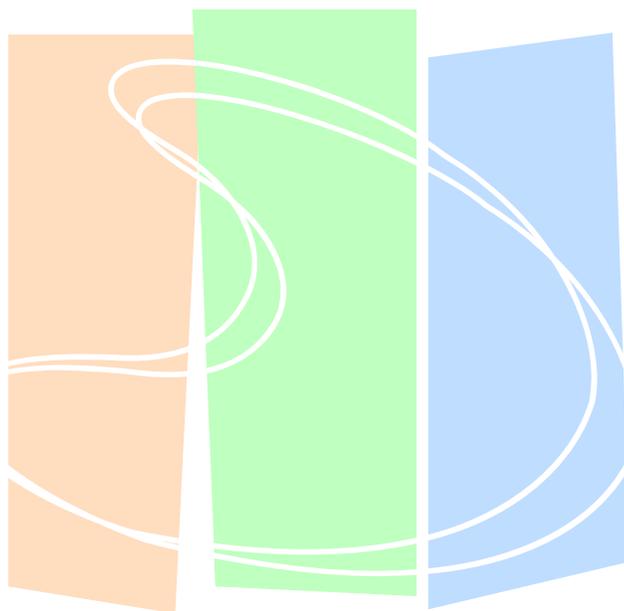
Annotated Bibliography

Twice-Exceptional Annotated Bibliography

Baum, S.M. & Owen, S.V. (2004). *To Be Gifted & Learning Disabled: Strategies for Helping Bright Students with LD, ADHD, and More*. Mansfield, Conn: Creative Learning Press, Inc.

> -Part I reviews the unique characteristics of gifted, learning-disabled (GLD) children and provides background information for understanding the GLD child. The authors describe pioneering studies of GLD students and use those results to forge a clearer approach to educational intervention. Finally, the authors examine the confusion in diagnoses between LD and ADHD, especially in gifted children.
> -Part II discusses contemporary psychological theory and research that leads to educational applications for GLD students.
> -Part III provides strategies for meeting needs for effective learning, which includes guidelines for developing a comprehensive individual education plan that assures gifted students with disabilities a free appropriate public education (FAPE); effective strategies for identifying GLD students; ideas for programs that nurture gifts in students with gifts and disabilities; curricular strategies, modifications, accommodations, and compensation strategies that enhance the learning and self-efficacy of the students; and finally, strategies for meeting the social and emotional needs of students with gifts and disabilities. This second edition has three new chapters: self-regulations, developing comprehensive individual educational programs, and sources of support, as well as expanded chapters on classroom practices.

Baum, S.M., Olenchak, F.R. & Owen, S.V. (1998). Gifted Students with Attention Deficits: Fact and/or Fiction? Or, Can We See the Forest for the Trees? *Gifted Child Quarterly*, 42(2), 96-104.

> The authors explore unique issues of attention deficit disorders among gifted students and offer alternative explanations for the occurrence of those behaviors in some students. They distinguish among three groups of students who demonstrate behaviors associated with ADHD: (a) students whose learning and attention problems stem, for the most part, from a neuro-chemical disorder; (b) those with behavioral disorders that are mostly brought about, and perhaps intensified, by the learning environment; and (c) those who fall into both of the preceding categories. Suggestions are offered for determining whether the behaviors are primarily environmental, neurological, or both.

Bees, C. (1998). The GOLD Program: A Program for Gifted Learning Disabled Adolescents. *Roeper Review, 21* (2) 155-161.

> The GOLD program is a model for adolescents who are both gifted and learning disabled. The program has resource room support and enrichment. Entrance criteria are described. The curriculum is critical thinking, word processing, communication skills, and ethics. The success of this program has resulted from intense involvement of staff, one-to-one tutoring, a flexible approach to timetables and attendance, and an environment that encourages hope, humor, trust, and student decision-making.

Benito, Y. (2003). Intellectual Giftedness and Associated Disorders: Separation Anxiety Disorders or School Phobia. *Gifted and Talented International, 18*(1), 27-35.

> Although a great amount of literature about the definition and education of gifted students exists, information about gifted students with associated disorders is not so abundant. The author uses case studies to show how separation anxiety disorder affects gifted children. He poses the question, "Is the child afraid of going to school or is there a fear that she would be unable to adapt as a gifted child? Is the child afraid of being separated from her parents or does she suffer from anxiety at the thought of new responsibilities?"

Betts, G.T. & Neihart, M. (1988). Profiles of the Gifted and Talented. *Gifted Child Quarterly*, 32(2), 248-253.

> After several years of observations, interviews, and reviews of literature, the authors have developed six types of profiles of gifted and talented children and youth. The authors address the twice exceptional in the profile of a "double labeled" gifted child. These profiles help educators and parents to look closely at the feelings, behaviors, and needs of the gifted and talented. There are tips on identification of each profile and information on facilitating the gifted in school.

Birely, M. (1994). *Crossover Children: A Sourcebook for Helping Children Who Are Gifted and Learning Disabled* (2nd ed.). Reston, VA: The Council for Exceptional Children.

>A rich resource that provides specific strategies to help children who are gifted and learning disabled and/ or ADD control impulsivity, increase attention, enhance memory, improve social skills, and develop a positive self-concept. It provides recommendations for academic interventions and enrichment activities.

Bisland, A. (2004). Using Learning-strategies Instruction with Students Who Are Gifted and Learning Disabled. *Gifted Child Today*, *7*(3), 52-58.

>Explores current policies and practices concerning the definition, identification, and educational needs of students who are both gifted and learning disabled. Recommendations stress the need for less rigid definitions and cutoff scores for program eligibility and the provision of a variety of settings and services. Students who are gifted and learning disabled have unique needs that must be met through the education system. Special education teachers, classroom teachers, and gifted teachers should be aware of the unique characteristics of this population and know strategies to advance their learning.

Brody, L.E. & Mills, C.J. (1997). Gifted Children with Learning Disabilities: A Review of the Issues. *Journal of Learning Disabilities*, *30*(3), 282-296.

>This article explores current policies and practices concerning the definition, identification, and educational needs of students who are both gifted and learning disabled. Recommendations stress the need for less rigid definitions and cutoff scores for program eligibility and the provision of a wide variety of settings and services options.

Cline, S. & Schwartz, D. (1999). *Diverse Populations of Gifted Children*. NJ: Merrill.

>This book provides classroom teachers with guidance in identifying and planning curricula for special populations of gifted children. This book is divided into four sections: 1) background on intelligence theory and public policy on special education; 2) twice-exceptional children (gifted children with physical or learning disabilities or sensory impairments; 3) special populations of gifted (culturally diverse, disabled gifted children, young gifted children, and gifted females; and 4) issues and concerns for gifted education in the 21st century. The chapters begin with framing questions, followed by an advanced organizer on how the chapter addresses these questions.

Coleman, M.R., Gallagher, M.R., & Foster, A. (1994*). Updated Report on State Policies Related to the Identification of Gifted Students*. Washington, DC: Office of Educational Research and Improvement.

>An analysis was conducted of state policies in the identification of gifted students, especially those traditionally underserved (the culturally diverse, economically disadvantaged, and students with disabilities). Content analysis of each state's documents focused on six major areas: (1) legislation; (2) definitions of gifted; (3) standard identification practices; (4) nonstandard identification practices; (5) due process and grievance procedures; and (6) specific references to gifted from special populations. The analysis revealed that a range of attention is being given to these special populations and that state policies tend to be both permissive and inclusive regarding identification and services.

Cross, T.L. (2000). Gifted Students' Social and Emotional Development in the 21st Century. *Gifted Child Today, 23*(2), 14-15 and 52.

>This article provides two examples of ways that children's experiences vary significantly from previous generations. The author states that by realizing our limitations in being empathetic and by utilizing the strategies, we have the opportunity to provide effective guidance to the gifted youth of the 21st century.

Delisle, J. (1994). Dealing with the Stereotype of Underachievement. *Gifted Child Today*, *17*(6), 20-21.

>This article discusses the issue of labeling in dealing with the stereotype of underachievement. The author poses the questions: is there such a thing as underachievement? Do we need to put a label to a child? Dr. Delisle suggests that we treat individuals who are not doing as well in school as their aptitude as individuals. We need to ask these able students if they can pinpoint reasons for their disinterest in or distrust of school.

Flint, L. (2001). Challenges of Identifying and Serving Gifted Children with ADHD. *Teaching Exceptional Children, 33*(4), 62-69.

> This article describes the special situations and needs of three children—Tony, Mikey, and Gina. As you read the first part of the article, consider suggestions for interventions and what might happen in the classroom. The author describes what others have to say about working with children who are gifted and have attentional difficulties.

Ford, D.Y. & Trotman, M. (2000). Office for Civil Rights and Non-discriminatory Testing, Policies, and Procedures: Implications for Gifted Education. *Gifted Child Quarterly, 23*(2), 109-112.

> This brief article examines Office for Civil Rights (OCR) positions on non-discrimination test policies and practices. The intent is not to present an extensive review of the literature on the topic, but to focus specifically on the OCR and its goals and responsibility in securing the civil rights of culturally and linguistically diverse students in the context of gifted education.

Hartnett, D.N., Nelson, J.M. & Rinn, A.N. (2004). Gifted or ADHD? The Possibilities of Misdiagnosis. *Roeper Review, 26*(2), 73-76.

> This research provides empirical support for the possibility of misdiagnosis of giftedness and Attention Deficit Hyperactivity Disorder (ADHD). Forty-four graduate students enrolled in a school counseling program acted as participants. Participants were given one of two forms, both of which provided a hypothetical case study of a young boy and then asked for a diagnosis. Implications for educators and graduate level counseling and psychology programs are provided.

Hishinuma, E.S. & Nishimura, S.T. (2000). Parent Attitudes on the Importance and Success of Integrated Self-contained Services for Students Who are Gifted, Learning Disabled, and Gifted/Learning Disabled. *Roeper Review, 22*(4), 241-250.

> This study reported on an assessment of parent attitudes of services provided by a specialized school in which the majority of the students were gifted, learning disabled (LD), or both. The findings supported the need for specialized and integrated services for students who are gifted, LD, and gifted/LD. The description of this particular specialized school provided a starting point for discussion on comprehensive and integrated programs to meet the needs of these populations.

Ingraham, C.L., Daugherty, K.M. & Gorrafa, S.(1995). The Success of Three Gifted Deaf-blind Students in Inclusive Educational Programs. *Journal of Visual Impairment & Blindness*, *89*(3), 257-261.

> This article examines the challenges and successes experienced over four years by three academically gifted students with deaf-blindness in inclusive educational programs and presents recommendations about placement of students with similar needs in inclusive programs.

Kay, K. (2000). *Uniquely Gifted: Identifying and Meeting the Needs of Twice-Exceptional Students*. Gilsum, NH: Avocus Publishing, Inc.

> The 32 readings in this collection discuss the needs of children who are both gifted and have special needs such as disability. The readings are grouped into four sections. Section 1 "Family Matters: Perspectives from Family Members" includes the personal viewpoints of individuals who are themselves twice exceptional or have a family member who is twice exceptional. Section 2 is "Teaching Strategies: Learning and Leadership." This section addresses the special problems of placement and instructional needs of this population. Section 3 is "Research and Theory: Discovering Possibilities" and Section 4 is "Administrative Options: Working Together," which discusses a variety of different services, delivery systems, and programmatic options for the twice-exceptional child. The two appendices contain a list of internet resources and an explanation of the Autonomous Learner Model.

Karnes, F. (2003). *State of the States Gifted and Talented Education Report 2001-2002: Council of State Directors of Programs for the Gifted and National Association for Gifted Children*. Washington, DC: National Association for Gifted Children.

> This report contains the results of 2001-2002 state of the states survey. The survey questions completed

by state education agencies (SEA) are about state definition, mandate, identification, programming and accountability, personnel preparation, and state and national funding. The report contains graphs and diagrams and actual data of the results. Questions about disabled gifted are included in the survey sections about definition, identification, and programming questions.

Karnes, F. (2004). *Appropriate Practices for Screening, Identifying, and Instructing Gifted/Disabled Youth*. Hattiesburg, MS: University of Southern Mississippi.

> This manual promotes appropriate practices for screening, identifying, and instructing gifted/disabled youth. Throughout the manual, children who are both gifted and disabled are referred to as twice exceptional. Each chapter is the review of literature of appropriate practices for screening, identifying, and instructing gifted/disabled. In this manual, the twice-exceptional include gifted/autistic students, gifted/ deaf-blind students, gifted/deaf and gifted/hearing-impaired students, gifted/developmentally delayed students, gifted/emotional-behavioral disability students, gifted/multi-disabled students, gifted/physically or orthopedically impaired students, gifted/specific learning disabled students, gifted/speech or language impaired students, gifted/traumatic brain injured students and gifted/visually impaired students.
>
> Despite these specific definitions, Karnes maintains that it remains difficult to screen, identify and instruct gifted/disabled students. Appropriate time, effort, and planning must be spent to satisfy their needs. This manual is used in the school districts for teachers of the gifted, regular classroom teachers, special education coordinators and parents.

Karnes, F.A., Shaunessy, E., & Bisland, A. (2004). Gifted Students with Disabilities Are We Finding Them? *Gifted Child Today, 27*(4), 16-21.

> This article reports the results of study to determine the number of gifted students with disabilities identified and served in gifted education programs in the state of Mississippi. The results of the study indicate that few gifted students with disabilities in Mississippi have been identified. To address this situation the author suggests that more emphasis may be needed in training teachers of the gifted and regular classroom teachers of the characteristics of gifted students with disabilities, a suggestion also found in the literature (Cline & Schwartz, 1999).

Lichtenstein, J.L. (1997). The Essence of Empowerment: Richard's Story. *Teaching Exceptional Children*, *30*(2), 16-19.

> This article uses a case study of the educational history of a gifted young man with severe visual impairment to show how principles of dialogic education can empower both students and teachers. Collaboration between Richard and his teachers and between regular and special educators led to high school graduation and his accomplishment of class valedictorian.

Little, C. (2002). Which is it? Asperger's Syndrome or Giftedness? Defining the Differences. *Gifted Child Today*, *25*(1), 58-63.

> This article clarifies what Asperger's Syndrome is and how it can seemingly mirror certain gifted behaviors. The author suggests intervention strategies for this twice-exceptional learner.

Maker, J. (1977). *Providing Programs for the Gifted Handicapped*. Reston, VA: Council for Exceptional Children

> This is the first book devoted entirely to the gifted handicapped. In this book are descriptions of the work by Sanford and Karnes. In 1975, these educators received funds from the Bureau of Education for the Handicapped, now known as the Office of Special Education Programs, for development of demonstration models for educating young handicapped and gifted children.

Moon, S.M. & Dillon, D.R. (1995). Multiple Exceptionalities: A Case Study. *Journal for the Education of the Gifted*, *16*(2), 111-130.

> This case study reports an 11-year-old boy with multiple exceptionalities. The child was verbally gifted, learning disabled in mathematics, and health impaired. He had received homebound instruction throughout his elementary school years. Qualitative research methods were used to explore the subject's learning characteristics and educational experiences.

National Academy of Sciences & United Stated Department of Education. (2002). *Minority Students in Special and Gifted Education*. Donovan, M.S. & Cross. C.T. (Eds.) Washington, DC: National Academy Press.

> Special education and gifted and talented programs were designed for children whose educational needs are not well met in regular classrooms. From their inception, these programs have had disproportionate representation of racial and ethnic minority students. The report examines the important problem in U.S. education and makes recommendations for early intervention and general education, as well as for changes in referral and assessment processes. This book is an excellent resource to educators and policy makers at all levels from schools and school districts to the state and federal government. The entire contents of this 350 page book are available free online at http://books.nap.edu/books/0309074398/html/index.html.

Neihart, M. (2000). Gifted Children with Asperger's Syndrome. *Gifted Child Quarterly*, *44*(4), 222-230.

> This author maintains that gifted children with Asperger's syndrome may not be identified because their unusual behaviors may be wrongly attributed to either their giftedness or to a learning disability. Ways in which the syndrome might be missed and guidelines for differentiating characteristics of giftedness from Asperger's characteristics are discussed.

Nielsen, E.M., Higgins, L.D., Hammond, A.E., & Williams, R.A. (1993). Gifted Children with Disabilities. *Gifted Child Today* (*GCT*), *16*(5), 9-12.

> The Twice-Exceptional Child Project is a collaborative project of the Albuquerque (New Mexico) Public School system and the University of New Mexico to serve students who are gifted and have a mild-to-moderate handicapping condition. This article describes the project's training components, screening and identification procedures, curriculum, and technology interventions.

Norton, M.S. & Zeilinger, E.R. (1983). A Principal's Handbook of Programs for Gifted Students. *NASSP Bulletin, 67(459)*, 102-106.

> The authors maintain that principals supporting effective programming for gifted students should exhibit competencies listed in this article when exercising planning and leadership, developing philosophy, determining goals and objectives, understanding gifted students' characteristics, identifying gifted students, financing and staffing the program, providing guidance and counseling, using community resources, and communicating and evaluating the program.

Passow, A.H. & Rudnitski, R.A. (1993). *State Policies Regarding Education of the Gifted as Reflected in Legislation and Regulation. Collaborative Research Study*. Storrs, CT: National Research Center on the Gifted and Talented.

> This study analyzed state policies on the identification and education of gifted students as reflected in legislation, regulations, rules, recommendations, and guidelines provided by 49 states. The elements examined include: (1) state mandated services; (2) district plans for the gifted; (3) gifted education as part of special education; (4) philosophy or rationale; (5) definitions of gifted; (6) identification procedures; (7) programs for gifted; (8) differentiated curriculum and instruction; (9) counseling and other support services; (10) parent involvement; (11) program evaluation; (12) teacher education/certification; and (13) state funding for gifted. Major recommendations are: establishing challenging curriculum standards; providing high-level learning opportunities; ensuring access to early childhood education; offering extended opportunities for economically disadvantaged and minority children; and providing teacher training and technical assistance.

Reis, S.M. & McCoach, D.B. (2000). The Underachievement of Gifted Students: What Do We Know and Where Do We Go? *Gifted Child Quarterly*, *44*(3), 152-170.

> This article reviews and analyzes three decades of research on the underachievement of gifted students in an attempt to clarify the state of research. The problems inherent in defining and identifying underachieving gifted students are given special attention. The authors also include suggestions for new lines of research and inquiry in this area.

Reis, S.M., McGuire, J.M. & Neu, T.W. (2000). Compensation Strategies Used by High-ability Students with Learning Disabilities Who Succeed in College. *Gifted Child Quarterly*, *44*(2), 123-134.

This study reports the results of how 12 high-ability students with learning disabilities succeeded in post-secondary academic environments. Extensive interviews with these adults provided examples of the problems they faced as high-ability students with learning disabilities. The compensation strategies used by academically gifted students who were successful include: study strategies; cognitive learning strategies; compensatory supports; environmental accommodations; opportunities for counseling; self-advocacy; and the development of an individual plan incorporating a focus on metacognition and executive functions.

Rittenhouse, R.K. & Blough. L.K. (1995). Gifted Students with Hearing Impairments: Suggestions for Teachers. *Teaching Exceptional Children*, *27*(4), 51-53.

These suggestions for teachers of gifted students with hearing impairments address definitional dilemmas affecting this population and special screening and evaluation problems. Guidance is given concerning choosing a "gifted" definition, selecting measures for identifying giftedness, and determining the reference group.

Rizza, M.G. & Morrison, W.F. (2003). Uncovering Stereotypes and Identifying Characteristics of Gifted Students and Students with Emotional/Behavioral Disabilities. *Roeper Review, 25*(2), 73-77.

The authors report the results of an instrument that asked pre-service and in-service teachers to categorize a set of characteristics and behaviors according to whether each described a student identified with an Emotional/Behavior Disability (EBD) who is gifted, both, or neither. Results of this survey revealed stereotypical thinking in the identification of characteristics of the student labeled EBD. The degree of teachers' training and experience also played a role in the understanding and categorization of the characteristics/behaviors used in the survey.

Schnur, J.O. & Stefanich, G.P. (1979). Science for the Handicapped-gifted Child. *Roeper Review, 2*(2) p.26-28.

The authors state that with the passage of P.L. 94-142 it seems reasonable that, as individual states respond to this legislative mandate, the handicapped-gifted should and will be identified. They further state that this legislation should have the effect of improving the incidence of identification of the handicapped-gifted. The authors interviewed three handicapped scientists who have pursued scientific careers to illustrate some educational practices that appear to account for the scarcity of handicapped individuals in scientific fields.

Smutny, J.F. (2001). Meeting Needs of Gifted Underachievers Individually. *Gifted Education Communicator*, *32* (3), 44-46.

The author reviews Whitmore's definition for underachievement and examines the most promising solutions to underachievement.

Southern, W.T. and others. (1995). Twice-Exceptional: Gifted Children with Learning Disabilities and Gifted Students With Learning Disabilities. *LD Forum*, *20*(2), 48-50.

This column offers two articles: one about problems in identifying students who are gifted and learning disabled and recommendations for working with this population; and a second article describing a resource program involving collaboration through weekly team meetings for students in grades six through eight who are gifted and learning disabled.

Strop, J. & Goldman, D. (2002). The Affective Side: Emotional Issues of Twice-Exceptional Students. *Understanding Our Gifted*, Winter, 28-29.

This article looks at the dilemma faced by twice-exceptional students in balancing the expectations of being gifted while trying to overcome learning challenges. Consequently, twice-exceptional students need a strong support group to assist them with several key emotional issues that may impede their academic achievement: anger; fear of failure; a strong need to control; low self-esteem; and sometimes even fear of success.

Vantassel-Baska, J. & Baska, A. (2004). Working with Gifted Students with Special Needs: A Curriculum and Program Challenge. *Gifted Education Communicator, 35*(2), 4-7 & 27.

This article addresses the realities of educating twice-exceptional or thrice-exceptional children, and the need to tailor the educational process. The author states that every generalization about giftedness must be

filtered through the disabilities. Table I "Comparison of Needs and Responses" examines the needs of gifted and the needs of the LD/ADD.

Vernon, M. & LaFalce-Landers, E. (1993). A Longitudinal Study of Intellectually Gifted Deaf and Hard of Hearing People. *American Annals of the Deaf*, 138 (5), 427-434.
> Fifty-seven gifted deaf and hard of hearing people were followed longitudinally to determine their current educational, career, and mental health status. Article contains information about the individuals studied.

Vialle, W. & Paterson, J. (1998). Deafening Silence: The Educational Experiences of Gifted Deaf People. *Gifted Education International*, *13*(1), 13-22.
> Case studies based on interviews with gifted deaf adults reported a common frustration with schooling, a reluctance to be double-labeled as gifted and deaf, recognition of the importance of a supportive home environment and positive socialization experiences, and identification with the deaf community as a critical factor in personal success. Results have implications for identification and educational services.

Webb, J. (2000). *Misdiagnosis and Dual Diagnosis of Gifted Children*. Paper presented at the American Psychological Association Annual Convention, Washington, D.C., August 7, 2000.
> This presentation is about gifted children and adults who are at particular psychological risk due to both internal characteristics and situational factors. These internal and situational factors can lead to interpersonal and psychological difficulties for gifted children and subsequently to misdiagnoses and inadequate treatment.

Whitmore, J. (1980). *Giftedness, Conflict, and Underachievement*. Boston, MA: Allyn & Bacon.
> This classic book is about the gifted child who experiences conflict and is an underachiever. This book is one of the first books that thoroughly addresses these issues with a review of literature, practical experience by the author with this population, suggestions for parent involvement, educators' needs for in-service and staff development, and successful strategies for identification and service for these students. This book has been a wonderful reference on underachievement for educators, teachers, parents, and students.

Whitmore, J.R. & Maker, C.J. (1985). *Intellectual Giftedness in Disabled Persons*. Rockville, MD: Aspen Systems Corporation.
> The text examines the emerging field of educating gifted handicapped students in the mid-1980s. An initial chapter traces the history of the field and offers definitions. These authors cite Mary Meeker, Merle Karnes, and Anne Sanford as the first educators to concentrate on giftedness in disabled persons. This book is a valuable resource with case studies. Five goals include identifying gifted students with specific disabilities, preparing professionals, and increasing the sharing of responsibility. Five case studies of gifted persons with hearing impairments, visual impairments, severe physical impairments, severe disabilities, and learning disabilities are included. Each case study includes a discussion, specific guidelines and recommendations, conclusions, and reaction. The final three chapters examine implications and recommendations for practices to meet the affective and intellectual needs of gifted persons with disabilities.

Williard-Holt, C. (1998). Academic and Personality Characteristics of Gifted Students with Cerebral Palsy: A Multiple Case Study. *Exceptional Children*, *65*(1), 37-50.
> Using a qualitative cross-case methodology over three years, this study investigated how two gifted students with cerebral palsy and no speech exhibited their cognitive abilities. Findings indicated such traits as maturity, goal orientation, persistence/determination, patience, recognition of limitations, desire for independence from aids and devices, and use of intellect to circumvent the disability.

Williard-Holt, C. (1999). Dual Exceptionalities. *ERIC Clearinghouse on Disabilities and Gifted Education*. Washington, DC: Office of Educational Research and Improvement.
> Gifted students with disabling conditions remain a major group of underserved and understimulated youth. This digest stresses the importance of both accommodating the disability appropriately while recognizing and nurturing the individual's intellectual strengths. Discussion of assessment is followed by a series of

lists intended to assist parents and teachers in recognizing intellectual giftedness in the presence of a disability, specifically gifted students with visual impairments, gifted students with physical disabilities, gifted students with hearing impairments, and gifted students with learning disabilities. Three additional lists are intended to help distinguish between gifted students who are bored and students who have Attention Deficit Hyperactivity Disorder. The final section considers implications for students with dual exceptionalities and issues related to identification, instruction, and classroom dynamics.
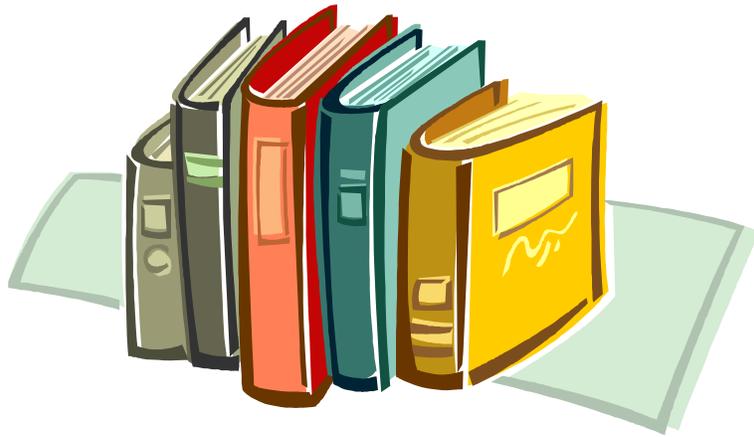
Resources on the World Wide Web

Center for Gifted Education, College of William and Mary, Williamsburg, VA, www.cfge.wm.edu

Center for Gifted Education & Talent Development, www.gifted.uconn.edu/

Colorado Mathematical Olympiad, Colorado Springs, CO, www.uccs.edu

The Council for Exceptional Children, www.cec.sped.org

Destination ImagiNation Program., Glassboro, NJU, www.destinationimagination.org

Future Problem Solving Program, Lexington, KY, www.fpsp.org

Great Books Foundation, www.greatbooks.org

Hoagies' Gifted Education Page, Gifted Children with Special Needs, http://www.hoagiesgifted.org/special_needs.htm

Inspiration Software, Inc., Portland, OR, www.inspiration.com

International Mathematical Olympiad, www.imo.math.ca

JASON Project, The JASON Foundation for Education, Needham Heights, MA, www.jasonproject.org

Learning Disabilities OnLine, www.LDonline.org

The National Foundation for Gifted and Creative Children, www.nfgcc.org

National Research Center on the Gifted and Talented, www.gifted.uconn.edu/nrcgt.html

Models Cited

Autonomous Learner Model for Optimizing Learning, by George Betts and Jolene Kercher ALPS Publishing, Greeley, CO, www.alpspublishing.com

Enrichment Triad Model, by Joseph S. Renzulli, Creative Learning Press.

Source: From *Twice Exceptional Students: A Status Study.* (2005) by J. Wolf, J. Goertz, T. Stephens, M. Nelson, Columbus, OH; School Study Council of Ohio.