Best Practices Toolkit for Gifted Education

In Arizona

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Created in Partnership with the Arizona Association for Gifted and Talented

AAGT
Creating a Bright Future for Arizona's Gifted Children

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Characteristics & Needs of Gifted Learners

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Section 1:
Characteristics and Needs of Gifted Learners

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Overview of Characteristics and Needs of Gifted Learners

General Definitions

Arizona Revised State Statute 15-779 Definitions:[1]

1. "Gifted education" means appropriate academic course offerings and services that are required to provide an educational program that is an integral part of the regular school day and that is commensurate with the academic abilities and potential of a gifted pupil.

2. "Gifted pupil" means a child who is of lawful school age, who due to superior intellect or advanced learning ability, or both, is not afforded an opportunity for otherwise attainable progress and development in regular classroom instruction and who needs appropriate gifted education services, to achieve at levels commensurate with the child's intellect and ability.

From the National Association for Gifted Children:[2]

Students with gifts and talents perform—or have the capability to perform—at higher levels compared to others of the same age, experience, and environment in one or more domains. They require modification(s) to their educational experience(s) to learn and realize their potential. Student with gifts and talents:

- *Come from all racial, ethnic, and cultural populations, as well as all economic strata.*
- *Require sufficient access to appropriate learning opportunities to realize their potential.*
- *Can have learning and processing disorders that require specialized intervention and accommodation.*
- *Need support and guidance to develop socially and emotionally as well as in their areas of talent.*
- *Require varied services based on their changing needs.*

[1] Arizona Revised Statutes. (2024, January).

[2] Johnsen, S. et al. (2019).

General Characteristics of Gifted Learners

- Rapid learner; puts thoughts together quickly.
- Excellent memory
- Unusually large vocabulary and complex sentence structure for age
- Advanced comprehension of word nuances, metaphors and abstract ideas
- Enjoys solving problems, especially with numbers and puzzles.
- Deep, intense feelings and reactions
- Highly sensitive
- Thinking is abstract, complex, logical, and insightful.
- Idealism and sense of justice
- Concern with social and political issues and injustices
- Longer attention span and intense concentration
- Preoccupied with own thoughts—daydreamer.
- Learn basic skills quickly and with little practice.
- Asks probing questions.
- Wide range of interests
- Extreme focus in one area
- Highly developed curiosity
- Interest in experimenting and doing things differently.
- Puts ideas or things together that are not typical.
- Keen and/or unusual sense of humor
- Desire to organize people/things through games or complex schemas.
- Vivid imagination

Characteristics of Gifted Learners in Early Childhood (PreK-Grade 2):

Characteristics common among young, gifted children[3] are listed below. The highly and profoundly gifted will demonstrate gifted characteristics earlier in life than those who are moderately gifted.[4]

Learning Characteristics

- Creative, exhibit especially original imaginations.
- Use previously learned things in new contexts.
- Knows letters and numbers beyond average.
- Prefer more adult interactions.
- Can solve puzzles, play games, beyond twice their years.
- Early reading (2nd-4th grade).
- Are fast learners.
- Are very observant.
- Desire to work independently and take initiative.
- Have good memories.

Motivational Characteristics

- Have sustained attention spans and may persist on challenging tasks.
- Perfectionists.
- Easily gets frustrated when performance is not perceived as perfect (OCD behaviors).

Creativity and Affective Characteristics

- Extremely talkative (2-4 years), have extensive vocabularies and use complex sentence structure.
- Extremely inquisitive, asking thoughtful questions.

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[3] Smutny, J. F. (2000).

[4] Clark, B. (2021, May 6).

- Exhibit unusual talent in art, music, or creative dramatics - Enjoys singing songs and can recite the lyrics.
- Viewed as bossy.
- Exhibit wit and humor.
- Show talent in making up stories and telling them.

Learning Needs of Young Gifted Children

For their growth, young, gifted children need to have:

- Their abilities recognized before they deteriorate. The more highly and profoundly gifted the child, the more critical the need for early identification and intervention.[5, 6]
- A classroom environment that fosters student engagement at the student's own level and pace.
- Flexible grouping, allowing the gifted students to be together, based on strengths and interests.
- The curriculum compacted. This is the "process of compressing the essentials so that they can advance beyond the material they have already mastered."[7]
- Opportunities to engage in creative expression.[8]
- Opportunities to "engage in problem solving and employ critical thinking."[9]
- Teachers who understand the overexcitabilities[10] of giftedness and are able to provide affective support.

Creating student portfolios is a helpful way to identify and document the strengths and learning needs of young, gifted students. Early identification and intervention are vital for young, gifted students to develop and grow.[11]

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[5] Dlugosz, M. (2021, December 2). *Profoundly gifted students & gifted education FAQ*. Davidson Institute.

[6] Gross, M. (2022, March 10). *Small poppies: Highly gifted children in the early years*. Davidson Institute.

[7] Smutny, J. F. (2000).

[8] Hertzog, N. B., & Smutny, J. F. (2016). *Early Childhood*. National Association for Gifted Children.

[9] O'Brien, R. (n.d.). *Problem solving as a characteristic of talent development in the early grades.* Problem Solving as a Characteristic of Talent Development in the Early Grades | National Association for Gifted Children.

[10] Lind, S. (2011, September 14). *Overexcitability and the gifted*. SENG.

[11] Smutny, J. F. (2000).

The *Characteristics* Subcommittee has crossover with *Identification*. As within Special Education, the more deviated from the norm a child's development, the more critical it is for **early** identification and intervention. This is true for the highly and profoundly gifted as well.[12] NAGC has released An Early Childhood Assessment Tool to Identify Young Gifted Children (2021).

Characteristics of Gifted Learners Elementary Aged Students (Grades 3-6):

Learning characteristics

- Unusually advanced vocabulary for age or grade level.
- High levels of language development and verbal ability.
- Quick mastery and recall of factual information.
- Wants to know what makes things work or makes people tick.
- Usually sees more or gets more out of a story, film, etc., than peers.
- Reads a great deal on his or her own.
- Comprehends materials at advanced levels; does not avoid difficult materials.
- Processes and retains large amounts of information.
- Reasons things out for himself or herself.
- Prefer complex and challenging work.
- Displays a need for freedom and individuality in learning situations.
- See unusual relationships among disciplines or objects.
- Ability to manipulate a symbol system.
- Ability to use stored knowledge to solve problems.
- Reasons by analogy.

Motivational characteristics

- Becomes easily absorbed in certain topics or problems.
- Is easily bored with routine tasks.

[12] Dlugosz, M. (2021).

- Needs little external motivation to follow through in work that initially excited him or her.
- Strives toward perfection.
- Self-critical.
- Not easily satisfied with his or her own speed and products.
- Prefers to work independently.
- Requires little direction from teachers.
- Shows a keen interest in complex societal topics.
- Stubborn in his or her beliefs.
- Concerned with right and wrong, good and bad.
- Possesses high energy levels and longer attention spans.

Creativity and Affective Characteristics

- Constantly asking questions about anything and everything.
- Often offers unusual, unique, or clever responses.
- Is uninhibited in expressions of opinion.
- Is a high-risk taker.
- Adventurous.
- Speculative.
- Is often concerned with adapting, improving and modifying institutions, objects and systems.
- Displays a keen sense of humor.
- Shows emotional sensitivity.
- Nonconforming.
- Sense of justice appears at an early age.
- Possess large amounts of information about emotions.
- May possess an unusual sensitivity to the feelings of others.
- Individualistic; does not fear being different.
- Is unwilling to accept authoritarian pronouncements without critical examination.
- Carries responsibility well.
- Is self-confident with children his or her own age as well as adults.
- Can express himself or herself well.

- Adapts readily to new situations.
- Is sociable and prefers not to be alone.
- Generally, directs the activity in which he or she is involved.
- Possesses unusual emotional depth and intensity.
- Exhibits high expectations of self and others.
- Exhibits leadership ability and independent thinking.

Learning Needs of Elementary Aged Gifted Learners

Gifted, elementary-aged students have a variety of needs, including:

- **Challenging curriculum:** Gifted students need challenging curriculum, enrichment, and accelerated learning opportunities in regular classroom settings. They may also benefit from a multi-level curriculum that differentiates by pace, depth, and rate of learning.
- **Differentiated instruction:** Teachers can use tiered assignments to allow students to complete the same assignment at different levels of difficulty.
- **Flexible learning:** Gifted students may benefit from more space to work on their own, as well as flexible and in-depth learning, where students may be provided choice in how, where, when, and what they learn.
- **Support of affective needs:** Gifted students may need to be guided through feelings of isolation or stigmatization due to asynchronous development (an uneven progression of their cognitive, emotional, and social skills), which can lead to negative self-image. They may also need help with perfectionism, identity, and peer relationships. Furthermore, gifted students have holistic needs that considers emotional regulation, self-perception, social skills, and more.
- **Opportunities to make choices:** Gifted students may benefit from opportunities to make choices, set goals, and engage in self-reflection.
- **Creative questioning:** Gifted students are often curious and may ask detailed questions to satisfy their thirst for knowledge.

The *Characteristics* Subcommittee has crossover with *Instructional Methodologies and Strategies.* For more strategies to support gifted learners, see Section 5: Gifted Instruction and Methodologies.

Characteristics of Gifted Learners in Middle School & High School (Grades 6-12):

Gifted learners in middle, & high school typically exhibit the following:

Learning Characteristics

- Advanced vocabulary for age or grade level (verbally gifted).
- Reads a great deal on his or her own; usually prefers adult-level books; does not avoid difficult materials.
- Sees more or gets more out of a story, film, etc., than others.
- Quick mastery and recall of factual information.
- Quick to learn math skills and move through concepts rapidly without much need for repetition (quantitatively gifted).
- Able to reason things out alone.
- Makes intuitive connections.

Motivational Characteristics

- Become easily absorbed with and truly involved in topics they find interesting.
- Easily bored with routine tasks.
- Need little external motivation to follow through in work that initially excites them.
- May strive toward perfection; can be self-critical.
- Many times, prefers to work independently.
- Requires little direction from teachers.
- Wanting to know what makes things or people tick (ask “the why?”).
- Is interested in many "adult" problems such as religion, politics, justice, etc.
- May be stubborn in holding onto beliefs.
- Concerned with right and wrong, good and bad.

Creativity and Affective Characteristics

- Constantly asking questions about anything and everything.
- Often offers unusual, unique or clever responses - thinks “outside of the box.”
- Is unwilling to accept authoritarian pronouncements without critical examination.

- Is often concerned with adapting, improving and modifying institutions, objects and systems.
- Can be a high-risk taker; is adventurous and speculative.
- Displays a keen or unique sense of humor.
- Shows emotional sensitivities.
- May display Masking (hiding).
    - May mask abilities in order to not stand out socially, avoid access work, avoid pressures, etc.
    - May mask to cover up areas of struggle (2e).
- Is sensitive to beauty, surroundings, and social pressures.
- May be uninhibited in expressions when younger but may be more affected by social pressures as they get older.
- Is nonconforming; accepts disorder.
- Thrives on genuine connections.
- May struggle with imposter syndrome.

Learning Needs of Gifted Students in Middle and High School

Gifted, middle & high-aged students have a variety of needs, including:

- **Challenging curriculum:** Gifted students need challenging curriculum, enrichment, and accelerated learning opportunities. They should have the option to take classes that are more rigorous such as Advanced, AP, IB, & Honors, and they should also have options to take classes that offer more creativity and hands-on learning such as CTE programs, specific gifted coursework, Arts, etc.
- **Differentiated instruction:** Gifted learners have many different academic needs (i.e. gifted in only one or two areas, learning disabilities, profoundly gifted in some areas, etc.) and thus gifted learners will be in all different classrooms. Teachers should still be trained in gifted education so they can differentiate for gifted learners who may be in any of their classrooms.
- **Affective support:** Gifted students may need to be guided through feelings of isolation or stigmatization due to asynchronous development (an uneven progression of their cognitive, emotional, and social skills), which can lead to negative self-image. They may also need help with perfectionism, identity, and peer relationships. Furthermore, gifted students have holistic needs that considers emotional regulation, self-perception, social skills, and more. They

need access to trained counselors and mental health professionals who understand gifted learners. They may also need support groups to meet with others going through the same issues and concerns as them.

- **Opportunities outside of the classroom:** Gifted students may benefit from opportunities outside of the academic school day. These can be clubs, sports, etc.

Characteristics by Testing Battery[13]

Verbal Reasoning

Gifted learners with verbal strengths may have the following characteristics:

- Advanced reading: They are often advanced readers for their age.
- Large vocabulary: They have an extensive vocabulary and use big words.
- Excellent ear for language: They have a good ear for the sounds of language and may start speaking fluently by preschool.
- Creative writing: They may write original stories and memorize poems and plays.
- Strong reasoning abilities: They can notice patterns, figure out new situations, and solve problems.
- Sensitive to language nuances: They appreciate puns, large words, and verbal puzzles.
- Talkative: They are often talkative, expressive, and fun to talk with.
- Fascination with nonfiction: They may be fascinated by books about factual places and events.

Gifted learners with verbal strengths may also have a distinct learning style that can be overlooked by educators. They may have a heightened capacity for symbolic, abstract thought, which can go unrecognized in an education system that values rote memorization.

Quantitative Reasoning

A "gifted learner with quantitative strengths" refers to a student who demonstrates exceptional ability in understanding and manipulating numbers, patterns, and mathematical concepts, often solving complex problems quickly and with ease, showing a natural aptitude for logic and reasoning in quantitative situations.

Key characteristics of gifted learners with quantitative strengths:

- Rapid comprehension of mathematical concepts: They grasp new mathematical ideas quickly and easily, often without needing extensive explanation.
- Excellent problem-solving skills: They can identify patterns, analyze information, and devise effective strategies to solve complex mathematical problems.

[13] *Öpengin, E., Sezerel, B.B., (2023)*

- Logical reasoning: They excel at using logic and deduction to arrive at solutions, often seeing connections between different concepts.
- Mental math abilities: They can perform calculations mentally with speed and accuracy.
- Visualization skills: They can easily visualize and manipulate abstract mathematical concepts in their minds.
- Curiosity about numbers and patterns: They are naturally drawn to exploring numerical relationships and patterns in the world around them.
- Flexibility in approach: They can adapt their strategies to different problem-solving situations and can often find multiple solutions.

Examples of behaviors that might indicate quantitative giftedness:

- Asking insightful questions about mathematical concepts beyond the curriculum
- Easily identifying patterns and relationships in data sets
- Showing enthusiasm for challenging math problems
- Inventing creative ways to solve math problems
- Performing well on standardized math tests, especially in advanced math sections

Nonverbal Reasoning[14]

Gifted learners with nonverbal strengths may have exceptional abilities in visual flexibility and sequential processing. They may also demonstrate other characteristics, such as:

- Making connections and seeing patterns.
- Can hide their abilities, but then surprising others with insights or tasks they perform beyond their years.
- Drawing inferences: They seem to "know" something without being able to explain how.
- Think in pictures - visualize the world in a three-dimensional way.

Nonverbal reasoning tests can assess a person's cognitive abilities, including problem-solving, abstract reasoning, spatial reasoning, and logical thinking. These skills are important for success in many academic and professional fields.

[14] Hess, M. S. (

Historically Underserved Populations

Twice Exceptional

Definition[15] -

The term “twice exceptional” or “2e” refers to intellectually gifted children who have one or more learning disabilities. These disabilities can include specific learning disabilities, speech and language disorders, emotional/behavioral disorders, physical disabilities, autism spectrum disorders (ASD), or other health impairments, such as Attention Deficit/Hyperactivity Disorder (ADHD). These disabilities and high abilities combine to produce a unique population of students who may fail to demonstrate either high academic performance or specific disabilities. Their gifts may mask their disabilities, and their disabilities may hide their gifts.

2e students have similar learning needs & traits as gifted learners but have additional needs based on their unique giftedness and disabilities. They have similar characteristics to gifted learners, but these tend to be heightened for 2e learners in the following areas:

Learning Characteristics

- Inconsistent academic achievement.
- Difficulty with long- or short-term memory.

Motivational Characteristics

- Setting unrealistic goals and expectations.
- May appear stubborn, opinionated and argumentative, yet sensitive to criticism.
- Bored, frustrated, feel held back by traditional classroom instruction.

Creativity and Affective Characteristics

- Heightened asynchronous emotional development.
- Often feel lonely or out of sync with others.

[15] Twice Exceptional: Definition, Characteristics & Identification. (2021).

- Intense feelings may be confused by their emotions.
- May struggle to express themselves.
- Socially awkward, often bullied.
- Gets along well with adults as well as with much younger or older children.
- Confused by social protocols.
- Low self-esteem.
- May have high social anxiety.
- Easily frustrated.

Learning Needs

- 2e students need a special combination of education programs and counseling support.
- Appropriate challenging learning experience in the individual's strength.
- Providing specific, targeted instruction, and accommodations to support the individual's areas of challenges.
- Teach learning strategies and explicit instruction on executive functioning skills to help develop organization and autonomy.
- Develop compensation strategies and assistive technology skills.

Culturally & Linguistically Diverse and Thrice Exceptional

Definition

Culturally and Linguistically Diverse (CLD) gifted students refer to learners growing up in households that differ from the system-normed, white, middle-to-upper class, North American household. This group includes students whose cultural backgrounds and experiences diverge from mainstream culture. It also encompasses students whose primary home language is not English, even if they are proficient in English.

Thrice Exceptional (3e) refers to students who are twice exceptional from a historically underserved racial, cultural, ethnic, and/or linguistic background.

Learning Characteristics

- Multiple intelligences.

- Autonomous Learners.
- Dislikes routine prefers novelty.
- Likes flexibility, options.
- Has flare; plays with words and ideas.
- Quick to note lack of relevance in assignments, rules, etc.
- Quick to disengage.
- Frustrated by irrelevance.
- Interdependent; prefers to work with others.
- Prefers and enjoys helping others.
- Risk taker.
- Less likely to follow directions.

Thrice Exceptional (3e)

- Disability typically overshadows giftedness.
- Processing speed - fast input but slower output.
- Executive functional skills lacking.
- Struggle with flexible thinking.
- Struggle with putting thoughts in writing.
- Will lose focus if assignments are too long.
- Great with discussion assignments.

Motivational Characteristics

- Leadership.
- Code switches.
- May use words to manipulate, to present double messages, to challenge.
- May use “inappropriate” words and language.
- Talkative.
- Quick to see discrepancies, inconsistencies, injustices.
- Remembers negative events more than positive events.
- Engaged when interest is high.
- Easily disengaged when task lacks meaning or usefulness (task value, utility value).

Thrice Exceptional (3e)

- Bored, frustrated, feel held back by traditional classroom instruction.
    - Instruction in a traditional class may be too slow due to their processing speed, so 2e learners get frustrated and bored because they can't move ahead.
    - Where the disability masks their giftedness will show signs of frustration because they can express themselves in the way they want. For example, if the disability is in written expression, the student will struggle and become frustrated with writing assignments. They will be able to verbally express their thoughts with high intelligence but can't when it comes to writing.
- Perfectionists - afraid to attempt assignments because they do not want to make mistakes.
- Affirmations support positive outcomes.
- Given options helps motivate through strengths and challenges.

Creativity and Affective Characteristics

- Psychomotor ability.
- Arts aptitude.
- An ability to recover quickly from setbacks.
- Sensitive to rejection.
- Respect is important.
- Fear of isolation, need for affiliation and belonging.
- Need for approval from peers.
- Confronts injustices, especially personal ones.
- Takes on battles of loved ones, peers.
- Refuses to accept status quo.

Thrice Exceptional (3e)

- Creativity - May have creative ideas, but struggle with attempting creative assignments or completing creative assignments (will lose focus).
- Overthinks situations.

- Often has older friends or connects with older individuals (teachers, school staff) due to intellectual level.
- Struggles with having conversations with peers due to feeling their intellectual level is higher than their peers (they had difficulty relating to their peers).

Learning Needs

- To see themselves as vital contributors to the world through their ability to be autonomous learners.
- Hands-on learning techniques such as laboratory classes and independent research projects.
- Out-of-school activities designed to enhance students cultural and intellectual development, such as business and industry mentorships.
- Opportunities to participate in programs within the communities where they live and see academic excellence reflected in their communities by members who could speak to their interests, so they do not have to choose between academic achievement and social acceptance.
- Multicultural curriculum and culturally responsive education.

Thrice Exceptional (3e)

- Disability is often the focus when instructing 3e learners. They are overrepresented in special education classes and underrepresented in gifted education. 3e learners need more opportunities to participate in a rigorous curriculum.
- Less referral based on student behaviors or teacher biases.
- Real-world connection to lessons.
- Classroom environment welcoming for all 3e learners.
- Need more inclusivity and not isolation with 3e learners.
- Instructional choices to make them feel like they have control over their learning.
- One to two individuals as their point of contact on campus that could help support their affective needs.
- Welcoming classroom environment to support their learning needs for both exceptionalities.

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Gifted Identification & Assessment

Section 2

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Section 2:
Gifted Identification and Assessment

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Gifted Identification and Assessment

Identifying Gifted Learners - Arizona

The first step in developing a gifted education program is establishing who is being served through identification processes. Arizona Revised Statutes[16] outline several key factors to consider.

- Identification needs to use one or more of the state board-approved tests for with a minimum threshold no higher than the 97th percentile in any one of the three batteries (vernal, nonverbal, or quantitative measures).
- Screening students for giftedness needs to be routine in nature, offered at least three times annually, to students Kindergarten through 12th grade.
- Testing results may be submitted from other school districts or other qualified professionals and must be accepted (if it is a state-board approved test).
- Additionally, if a student is transferring to the school district, the district must verify eligibility "without unreasonable delay."

Districts are allowed flexibility with identification of gifted learners including:

- The ability to establish local norms below the minimum percentile referenced in statute.
- Measures to consider in addition to state board approved tests including subjective assessments.

From the National Association for Gifted Children[17]:

Using tests as assessment tools, while easy to administer, is not sufficient for identifying students with special considerations that are often underserved such as English Language Learners, students with disabilities, minority students, and students from low-income backgrounds. Considering testing options that are more inclusive and administering universal screening are steps toward closing identification gaps for these students, but the best method includes objective and subjective tools to ensure no gifted learner is overlooked.

[16] Arizona Revised Statutes. (2007).
[17] NAGC - Assessment & Tests. (2024)

Arizona Requirements for Testing[18]

Arizona Revised Statutes updated January 1, 2007, provides guidance for the state board-approved tests acceptable in Arizona for identifying gifted learners and the highest minimum threshold for qualifications.

Provide for routine screening for gifted pupils using one or more tests adopted by the state board as prescribed in section 15-203, subsection A, paragraph 15 and section 15-779.01. School districts may identify any number of pupils as gifted but shall identify as gifted at least those pupils who score at or above the ninety-seventh percentile, based on national norms, on a test adopted by the state board of education.

Procedures for identification and placement of students to be placed in gifted programs.

a. Students shall be served who score at or above the 97th percentile on national norms in any one of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board-approved list. Students who score below the 97th percentile also may be served.

b. Local educational agencies (LEAs) shall accept, as valid for placement, scores at or above the 97th percentile on any State Board-approved test submitted by other LEAs or by qualified professionals.

c. LEAs shall place transfer students as soon as they have verified eligibility.

Each LEA shall:

i. Make testing available for students K-12 on a periodic basis but not less than three times per year;

ii. ii. Inform parents or legal guardians of the results of the district-administered test within 30 school days of determining the test results;

iii. iii. Upon request, explain test results to parents or legal guardians.

[18] Arizona Revised Statutes. (2007)

Objective Assessments

Testing provides an objective approach for identifying gifted learners comparing ability and achievement results of students of similar ages. Choosing the most appropriate test for particular students plays a key role in maximizing the results of formal assessments. Districts have the flexibility to include subjective metrics in addition to the state board-approved tests when considering students who may be close to the national norms of 97th percentile in any one of the three batteries (verbal, nonverbal, quantitative). The National Association for Gifted Children recommends a blend of subjective and objective assessment tools.[19]

Verbal Testing Battery

Verbal batteries measure a student's vocabulary, verbal memory, ability to find relationships between words, and comprehension looking at flexibility, fluency, and adaptability.

Nonverbal Testing Battery

Nonverbal batteries measure a student's ability to analyze visual information, spatial reasoning, and pattern recognition without numbers or language.

Quantitative Testing Battery

Quantitative batteries measure a student's reasoning skills using number relationships, problem solving with numerical data, and quantitative concepts.

Types of Tests

Tests for gifted identification fall into either achievement or ability categories. Achievement tests include group tests like the SAT or ACTs as well as individually administered tests like the Woodcock-Johnson Tests of Achievement.

[19] Read Western Kentucky University's *Using Local Norms*.

Achievement tests may be geared to subject like math or language arts and are designed to measure what the student already knows or understands about a subject.

Ability tests are designed to measure a student's potential learn or mental abilities. While ability tests may be used to identify gifted learners, they may provide a more in-depth profile of the child. Typical ability tests include:

Individual

- Differential Abilities Scale
- Kaufman Assessment Battery for Children
- Naglieri Nonverbal Abilities Test
- Stanford Binet Intelligence Scales
- Weschler Intelligence Scale for Children[20]
- Woodcock-Johnson Test of Cognitive Abilities

Group

- CogAT
- Otis-Lennon
- Universal Nonverbal Intelligence Scale (WAIS)

Nonverbal tests, such as the *Naglieri Nonverbal Ability Test o*r the *Test of Nonverbal Intelligence*, may be more effective for students from culturally and linguistically different or low-income backgrounds to eliminate barriers.

[20] Read NAGC's position papers, *Use of the WISC-V for Gifted and Twice Exceptional Identification* and *Use of the WISC-IV for Gifted Education.*

Testing Logistics

(From the National Association for Gifted Children – Assessments & Tests[21])

Who Should Test

Testing is often used as a measurement tool to qualify for a specific program or when it is suspected that a student's gifts and talents are not being recognized. School-age children are typically tested using *group* testing methods through their school's gifted and talented screening program. It is rare that any *individual* test of ability or achievement will be offered to gifted students by their school or district. Tests should always be administered by trained professionals.

When to Test

While experts have differing opinions on whether to test young children, researchers generally agree that it is difficult to make accurate IQ determinations at an early age (under 6). For younger children, alternative measures of giftedness include characteristic checklists, parent/teacher surveys and interviews, observations, and portfolios.

How to Interpret Test Scores

Tests provide a variety of scores, including raw scores, percentile ranks, grade-equivalent scores, and standard scores. Assessments should be current (recent norms) and unbiased. They should relate to the area of giftedness, a specific program option, or the identification of gifted and talented students. Test norms should reflect the local demographic, not only national norms (important for districts with a greater number of individuals from minority or ethnic groups). In some cases, it is important to review sub scores, as twice-exceptional students can be overlooked if only using a general score.

Results: Now What?

Assessments provide data points, but do not automatically guarantee placement in gifted programs. The majority of states do not require local education agencies to follow

[21] NAGC – Assessment & Tests. (2024)

the same identification process, so program criteria are left to the district or individual school. Parents and administrators should work together in a positive and collaborative spirit to use test data as one of several measures for developing an appropriate educational strategy for gifted students.

Special Considerations

Second Grade Universal Screening Opportunity:

Participation in this FREE universal testing opportunity is available, and optional, for all Arizona public schools.

The Arizona legislature appropriated $850,000 to the Arizona Department of Education (ADE) to procure an assessment that Arizona public schools could choose to use to evaluate the abilities of all their 2nd grade students at no cost. Following a competitive procurement process, ADE has identified the Cognitive Abilities Test™ (CogAT®), from Riverside Insights as the 2nd grade assessment tool for this program. Check the Gifted Education website for more information about availability and ordering.

Students Not Enrolled in Public Districts

Many parents reaching out to the Arizona Department of Education's Gifted Education team have questions about how to get their children identified as gifted learners. Other than testing completed by local school districts, the state board-approved tests can be administered by nearby professionals such as psychologists or through university graduate student departments.[22]

[22] Read Davidson Institute's How to Get Your Child Tested for Giftedness.

Subjective Assessments

Subjective, or qualitative assessments provide information that is not captured in quantitative assessments. While quantitative assessments provide data points compared to norms, qualitative assessments provide the lens with which to better understand the data. Subjective assessments provide descriptive information on the student about certain characteristics, attributes, performances or behaviors. Subjective measures include student portfolios, observation records, surveys completed by teachers and/or parents, and interviews with the student. Using qualitative assessments aligns with the NAGC Gifted Education Standard Strand 2 of Assessments[23] which states-

> *2.2.2. Educators select and use multiple assessments that measure diverse abilities, talents, and strengths that are based on current theories, models, and research.*
>
> *2.2.3. Assessments provide qualitative and quantitative information from a variety of sources, including off-level testing, are nonbiased and equitable, and are technically adequate for the purpose.*
>
> *2.4.4. Educators use and interpret qualitative and quantitative assessment information to develop a profile of the strengths and weaknesses of each student with gifts and talents to plan appropriate intervention.*

A team of professionals, with at least one person qualified in gifted education, should be assembled to review subjective assessments. It is important to remember that 2e and 3e gifted students might not be identified through traditional quantitative means but rather they may demonstrate their talents in other ways. When reviewing the qualitative evidence of 2e and 3e students, it's important to include a 2e or 3e trained gifted education professional on the assessment team.

Qualitative assessments for giftedness are also helpful in early identification of giftedness in preschool children. Observable behaviors of preschool children might include:

- Strong reasoning skills

[23] Corwith, et al., (2019)

- A broad range of knowledge
- A wide vocabulary
- Reading skills and reading comprehension
- Problem-solving skills
- Strong attention and memory
- Strong processing speed
- Creativity
- Social skills that are more developed than same-age peers
- Deeper sensitivities and emotions compared to same age peers
- A sense of empathy
- Early leadership abilities
- A heightened sensitivity of the five senses

The assessment of gifted and talented children is a multi-step process. The earlier gifted children can be assessed and identified, the sooner they are able to receive services that will foster their growth and stimulate their engagement in their own learning process.

Overcoming Pitfalls

Subjective assessments provide a different perspective when evaluating students for giftedness, but still have potential issues including:

Potential bias

- Implement inclusive, clear and specific criteria to guide the data collection process.
- Establish inter-rater agreement thresholds for scoring a student's portfolio.

Overly Restrictive

- Compile a diverse subjective assessment using different types of information representing a complete student profile.

Gifted Assessment Reference Table

State Board Approved Test List for the Identification of Gifted Students in Arizona

ARS§15-779.02 A. 1. "1. ***Provide for routine screening for gifted pupils using one or more tests adopted by the state board as prescribed in section 15-203, subsection A, paragraph 15 and section 15-779.01***"

ARS§15-203 A. 15. "15. *Adopt a list of approved tests for determining special education assistance to gifted pupils as defined in and as provided in chapter 7, article 4.1 of this title. The adopted tests shall provide separate scores for quantitative reasoning, verbal reasoning and nonverbal reasoning and shall be capable of providing reliable and valid scores at the highest ranges of the score distribution.*"

ARS§15-779.01 B. "B. *The governing board shall modify the course of study and adapt teaching methods, materials and techniques to provide educationally for those pupils who are gifted and possess superior intellect or advanced learning ability, or both, but may have an educational disadvantage resulting from a disability or a difficulty in writing, speaking or understanding the English language due to an environmental background in which a language other than English is primarily or exclusively spoken. Identification of gifted pupils as provided in this subsection shall be based on tests or subtests that are demonstrated to be effective with special populations including those with a disability or difficulty with the English language.*"

The most recent, or next most recent, version of a listed test and applicable norms shall be used for identification and placement of gifted students.

TEST	AGE RANGE	GRADES	VERBAL REASONING	QUANTITATIVE REASONING	NONVERBAL REASONING	COMPOSITE SCORE AVAILABLE	GROUP (G) or INDIVIDUALLY (I) ADMINISTERED
Bateria III Woodcock-Munoz Pruebas de Habilidades Cognitivas	2-90+	PK-12	Y	Y	Y	Y	G
Bilingual Verbal Ability Tests, Normative Update (BVAT-NU)	5-90+	K-20	Y	N	N	Y	I
Cognitive Abilities Test (CogAT)	4.11-18+	K-12	Y	Y	Y	Y	G
Cognitive Assessment System (CAS)	5-18	K-12	N	N	Y	Y	I
Comprehensive Testing Program (CTP)	-	1-11	Y	Y	N	N	G/I
Differential Abilities Scale (DAS)	2.6-17.11	PK-12	Y	Y	Y	Y	I
DISCOVER	3-Adult	PK-12	Y	Y	Y	Y	G
Kaufman Assessment Battery for Children (KABC)	3-18	PK-12	Y	N*	Y	Y	I
Naglieri General Abilities Test (NGAT)**	4-18	PK-12	Y**	Y**	Y	Y**	G
Naglieri Nonverbal Abilities Test, Individual (NNAT-Individual)	5.0-17.11	PK-12	N	N	Y	N	I
Otis-Lennon School Abilities Test (OLSAT)	6-17	K-12	Y	Y	Y	Y	G
Stanford Binet Intelligence Scales	2-85+	PK-12	Y	Y	Y	Y	I
Universal Nonverbal Intelligence Test (UNIT)	5-21.11	K-12	N	N	Y	Y	G
Wechsler Adult Intelligence Scale (WAIS)	16-90.11	-	Y	N	Y	Y	I
Wechsler Intelligence Scale for Children (WISC)	6-16.11	1-12	Y	N	Y	Y	I

TEST	AGE RANGE	GRADES	VERBAL REASONING	QUANTITATIVE REASONING	NONVERBAL REASONING	COMPOSITE SCORE AVAILABLE	GROUP (G) or INDIVIDUALLY (I) ADMINISTERED
Bateria III Woodcock-Munoz Pruebas de Habilidades Cognitivas	2-90+	PK-12	Y	Y	Y	Y	G
Bilingual Verbal Ability Tests, Normative Update (BVAT-NU)	5-90+	K-20	Y	N	N	Y	I
Cognitive Abilities Test (CogAT)	4.11-18+	K-12	Y	Y	Y	Y	G
Cognitive Assessment System (CAS)	5-18	K-12	N	N	Y	Y	I
Comprehensive Testing Program (CTP)	-	1-11	Y	Y	N	N	G/I
Differential Abilities Scale (DAS)	2.6-17.11	PK-12	Y	Y	Y	Y	I
DISCOVER	3-Adult	PK-12	Y	Y	Y	Y	G
Kaufman Assessment Battery for Children (KABC)	3-18	PK-12	Y	N*	Y	Y	I
Naglieri General Abilities Test (NGAT)**	4-18	PK-12	Y**	Y**	Y	Y**	G
Naglieri Nonverbal Abilities Test, Individual (NNAT-Individual)	5.0-17.11	PK-12	N	N	Y	N	I
Otis-Lennon School Abilities Test (OLSAT)	6-17	K-12	Y	Y	Y	Y	G
Stanford Binet Intelligence Scales	2-85+	PK-12	Y	Y	Y	Y	I
Universal Nonverbal Intelligence Test (UNIT)	5-21.11	K-12	N	N	Y	Y	G
Wechsler Adult Intelligence Scale (WAIS)	16-90.11	-	Y	N	Y	Y	I
Wechsler Intelligence Scale for Children (WISC)	6-16.11	1-12	Y	N	Y	Y	I

1

Adopted as of June 22, 2015 (*technical corrections *1/25/2016, **4/23/2021 (NGAT is the rebranded version of the Naglieri Nonverbal Abilities Test (NNAT))*

AZ State Board Approved Test List for Identification of Gifted Students adopted June 22, 2015.

ARIZONA DEPARTMENT OF EDUCATION

State Board Approved Test List for the Identification of Gifted Students in Arizona

SUPPLEMENTAL GUIDANCE

This companion piece to the State Board Approved Test List adopted as of June 22, 2015, elaborates on the Identification Tests approved by the State Board of Education and provides more details regarding test administration; length of testing, qualified testing individuals (if applicable), and other pertinent information for choosing identification test(s).

The most recent version of a listed test and applicable norms shall be used for identification and placement of gifted students.

Administered by Non-Psychologist

Assessment Name Website	Time Frame	Research / Theory	Test Format
Bateria IV Woodcock-Munoz Pruebas de Habildades Cognitivas	5 min./subtest 14 tests & 15 clusters	Only co-normed test assessing cognitive abilities in Spanish. Spanish version of Woodcock-Johnson. It can be group administered.	
Bilingual Verbal Ability Tests Note from Riverside Insights: Inventory for BVAT-NU is extremely limited. Riverside Insights no longer supports the scoring CD for the BVAT, and because of that, kits are also no longer sold. The BVAT cannot be hand-scored.	30 minutes	Bilingual Verbal Ability Normative Update (BVAT-NU) comprises 3 tests: Picture Vocabulary, Oral Vocabulary, and Verbal Analogies. All three are given first in English. Items answered incorrectly are then repeated in the learner's native language. The BVAT-NU yields a Bilingual Verbal Ability score, an English Proficiency score, and scores for each subtest. The test has been translated into 16 languages. ***Must be used with the Woodcock-Johnson** – Revised Tests of Cognitive Ability to assess giftedness.	
Cognitive Abilities Test (CogAT)	2.5-3 hours	Composed of 3 batteries: Verbal, Quantitative, Nonverbal Each battery is composed of 3 subtests (9 total) Types of scores: Standard age scores (SAS), Stanines, Percentiles	
Cognitive Assessment System (CAS2)	40-60 minutes; 5-10 minutes to score	PASS (Planning, Attention, Simultaneous, and Successive) Well-researched cognitive / neuropsychological theory English & Spanish	
Comprehensive Testing Program (CTP)	40 min modules reading & math	The Comprehensive Testing Program (CTP) is a **summative assessment for students in Grades 1-11** covering reading, listening, vocabulary, writing, mathematics, and science. Verbal and quantitative subtest are part of the CTP beginning in Grade 3.	
DISCOVER ***Testing Material not available** – Website & Contacts inactive		Discover creates a "Map of Strengths" using 9 intelligence components. Measures Spatial Artistic, Spatial Analytical, Logical Mathematical, Oral Linguistic, Written Linguistic	
Naglieri General Abilities Test	35-40 minutes	NGAT is comprised of 3 tests; Verbal, Nonverbal, & Quantitative Unbiased evaluation for all students, regardless of language or cultural background. The online format includes student video models.	
Naglieri Nonverbal Abilities Test – 3rd Edition	30 min	NNAT3 measures general ability using only nonverbal format. It is intended to assess cognitive ability independently of linguistic and cultural background.	
Otis-Lennon School Abilities Test – 8th edition	75 min max	OLSAT 8 assess verbal, nonverbal, and quantitative cognitive abilities. A general ability indicator related to academic skills.	
Woodcock Johnson Test of Cognitive Abilities	40 min for standard battery (6 core subtests) 15-20 writing sample, 5-10 for all other tests	Standard Battery includes 11 tests. Extended Battery contains 9 tests. Yields up to 22 cluster scores across 4 domains: 1. Reading /GRW –Reading, Broad Reading, Reading Comprehension, Reading Fluency, Reading Rate) 2. Math/GQ - Mathematics, Broad Mathematics, Math Calculation Skills, Math Problem Solving 3. Writing /GRW - Written language, Broad Written Language, Basic Writing Skills, Written Expression 4. Cross Domain Cluster Scores - Academic Skills, Academic Applications, Academic Fluency, Academic Knowledge, Phoneme-Grapheme Knowledge	

Paper Format: Online Format: CD Scoring:

Individual Test Administered by Psychologist		
Assessment Name Website	**Time Frame**	**Research / Theory**
Differential Abilities Scale, 2nd edition (Normative Update)	45-90 minutes	Based on hierarchical view of mental abilities, influenced by a range of cognitive theories including the Cattell-Horn-Carroll (CHC) model.
Kaufman Assessment Battery for Children, 2nd edition (Normative Updated)	25-70 minutes	Dual theoretical model: can choose between the Cattell-Horn-Carrol model or the Luria model.
Stanford Binet Intelligences Scales, 5th edition (SB-V)	5 min/subtest 50-60 min total	Provides standard scores for Full Scale IQ, with composite scores for Verbal IQ, Nonverbal IQ, Brief IQ, and five factors (fluid, knowledge, quantitative, visual-spatial, and working memory).
Universal Nonverbal Intelligence Test, 2nd edition	30-60 minutes	Nonverbal score only as test is administered in pantomime format, based on a multidimensional view of intelligence.
Weschler Adult Intelligence Scale, 4th edition	60-90 minutes	Multi-factored theoretical based used for individuals 16-90 years old.
Weschler Preschool and Primary Scale of Intelligence, 4th edition (WPPSI-IV)	30-45 min age 2:6-3:11; 45-60 min age 4:0-7:7	Used for intelligence assessment of young children. Full Scale IQ scores with Primary scales (Verbal IQ, Visual/Spatial, Fluid reasoning, Working memory, Processing speed). Ancillary scales available (Vocabulary acquisition, Nonverbal general ability, cognitive proficiency).
Weschler Nonverbal Scale of Ability (WNV)	45 min	WNV is a nonverbal measure of ability for culturally and linguistically diverse groups. A nonverbal measure for ability for individuals who are neither English-language nor Spanish-language proficient or have other language considerations.
Weschler Intelligence Scale for Children	60 min core battery, + subtests	Factor structure includes a Full-Scale IQ, Primary Scales (Verbal, Fluid reasoning, Visual/Spatial, Working memory, Processing speed) along with ancillary scales (Nonverbal, General Ability Index, and Cognitive proficiency).

State Board Approved Test List for Gifted Students - Supplemental Guidance (2024)

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Gifted Services

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Comprehensive Overview of Gifted Services

Services for gifted education in Arizona refer to the support systems and resources provided by the state's educational institutions and agencies to identify, assess, and meet the needs of gifted students. These services may include gifted education coordinators, specialized teacher training, gifted education funding, assessment tools for identifying gifted students, and policies or guidelines for serving gifted learners in schools. The services aim to ensure gifted students receive appropriate educational opportunities and support to reach their full potential.

Three Essential Elements for Gifted Services

1. **Instructional Expertise:**
    - **Gifted Education Knowledge:** Teachers working with gifted students should have an Arizona Gifted Endorsement or working on a Provisional Gifted Endorsement. Teachers need a strong understanding of giftedness and how to cater to their specific learning needs.
    - **Content Expertise:** In addition to gifted education knowledge, teachers should also have a deep understanding of the subject matter they are teaching. This allows them to provide students with a rigorous and comprehensive learning experience.
    - **Passion and Creativity:** Effective gifted education teachers have a passion for learning and are creative in their approach to instruction. They should be able to design engaging learning experiences that spark curiosity and encourage students to think critically.
2. **Learning Pathways:**
    - **Challenge and Depth:** The curriculum should go beyond basic mastery and provide opportunities for students to explore topics in greater depth. This could involve complex projects, open-ended inquiry, and opportunities for critical thinking and problem-solving.
    - **Differentiation:** Instruction should be tailored to meet the individual needs and abilities of gifted learners. This might involve tiered assignments, compacted curriculum (covering material faster), or providing enrichment activities for students who have already mastered the core concepts.

- **Acceleration:** For some gifted students, acceleration may be necessary to keep them engaged and prevent boredom. This could involve skipping grades, subject acceleration, or early enrollment in high school courses.

3. **Affective Supports and Learning:**
    - **Peer Interaction:** While gifted programs often provide opportunities for advanced learning, it's crucial for gifted students to also have opportunities to interact with peers of similar abilities. This can foster social development, collaboration skills, and a sense of belonging.
    - **Affective Support:** Gifted learners develop intellectually at a different rate than emotionally. Programs supporting the expectations and frustration as well as social isolation or perfectionism are recommended[24]. Programs should provide support for their social and emotional well-being, helping them develop healthy coping mechanisms and navigate social interactions effectively.
    - **Celebrating Diversity:** Gifted programs should celebrate diversity and recognize that giftedness can manifest in various ways. This ensures all students with exceptional abilities have the opportunity to be identified and supported, regardless of background or learning style.

By focusing on these non-negotiables, gifted programs can create a nurturing learning environment that fosters intellectual growth, social-emotional development, and a love for learning in gifted students.

Recommendation Summary

from the National Working Group on Advanced Education[25]

Recommended Policies and Practices
Accessible Front-loading (Grades Pre-K-5) ● Provide front-loading programming (either to all students or to those from historically underrepresented groups) starting in Pre-K or Kindergarten. ● Offer accessible after-school, weekend, and/ or summer enrichment opportunities.

[24] MEGT, (2024)
[25] Thomas B. Fordham Institute. (2023)

Identification (Grades K-11)

- Adopt universal screening to identify students with potential and achievement.
- Use data from universally available assessments.
- Use assessment data to identify additional students for advanced education services in every grade.
- Use local norms.

Acceleration (Grades K-12)

- Allow Early Entry to Kindergarten.
- Allow Whole Grade Acceleration.
- Allow Single Subject Acceleration.
- Offer “grade compressed” pathways for students.
- Offer advanced courses in grades 6-12.
- Automatically enroll elementary students participating in advanced education programs in subsequent advanced opportunities in middle school and high school.
- Intentionally recruit underrepresented students for external advanced learning opportunities (i.e. - college for dual enrollment).

Equitable Achievement Grouping (Grades K-5)

- Frequently and equitably evaluate all students.
- Ensure teachers alter complexity and pace of the curriculum.
- Err on the side of inclusion.

Selective Enrollment Schools (Grades 6-12)

- Expand the supply of seats in such schools.
- Base admission on multiple indicators, including (not limited to) exam score.
- Combine culturally responsive advanced instruction and prior preparation of students who are admitted.

Affective Learning/ Mental Health Supports (Grades K-12)

- Make programs culturally relevant to all students.
- Foster a positive school culture.
- Implement a plan for supporting advanced students’ mental health comprising triage,

trauma-informed practices, targeted intervention, and faculty support.

Well-Prepared Educators

- Provide high-quality professional learning opportunities about evidence-based advanced learning strategies.
- Inform feeder teacher-preparation programs.
- Empower teachers with actionable data on students' abilities.
- Supplement with high-quality instructional materials.

Recommended State Policies and Practices

- In school and district accountability systems, place significant weight on student-level progress over time.
- Eliminate any policies that bar early entrance to kindergarten, middle school, or high school.
- Mandate the identification of students with advanced-learning needs, providing services for said students, and the use of local, school-based norms for identifying students for advanced programs, especially at the elementary level.
- Implement specific requirements about the services provided to advanced learners.
- Mandate that districts and charter networks allow for acceleration (including grade skipping) for students who may benefit.
- Publicly report on the students participating in advanced education, including their achievement and growth over time, as well as their demographic characteristics.
- Ensure that preparation and in-service professional development programs offer evidence-based instruction in advanced education, both for district-level coordinators and teachers.
- Enforce the federal requirement that states explain how teacher-preparation programs are addressing education of special populations, including advanced learners.
- Expand funding and other incentives to encourage schools to frequently and equitably evaluate all students and provide a continuum of services to every student who could benefit.

Respond When a Model is Not Effective

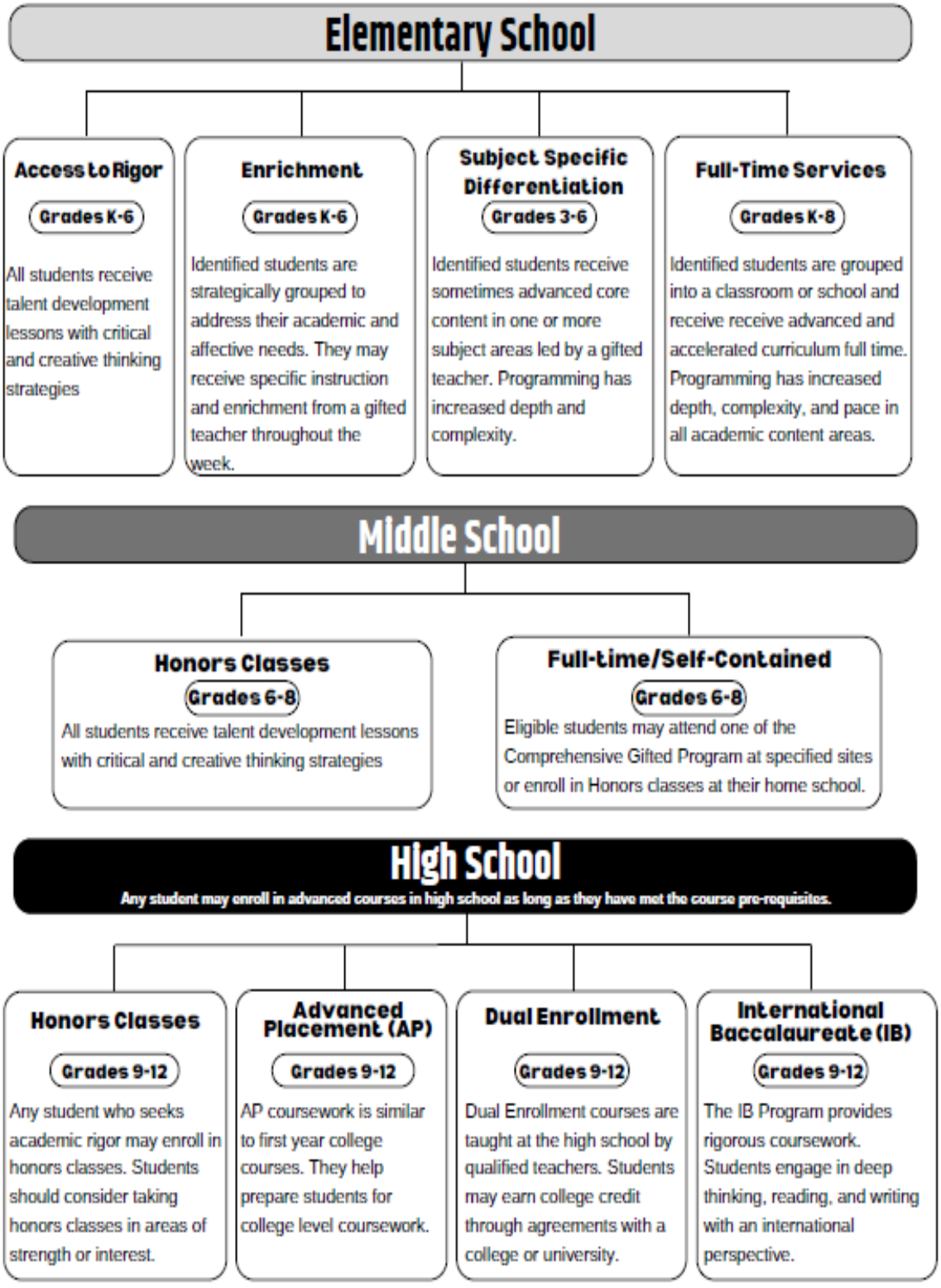
Even with the best planning and preparation, there will be times when the established gifted programming will not meet the needs of all students. At times, gifted learners may require services that are beyond the established program model. When this occurs, it may be in the student's best interest to discontinue participation in the existing service and transition to alternative interventions. The key consideration is providing attention to students' individual learning needs and flexibility within the service model.

Continuum of Services by Grade Level

Districts should establish a continuum of services that "strives to give individual students from culturally different backgrounds or at different ability/achievement levels what they need in each academic subject."[26]

[26] Thomas B Fordham Institute. (2023)

An example of providing a continuum of services for gifted learners. *Modified version from Fairfax County, Virginia*



School districts should offer a continuum of services to meet advanced learning needs of its students in grades K-12. Some services are available to all students, and other services are available to those who are identified through screening as needed.

Instructional Expertise

Gifted Education Team

No one-size-fits-all answer to ideal staffing for gifted education services in a K-12 district exists. Here's why:

- **Varied Needs:** Gifted students have diverse strengths and weaknesses. A gifted student in math might struggle with social interaction, requiring different support than someone excelling verbally.
- **Program Models:** Districts offer gifted education through various models, like self-contained classrooms, pull-out programs, or differentiation within general classrooms. Each model requires different staffing.
- **Student Count:** The number of gifted students in your district and individual schools significantly impacts staffing needs.
- **Program Administration**: This individual oversees the entire Gifted Services Program across the district for the health of services offered PreK-12.

Varied Needs:

Gifted students come in all shapes and sizes! While they share exceptional abilities, their strengths and weaknesses can be quite diverse. Here are some examples:

- **Twice-exceptional Students (2e):** These students are gifted in one or more areas but also have learning differences in others. For instance, a student might be a math whiz but struggle with reading fluency. They may need support that addresses both their strengths and weaknesses.
- **Affective Needs:** Gifted students can sometimes face social challenges. They might excel academically but find it difficult to connect with peers who share similar interests. Programs supporting affective needs can be a valuable support for these students.
- **Different Learning Styles:** Gifted students learn in various ways. Some might be kinesthetic learners who thrive through hands-on activities, while others might be auditory learners who benefit from lectures and discussions. Effective gifted programs provide differentiated instruction that caters to these diverse learning styles.

- **Creative Needs:** Many gifted students are highly creative and possess a strong desire for novelty and challenge. Gifted programs should provide opportunities for them to explore their creativity and delve deeper into their interests.

By understanding these varied needs, educators can tailor support to ensure gifted students reach their full potential in all aspects of their development.

Program Models:

There's no one-size-fits-all approach to gifted education. Districts offer a variety of program models to meet the diverse needs of gifted students and utilize resources effectively. Here's a breakdown of some common models and their staffing implications:

- **Self-contained Classrooms:** Gifted students spend a significant portion of the day (or even the entire day) in a classroom specifically designed for gifted learners. This model requires a gifted education specialist with expertise in gifted curriculum, pacing, and differentiation to lead the classroom. Depending on class size, a teacher's aide might also be needed for support.
- **Differentiation within General Classrooms:** This model integrates gifted education into the regular classroom environment. The general classroom teacher differentiates instruction to meet the advanced needs of gifted students while still catering to the needs of all learners. This approach requires professional development for general education teachers in gifted education strategies and differentiation techniques. While a dedicated gifted specialist might not be assigned to each classroom, the school may have a gifted education coordinator who provides support and resources to general education teachers. Gifted Cluster group is a consideration for general classroom differentiation.
    - **School-wide Cluster Grouping:** A school-wide cluster groups all the gifted students in a class with students of various abilities (excluding students far below average).
    - **Total Cluster Grouping:** A total cluster groups a selection of gifted students with students of various abilities (excluding students far below average).
- **Pull-out Programs:** In this model, gifted students are pulled out of their regular classrooms for a designated period to receive specialized gifted instruction in a small group setting. This could be for enrichment activities, project-based

learning, or advanced content exploration. Staffing needs here involve a gifted resource teacher who leads the pull-out sessions. The number of teachers will depend on the frequency and size of the pull-out groups.
    - Enrichment Clusters: Schools might group gifted students across grade levels within a subject area for in-depth exploration. This model could require collaboration between a gifted education specialist and a subject-area teacher, or it could be led by a single teacher with expertise in both gifted education and the specific subject.
- **Push-in Program:** A gifted instructor joins the general classroom to work with gifted students either one-to-one or in small groups during specific academic times for academic advancement and enrichment. Staffing needs involve a gifted resource teacher who leads the push-in group. The number of teachers will depend on the frequency and size of the push-in groups.

The choice of program model depends on factors like student needs, available resources, and school philosophy. It's important to consider which model allows for the most effective use of staffing to provide the best possible support for gifted students.

Student Count:

The number of gifted students you have across the district and within each school directly affects staffing requirements. Here's how the student count influence staffing decisions:

- **Student-to-Staff Ratio:** The National Association for Gifted Children (NAGC) recommends a ratio of one gifted education specialist per 100-150 identified gifted students.[27] This is a benchmark, and the ideal ratio might vary depending on your specific circumstances.
- **Program Model Impact:** The chosen program model also plays a role. Self-contained classrooms with a higher number of gifted students will necessitate a dedicated gifted education specialist, whereas a pull-out program with smaller groups might allow one specialist to serve a larger pool of students.
- **Differentiation Needs:** Schools with a significant number of gifted students integrated into general classrooms will need to prioritize professional development for general education teachers in differentiation strategies. This

[27] National Association for Gifted Children. (year)

might involve having a gifted education coordinator or coach who provides ongoing support but doesn't require a full-time specialist per classroom.

- **Equity Considerations:** It's important to ensure equitable access to gifted services across all schools, even if student populations vary. This might involve creative staffing solutions, such as a traveling gifted specialist who splits time between schools with lower number of gifted students.

Program Administration:

Program Coordinator: This individual oversees the entire Gifted Services Program across the district. Responsibilities include:

- **Program Development and Management:** Curriculum development, adherence to state guidelines, and ensuring program alignment with the district's vision.
- **Budgeting and Resource Allocation:** Securing funding, managing resources, and allocating them effectively to support gifted programs.
- **Professional Development:** Providing training and support for teachers and administrators on gifted education best practices.
- **Data Analysis and Evaluation:** Monitoring program effectiveness and making data-driven decisions for improvement.
- **Communication and Advocacy:** Communicating the program's value to stakeholders and advocating for gifted education.

Gifted Education Specialists: These specialists may support the program coordinator with specific areas like:

- **Identification and Assessment:** Developing and implementing procedures for identifying gifted students.
- **Differentiation Strategies:** Providing guidance and resources for teachers on differentiating instruction for gifted learners.
- **Curriculum Development:** Assisting in developing curriculum specifically tailored for gifted students.

By carefully considering the student count in relation to program models and budget constraints, you can make informed decisions about staffing that best meets the needs of your gifted student population.

Factors to guide school districts:

- **The Arizona Department of Education (ADE)** requires teachers who work with gifted identified students to have a gifted endorsement. This endorsement is required for all district teachers who have primary responsibility for teaching gifted pupils.
- **Staff Expertise**: Ideally, gifted education specialists have training and experience in gifted education curriculum, assessment, and differentiation strategies.
- **Collaboration**: General education teachers also play a role. Professional development opportunities to help them differentiate instruction for gifted students can be crucial.

Steps to take to determine appropriate staffing for your district:

1. **Data Collection**: Identify the number of gifted students across the district and in each school.
2. **Program Review**: Analyze your current gifted education models and their effectiveness.
3. **Community Input**: Involve parents, teachers, and administrators in discussions about staffing needs.
4. **Resource Allocation**: Consider available funding when making staffing decisions.

Maintain a gifted database for students.

STUDENT INFORMATION	ACADEMIC ACHIEVEMENT	PROGRAM PARTICIPATION
Demographics: Age, grade level, ethnicity, socioeconomic status, gender, language spoken at home. **Identification information:** Date of gifted identification, assessment used for identification.	**Standardized test scores:** Scores on national or state assessments **Grades:** Course grades, GPA	**Type of gifted program:** Enrichment, acceleration, differentiation **Program duration and intensity:** Length of time in the program, dosage (daily/weekly)

	Program outcomes: Changes in achievement, student satisfaction surveys

By considering these factors and involving stakeholders, you can determine the staffing approach that best meets the needs of your gifted students.

Additional resources that may be helpful:

- National Association for Gifted Children (NAGC): National Association for Gifted Children offers resources and professional development on gifted education.
- Arizona Department of Education: Gifted Education
- Arizona Gifted Endorsement
  Requirements for the Provisional and Full Gifted, PreK-12 Endorsement

Professional Development

The best practice for professional development is to utilize curriculum specifically designed for gifted learners. These programs often delve deeper into content areas, incorporate higher-order thinking skills, and provide opportunities for creativity and problem-solving. There are a variety of resources available, including online programs, textbooks designed for gifted learners, and curriculum guides developed by gifted education experts.

- **Understanding Giftedness**: Learning about the characteristics and needs of gifted students from a counselor, psychologist, or social worker perspective.
- **Identification and Assessment**: Learning about the identification process for gifted students and collaborating with gifted education specialists.
- **Collaboration**: Establish effective collaboration with teachers and administrators to stream-line access and to support the affective needs and academic success of gifted students.
- **Differentiation for Gifted Students**: Advanced differentiation strategies specifically for gifted learners, including enrichment, acceleration, and compacted curriculum.

- **Affective Development of Gifted Students**: Understanding the unique affective needs of gifted students and providing support strategies to topics such as perfectionism, asynchronous development, and existential questions.

Here's a breakdown of appropriate professional development (PD) for different roles in a K-12 school system focused on both general education and gifted education:

General Education Teachers:

- Differentiation Strategies:
- Affective Needs of Gifted Learners
- Underachievement
- Closing the Achievement Gap
- Culturally Responsive Teaching
- Technology Integration

Gifted Education Teachers:

- Identification and Assessment of Giftedness:
- Curriculum Development for Gifted Learners:
- Content Depth and Complexity:
- Differentiation Strategies:
- Curriculum Models:
- Additional Considerations:

Gifted Coaches/ Coordinators

- Tiered support
- Onboarding
- Connection /Affiliation
- Continuous Improvement

Campus Administrators:

- Leadership for Inclusive Schools
- Supporting Gifted Education Programs

- Implementing Professional Development
- Data-Driven Decision Making:
- Advocacy for Gifted Education

See Section 6 Professional Development for more information.

Learning Pathways

Progressions of Gifted Services

Gifted programs can take many forms, and their progressions will vary depending on the specific school district or program. Here's a breakdown of some common gifted service models across different grade spans:

K-6 (Elementary School)

- **Enrichment:** Students stay in their regular classrooms but receive additional challenging activities or projects beyond the standard curriculum. This could involve independent study, differentiated instruction, or participation in enrichment clusters.
- **Pull-Out Programs:** Students are pulled from their regular classes for a specific amount of time to participate in a dedicated gifted program with a focus on advanced content and critical thinking skills.
- **Self-Contained Classrooms:** Students are grouped together in a separate classroom specifically designed for gifted learners. The curriculum is tailored to their advanced needs and allows for deeper exploration of topics.

K-8 (Elementary and Middle School)

- **Combination of Elementary and Middle School Models:** This combines approaches from both K-6 and MS levels. Younger students might benefit from enrichment or pull-out programs, while older ones transition to more rigorous coursework or self-contained classrooms.

Middle School (MS)

- **Subject Acceleration:** Gifted students can move ahead in specific subjects where they demonstrate mastery. This allows them to delve into more advanced topics without being held back by the pace of the regular class.

- **Differentiation Within the Classroom:** Teachers use differentiated instruction strategies to cater to the advanced needs of gifted students within the regular classroom setting. This might involve providing complex projects, independent study opportunities, or tiered assignments.
- **Early High School Coursework:** High school-level courses can be offered to advanced middle school students. This can be a good option for students who have already mastered the middle school curriculum.

High School

- **Advanced Placement (AP) and International Baccalaureate (IB) Courses:** These rigorous programs provide college-level coursework that can be a good fit for gifted students looking for a challenge.
- **Dual Enrollment Programs:** Students can earn both high school and college credit simultaneously by taking classes at a local community college.
- **Independent Study Projects:** Gifted students can design and pursue independent research projects under the guidance of a teacher or mentor. This allows them to delve into topics of personal interest and develop strong research and critical thinking skills.

It's important to remember that these are just some of the many gifted program progressions available. The best approach will depend on the specific needs and abilities of the gifted students in the program.

See Section 4 Gifted Programming for more information.

Instructional Support

Who Makes the Decisions Regarding What Gifted Services to Implement?

Effective gifted services rely upon the support from district and building administrators. Gifted services should be built upon effective models that sustain throughout changes in staffing. Sustainability is increased when gifted services are embedded within the Multi-Tiered Systems of Support Framework. District administrators and building principals often lead these efforts. Other stakeholders who provide input on district gifted services programming include human resources departments, teacher unions, district assessment teams, special education specialists and English learner coordinators.

Program Development Process

There is no singular model for best serving gifted learners. Similarly, there is no one preferred way to develop a gifted program. As Arizona districts develop their gifted programs, the recommendations listed below may be considered.

- **Learn the established systems**. Developing meaningful and sustainable gifted programs take time and buy-in from multiple stakeholders (students, parents, teachers, administrators, and staff). District leaders may promote impact and longevity of their gifted programs by spending the first year establishing relationships and identifying educator and parent gifted philosophies.
- **Share information widely.** Present information and resources about the characteristics and needs of gifted learners with multiple stakeholder groups. Potential opportunities include parent meetings, staff meetings, book studies, administrator meetings, and social media platforms. Encourage questions and ask questions. Seek input and suggestions.
- **Provide professional development**. Utilize formal and informal methodologies to provide professional development (i.e. - Arizona Gifted Endorsement Educator Classes, campus-based professional development, district-directed professional development). Identify and prioritize the professional development needs of teachers.
- **Analyze and Apply Data**. Use school and district data to determine programming needs.

Equal Opportunities for Diverse Learners

Giving students equal access and opportunities to learn places increased importance in recognizing all learners, including gifted students. School entities that do not plan to meet the needs of their gifted and talented students, observe a decrease in achievement. English learners and students with special needs continue to be disproportionately underrepresented in identified gifted populations.[28] Districts and charter networks may increase positive practices by adopting a bias toward inclusion, especially for younger children. Special considerations when scheduling time should be paid to students who may qualify for gifted services and other service needs. Students should be able to maximize support for gifted learning as well as applicable supports for special education needs, English language learning, and other relevant services.

[28] Peters & Johnson (2023)

Section 5: Gifted Instruction and Methodologies provides resources for teachers of gifted learners in how to differentiate lessons.

Planning Considerations for Gifted Services

Primarily, school district leaders must determine the learning needs of their gifted and talented students. Connecting students to "good-fit" services must be based upon students' individualized needs. In addition, practical considerations such as the amount of service time available from gifted educators should be thoughtfully addressed. Environmental considerations such as location should be considered. All gifted service models should be facilitated by a gifted endorsed educator.

Planning for Gifted Services[29]

Instructional Needs of Gifted Students	***Service Time Available from Gifted Teachers***	***Connecting Environmental Needs to Instructional Practice***
Services must be based upon learner strengths and the unique learner needs per data.	*Full-time* gifted teachers provide instruction to gifted learners for 5 hours daily	*Gifted Resource Room*: Only eligible gifted students may be included.
Scheduling for gifted services must be student-driven and provide for service options across multiple content areas	*Part-time* gifted teachers provide instruction to gifted learners for 2 hours, 15 minutes daily (split a.m./ p.m. schedule). Gifted support for general education teacher to supplement.	*Co-Teach*: Roughly 8-10 students are clustered into the general education classroom according to their area of strength. Co-teaching occurs daily, during the entire class period.
Gather data from multiple sources to place students (# gifted identified per grade, benchmark/ district		*Support Facilitation*: Gifted students are grouped into their general education classroom

[29] Peters, Scotts, & Brulles, D., (2017)

assessments, student interests, and teacher observation).	according to areas of strength.

For programs and services to be effective they need to address the school population. This includes the students, the staff, administrative support, and the community, all of whom provide valuable information and different perspectives to consider when building programs and services. School and district initiatives and state mandates must also be factored heavily.

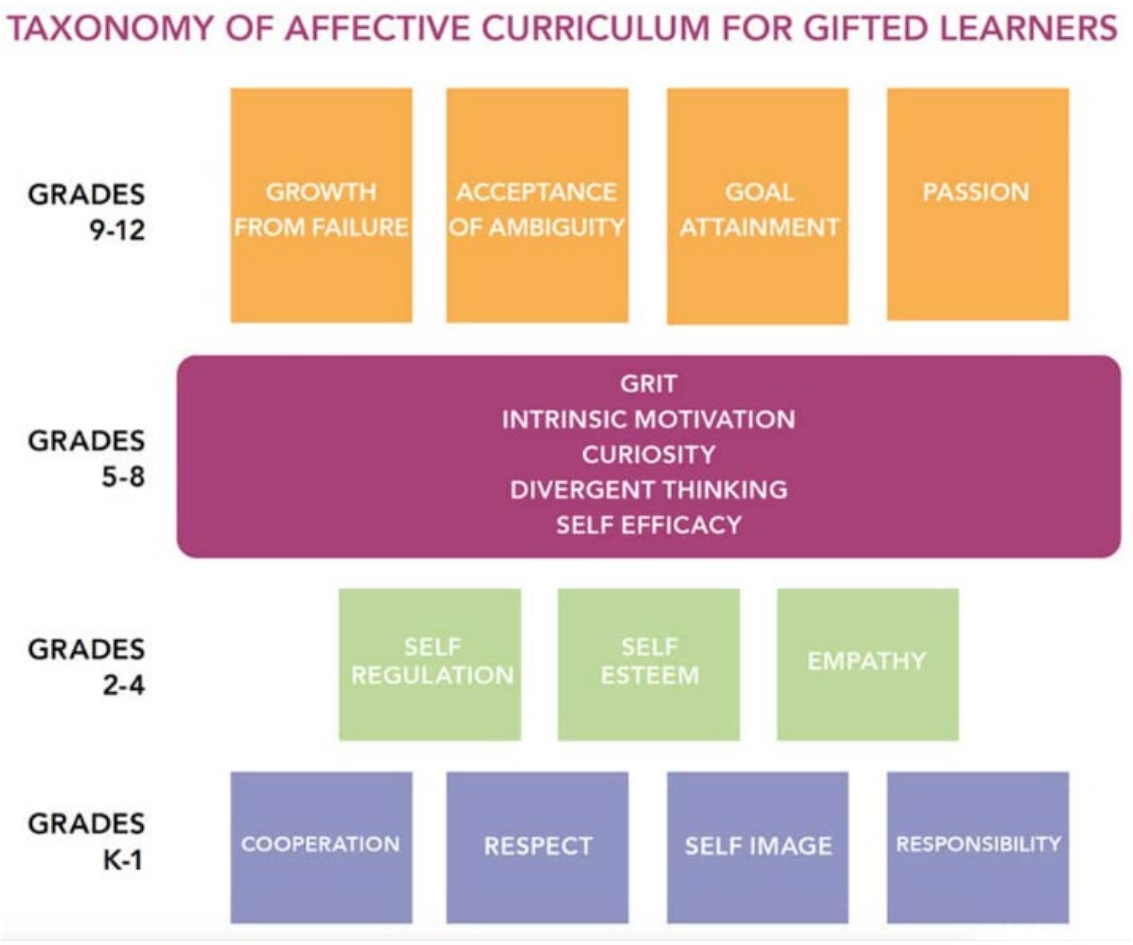
Affective Supports and Learning

Affective supports for gifted learners are critical to the success of a gifted program. Gifted learners need support with both internal emotional challenges and peer interaction. It has been noted that the intellectual components may outpace the emotional components of development leading to an asynchrony. Additionally, gifted learners experience an intensity in experiencing the world that warrants specific guidance.

> Giftedness has an emotional as well as intellectual component. Intellectual complexity goes hand in hand with emotional depth. Just as gifted children's thinking is more complex and has more depth than other children's, so too are their emotions more complex and more intense.[30]

Cavilla's taxonomy of affective curriculum for gifted learners outlines a K-12 progression of affective topics addressing the internal components and peer interactions for gifted learners.

[30] Sword, L., (2001)



Cavilla's taxonomy of affective curriculum begins in kindergarten with basic social skills. As students progress through their school career, the taxonomy adapts with the changing needs of gifted learners.

[31]

Empowering Your Community: Supporting Gifted Programming

Gifted students thrive when their unique learning needs are met. This extends beyond the classroom walls, and a strong community – including parents, families, and the broader public – is essential for a thriving gifted program. This guide provides school districts with resources and strategies to engage the community and foster a supportive environment for gifted programming.

Engaging Your Community

Families of gifted students and resources within their communities are a crucial part of the growth of gifted individuals.

[31] Cavilla, D. (2020)

- **Website and Social Media:** Develop a dedicated website section showcasing program goals, student successes, and opportunities for involvement. Utilize social media platforms to share program updates, event announcements, and resources.
- **Community Meetings and Events:** Organize information sessions and workshops to educate parents and families about gifted education, identification processes, and program offerings. Host events like career fairs, science expos, or game nights that showcase student talent and engage the broader community.
- **Parent Advisory Committees:** Establish a parent advisory committee to provide feedback, suggest program improvements, and foster communication between parents and educators.
- **Mentorship Programs:** Connect community professionals with gifted students for career exploration, project guidance, and real-world learning experiences.
- **Partnerships with Local Organizations:** Collaborate with libraries, museums, universities, or businesses to offer enrichment opportunities, field trips, or guest lectures for gifted students.

Building Bridges

- **SchoolConnectaz.org:** Leverage this platform to connect your school's gifted programs with businesses, faith-based organizations, and the broader community.
- **Collaboration:** The school actively fosters partnerships with families, schools, businesses, industries, and community organizations. This includes civic and service groups, helping professionals, and other schools serving gifted students.
- **Family Support:** Resources, education, and support programs are specifically designed for families with gifted children in third grade.
- **Resource Hub:** A dedicated team locates, develops, and shares relevant resources, programs, and materials to benefit gifted learners.
- **Educator Training:** Professional development opportunities are offered to ensure educators are well-equipped to meet the unique needs of gifted students.

Advocacy and Recognition

- **Public Awareness:** The school strives to increase public understanding and support for the specific needs of gifted students in third grade.

- **Connecting Peers:** Opportunities are created for gifted students to connect with other gifted individuals within the broader community, fostering a sense of belonging and shared experiences.
- **Building a Network:** The school encourages and supports the development of local and state organizations dedicated to gifted education.

Gifted Education Supports: A Breakdown

Here's a breakdown of the previously mentioned gifted education supports along with information on Mentorships, Independent Study, Correspondence Courses, Concurrent Enrollment, and Affective Needs:

1. Mentorships:

- **Description:** Mentorship programs connect gifted students with professionals or experts in their areas of interest. Mentors can provide guidance, answer questions, and offer real-world insights into potential careers.
- **Benefits:** Increased motivation, exposure to new ideas, career exploration, and development of professional skills.
- **Considerations:** Match mentors with student interests, ensure clear communication and expectations, and provide training for mentors on gifted learners.

2. Independent Study:

- **Description:** Allows gifted students to delve deeper into topics of their choice beyond the regular curriculum. This can be done within the classroom or at home.
- **Benefits:** Develops research and self-directed learning skills, fosters intellectual curiosity, and allows students to pursue passions.
- **Considerations:** Provide clear guidelines and expectations, offer support for research and project management, and ensure independent study complements, not replaces, regular coursework.

3. Correspondence Courses:

- **Description:** Gifted students can enroll in self-paced courses offered through mail, online platforms, or universities.

- **Benefits:** Access to advanced coursework not available in the school district, allows for in-depth exploration of specific subjects, and offers flexibility in scheduling.
- **Considerations:** Ensure courses align with student interests and learning goals, provide guidance and support for completing coursework, and monitor student progress.

4. Concurrent Enrollment:

- **Description:** Allows high school students to enroll in college-level courses while still attending high school.
- **Benefits:** Earns college credits while in high school, accelerates academic progress, and provides a taste of college-level rigor.
- **Considerations:** Students need strong academic preparation and time management skills, ensure course articulation with the intended college, and monitor student workload to avoid burnout.

5. Guidelines for Serving Students:

- **Differentiation:** Instruction should be tailored to challenge gifted students. This can involve tiered assignments, open-ended projects, or allowing students to work ahead with teacher guidance.
- **Curriculum Compacting:** Once students demonstrate mastery of a topic, they can move on to more advanced material without having to repeat information they already know.
- **Choice and Voice:** Provide opportunities for gifted students to have choices in their learning experiences and a voice in their education.

6. Affective Needs of Gifted Learners

- **Understanding:** Gifted students can experience challenges related to their affective needs, which encompass their social, emotional, and motivational aspects. These challenges may stem from asynchronous development, perfectionism, or a heightened sense of justice.
- **Support:** Provide a supportive environment that acknowledges and addresses the unique affective needs of gifted learners. This may involve:
    - Social Skills Development: While academics are important, gifted students may also need support developing social skills like communication, cooperation, and conflict resolution. Teachers may need training on how

to provide these skills to students. Integrate social-emotional learning activities that teach communication, collaboration, and conflict-resolution skills.

        - Peer Interaction: Facilitate opportunities for gifted students to interact with peers at similar academic levels. This can be through cluster grouping or after-school clubs. Deeper connections and conversations can be a benefit.
    - Emotional Development: Students may need help in learning how to regulate their emotions and learning how to identify and manage emotions.
    - Counseling or Support Groups: Offer opportunities for gifted students to connect with peers who share similar experiences or access counseling services to address social or emotional concerns.
    - Developing a Growth Mindset: Help students develop a growth mindset that emphasizes effort and learning from mistakes over fixed intelligence.
- **Considerations:** Educators should be trained to recognize the signs of affective needs in gifted students and collaborate with parents, counselors, and social workers to develop a comprehensive support plan.

7. K-8 Classroom Supports Based on Student(s) Needs:

- **Tiered Instruction:** Provide multiple pathways within a lesson to cater to different learning paces and abilities.
    - **Open-Ended Tasks:** Encourage critical thinking with questions that have multiple solutions. "How can we use these blocks to create something that shows the seasons?"
    - **Choice Boards:** Offer students options for how they demonstrate their learning. This allows gifted students to choose more complex projects or presentations.
- **Enrichment Activities:** Offer challenging and engaging activities that extend beyond the core curriculum.
- **Early Differentiation:** Start differentiating instruction early to address advanced learning needs from the beginning.
- **Differentiated Activities:** Create multi-level activities within a lesson. For example, all students might research a planet, but gifted students could delve deeper into its formation or moons.

- **Collaboration:** Encourage collaboration on projects to allow gifted students to learn from and support their peers.
- **Cluster Grouping:** Strategically group students for short periods based on similar interests or abilities to allow for peer collaboration and challenge.

By implementing these supports, schools can create a nurturing environment that fosters the academic, social, and emotional growth of all gifted learners across PreK-12. Remember, the most effective approach will involve a combination of these strategies, tailored to meet the specific needs and interests of each gifted student.[32]

External Supports for Gifted Education in PreK-12 Schools

Beyond the internal supports offered within a school district, there are valuable external resources that can enrich gifted education services:

Professional Organizations:

- **National Association for Gifted Children (NAGC)**: NAGC provides a wealth of resources, professional development opportunities, and advocacy for gifted education.
- **The Davidson Gifted Education Institute**: Offers online resources, professional development, and programs specifically designed for gifted learners.
- **Supporting Emotional Needs of the Gifted (SENG)**: Focuses on understanding and supporting the social-emotional needs of gifted students.
- **American Mensa**: Provides additional resources, websites/agencies with information about supporting the gifted learner K-12 and beyond.
- **Institute for Educational Advancement**: Advocates support, services, and resources for gifted learners and their families.

Collaborations and Networking:

- **American Association for the Gifted and Talented (AAGT)**: AAGT offers resources and networking opportunities for gifted education professionals.
- **Networking with Other Districts**: Connect with neighboring districts with strong gifted programs to share best practices, resources, and professional development opportunities.

[32] NAGC (year)

Community and Enrichment Programs:

- **Guest Speakers**: Invite professionals in various fields to speak to students about their careers and spark interest in potential pathways. Consider industry professionals who have an understanding of gifted learners.
- **Museums, Science Centers, and Universities**: Partner with local institutions to offer field trips, lectures, or workshops that cater to the advanced interests of gifted students.
- **Online Resources and Competitions**: Utilize online platforms with educational games, coding challenges, or writing competitions that allow students to engage in self-directed learning and compete with peers across the globe.
- **After-School and Summer Programs**: Explore after-school enrichment programs or summer camps focused on STEM (Science, Technology, Engineering, and Math), arts, or creative writing to provide additional challenges. Consider programs which are problem-based and/or those which are cross-curricular in nature.

Additional Considerations:

- **Funding**: Seek grant opportunities or explore partnerships with community organizations to secure funding for gifted education programs and resources. Partner with agents within your organization/district who can aid in accessing funding sources, such as Title IV-A.
- **Advocacy**: Encourage parents and educators to advocate for gifted education within the school district and at the county and state level.

By harnessing a combination of internal and external resources, a school district can create a comprehensive gifted education program that caters to the diverse needs and interests of all gifted learners across PreK-12. Remember, ongoing collaboration, professional development, and a commitment to providing enriching experiences are crucial for fostering the full potential of gifted students.

Conclusion

In conclusion, gifted education in the state of Arizona provides vital services. Gifted programs and services elevate the academic integrity for all learners by providing meaningful pathways for students to reach their fullest potential. This is achieved with a carefully aligned curriculum spanning K-12, highly qualified gifted educators, supportive

district and building administration, and responsive leadership from state and local agencies.

Arizona Funding Options for Gifted Education Services

Considering Arizona's specific funding sources, here's a breakdown of how a district/school can address gifted education services:

District/School

M&O (Maintenance & Operations):

- This is the Arizona base funding a district receives, and a portion can be allocated toward gifted programs.

School-Level Funding:

- Fundraising: Organize fundraising events or seek donations from parents, businesses, and community organizations to support gifted programs.
- Partnerships: Collaborate with local universities, museums, or cultural institutions to offer enrichment programs or guest speakers at minimal or no cost.
- Public School Tax Credit: This program allows taxpayers to claim a tax credit for cash contributions or certain fees paid directly to a public school in Arizona. The credit is capped at *$400 for married filing jointly and $200 for all other filing statuses.* Examples include:
    - Extracurricular Activities: This could include funding enrichment programs or competitions specifically geared towards gifted students.
    - Character Education Programs: If the program focuses on areas like critical thinking, creativity, or problem-solving, it might qualify under this category.
    - Standardized Testing Fees for College Readiness: This could be relevant if the testing helps identify gifted students or place them in appropriate advanced courses.

Arizona Specific:

AzEDS Group B Add-on Weight: This new weight (0.007) provides additional funding for identified gifted students scoring at or above the 97th percentile on a state-approved test.

Federal Funding:

- Title IV-A Student Support and Academic Enrichment Grant: While not specifically for gifted education, these funds can be used to support programs like AP/IB courses that benefit gifted students. This could include covering exam fees or providing additional resources for these programs.

Additional Funding Considerations:

- Rural Low-Income School Grant: If applicable, these funds can be used to support gifted education in rural, low-income schools.
- DeSeg Funds: Explore if these desegregation funds can be used to support gifted programs, particularly for promoting equity and access.
- Impact Aid: For districts receiving Impact Aid, explore if these funds can be used to supplement gifted education programs, especially in areas with high concentrations of military families.

Remember:

- Data-driven decisions: Track program effectiveness and return on investment to justify continued funding for gifted education programs.
- Focus on equity: Ensure funding is allocated in a way that provides access to gifted education for all students, regardless of background.
- Community engagement: Partner with parents, educators, and community stakeholders to advocate for gifted education and explore funding options.
- Transparency and Accountability: Communicate how gifted education funds are being used and demonstrate the positive impact on student outcomes.

By combining these funding sources with cost-effective program design and a focus on data and equity, Arizona school districts can create sustainable gifted education programs that benefit all students. Remember, advocating for dedicated funding and demonstrating the program's value are crucial for long-term sustainability.

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Gifted Programming

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Section 4:
Gifted Programming

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Creating Gifted Programming

Gifted programming outlines how the district will address the academic course offerings and services that are an integral part of the regular school day as described in ARS §15-779. Arizona gives latitude to individual school districts to tailor the gifted programming to the needs unique to the locality. As such, the details of gifted programs may differ from district to district.

While reviewing the gifted programming details, consider the impact on the three essential elements for gifted services (instructional expertise, learning pathways, and affective supports and learning) as well as the guiding questions below.

Guiding Questions

- What gifted programs should I implement based on my school/district needs?
- What is the difference between "provisions" and "programs" for gifted students?
- What do fair and impartial programs look like?

Gifted Program Terminology Defined[33]

TERM	DEFINITION
GIFTED SERVICES	The supports a school or district uses to place and educate gifted students. Gifted services may include counseling, instructional expertise, community involvement, and educational programs. Gifted services may include only one specific program model, or a range of program models provided in one educational setting.
GIFTED PROGRAM MODEL	A specific plan for delivering gifted services. Models typically refer to an established plan for grouping and teaching gifted students.
PROVISIONS	Instructional methods or strategies to broaden student's understanding.
INSTRUCTIONAL INTERVENTIONS	Program elements or strategies used to teach new skills or apply skills in new situations. Interventions are a type of provision.

[33] Peters, S., & Brulles, D. (2017)

Critical Elements of Effective Gifted Programs

Essential elements of a comprehensive gifted education[34] program include flexible grouping, curriculum differentiation, continuous progress, intellectual peer interaction, instructional continuity, and teachers with specialized training in gifted education. In Arizona, teachers of gifted learners are required to obtain their Arizona Gifted Endorsement.

Below is an extensive listing of effective gifted programs available at a multitude of tiers of service. It should be noted that the state of Arizona requires schools to provide gifted services for students who score at or above the 97th percentile in the areas of Verbal, Quantitative, and Nonverbal on a state-approved gifted assessment. The state also allows districts to provide gifted programs for students who score below the 97th percentile.

As Arizona school districts design programming to meet the rigorous needs of gifted learners, it is important to consider opportunities for special populations of gifted learners, including Culturally and Linguistically Diverse gifted students and Twice-Exceptional students.

Considerations for Equity in Gifted Programming Models[35]

PROGRAM MODEL	POSSIBLE BARRIERS	SUGGESTED SOLUTIONS
SELF-CONTAINED/ FULL TIME GIFTED (SCG)	When placement requires evidence of high achievement Using a one-size fires-all instructional approach within the self-contained class	Also have a cluster grouping model in the school if the self-contained class is restrictive academically to some gifted students. Create a SCG program based solely on high ability, without the requirement for high achievement.

[34] Clark, B. (2012)
[35] Brulles, D., Landsdowne, Kl, & Naglieri, J (2022)

CONTENT REPLACEMENT/ HONORS	When participation requires demonstration of high achievement When instruction is predominately based on acceleration	When serving gifts students through honors classes, also have a cluster grouping model if the honors program is restrictive academically to some groups. Create an honors program that includes students who demonstrate high ability, regardless of their achievement levels.
ITINERANT/ ENRICHMENT	When students are removed from a homeroom class for services When students must be bussed to a different school for services	Include enrichment classes at each school site and each grade level in the school, rather than bussing students to a different school.
CLUSTER GROUPING/FLEXIBLE GROUPING	When grouping models are confused with tracking When groups are formed solely by achievement levels	Make sure that all students who demonstrate high ability are included in gifted cluster classes regardless of the students' levels of achievement.

Identifying a Program Model

Identifying a program model should be determined by the needs of your gifted student population. Offering a continuum of services is ideal to address the vast range of gifted students' learning needs. Some gifted students need acceleration in some or all content areas, some need enrichment, and some need a combination of both.[36]

When choosing a program model or combination of program models, consider the 4 elements described in Section 3: Gifted Services: varied needs, program model types, student count, and program administration.

[36] Peters, S. & Brulles, D (2017)

ARIZONA DEPARTMENT OF EDUCATION

Gifted Program Models

This companion piece to the Best Practices Toolkit for Gifted Education in Arizona provides a quick-reference guide to choosing the best gifted program model. Identifying a program model or combination of models should be determined by the needs of your gifted student population. The program model is one part of the comprehensive gifted services.

Model Type	Duration	Overview
Gifted School 	Full-Day	An education environment consisting of all self-contained gifted classroom models. Benefits: School-wide acceleration and enrichment options are easier to plan. Considerations: Whole group acceleration does not replace individualized differentiation.
Self-Contained Gifted Classroom Model (SCG) 	Full-Day	A class consisting of gifted learners for academic acceleration and enrichment (in-depth) learning. Students participate in regular school activities. Benefits: Gifted students benefit from group differentiation and collaboration with peers. Considerations: Whole group acceleration does not replace individualized differentiation.
Cluster Grouping Model *School-Wide *Total 	Full-Day	Small group of gifted students within a mixed-ability classroom. School-wide cluster grouping selects all gifted learners in 1 class while the total cluster grouping model spreads the gifted students across a few classes. Both methods narrow the ability range of a classroom allowing for easier differentiation for gifted students. Benefits: Gifted students benefit from group differentiation and collaboration with peers. Considerations: Not to be confused with tracking (permanent assignments with lessons geared to the average ability level).
Gifted Pull-Out Model *Content Replacement or Honors *Enrichment Model 	Partial Day*	Removes gifted students from regular class to work with other gifted students in a specialized class. Content replacement or honors classes provide opportunity for course-specific content acceleration. Enrichment models provide an opportunity to develop in-depth explorations of content. Benefits: Gifted students benefit from group differentiation and collaboration with peers for specific classes. Considerations: Differentiation in other classes may be needed in addition to the pull-out course.
Gifted Push-In Model 	Partial Day*	Instructor works with gifted student 1:1 or in small groups within the regular classroom during specific academic times. Benefits: Gifted learners benefit from content differentiation. Considerations: This model lacks gifted collaboration. Contingent on reliable, routine scheduling.

Gifted Students 

Students 

Instructor 

* Partial Day models **may not** be sufficient to meet the ARS requirement "to provide an educational program that is an integral part of the regular school day." Consider how the gifted student(s) will be supported for the remainder of the school day/week.

[Gifted Education Program Models]

Full-Time Gifted School

Definition

An entire school where all the classrooms are self-contained gifted, full-time homogeneous classrooms, at every grade level in the school in which all curriculum areas are appropriately challenging and complex.

General Information

A program of services offered to a group of gifted children of the same or multiple grade levels, usually housed in a single school, in which all curriculum areas are appropriately challenging and complex. Full-time homogeneous classrooms, usually one homogeneous classroom distinct from several general classrooms at each grade level in the school in which all curriculum areas are appropriately challenging and complex[37].

Benefits

- The self-contained gifted setting offers a shared philosophy and vision for meeting the academic and affective needs of gifted students in a structured and consistent environment.
- Eases the delivery of appropriately differentiated curriculum to learners with similar educational needs.
- Facilitates the use of appropriately differentiated instructional strategies to learners with similar educational needs.
- Provides opportunities for students of similar abilities or performance levels to learn from each other.
- Has positive impact on affective needs of gifted students?
- All students are strategically placed for maximum growth opportunity.
- The special area classes also incorporate best teaching practices for gifted students.
- School-wide events are designed with gifted students and their families in mind.

[37] NAGC, (2009) Grouping

Recommendations

- Provide school-wide acceleration options. Each grade level can start with the grade level above standards, then differentiate for students who are needing scaffolding.
- Best teaching and learning practices should be utilized.
- Curriculum resources should be adopted that support these teaching practices.
- Grade level teachers should work in teams. Multiple teachers working at the same grade level allows for authentic and creative lesson planning.
- Establish a school-wide model for teaching and practicing social skills, emotional regulation, and executive functioning skills.

Duration of Services

Full-day, year-round service model for the grades served at the school campus.

Placement

- Students who score at or above the 97th percentile on national norms in any one of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board approved list.
- Local norms can be used to identify students in comparison to others of the same age, experience, and environment.

Staffing Considerations

****All educators working with gifted learners should have or be actively working toward earning an Arizona Gifted Endorsement.* This includes special area teachers and administrators.

Training should also be provided for support staff regarding the nature and needs of gifted children, including executive functioning skills, Dabrowski's Overexcitabilities, and Asynchrony.

KEY FACTORS	CONSIDERATIONS	OPPORTUNITIES
BRICK & MORTAR OPTIONS	Is there a building available? Will the building fit the needs of the program?	What is working well? What areas may be improved? Develop a timeline.
POPULATION	How many students will you serve? Are there enough to fill a building? What will the enrollment process look like? Will transportation be needed?	Are your identification practices sufficient for identifying students in your district? How are you advertising and making the community aware of the opportunity?
MEANINGFUL INSTRUCTION	How will classroom instruction be differentiated to reflect the accelerated and advanced learning abilities of gifted learners? How will instructional content, process, product, environment, and assessment be adjusted to reflect gifted learner needs?	What team-teaching or co-teaching models are you using across the grade level? What additional resources and materials may be needed to support the classroom? Identify additional resources that may be needed to accommodate differentiation.
MEETING AFFECTIVE LEARNER NEEDS	How will educators support gifted learners' affective needs?	Gifted learners' intellectual development may surpass their affective abilities (asynchronous development). Ensure that curricular decisions are made with the affective needs of gifted students in mind.

KEY FACTORS	CONSIDERATIONS	OPPORTUNITIES
SCHOOL CULTURE	How will you establish a collective vision at your school? How will you align school-wide events to showcase student abilities and accomplishments?	How often is the community invited to campus? How is school pride instilled and showcased? Do all students, families and teachers feel heard?
PRACTITIONER ROLES & RESPONSIBILITIES	How will the certified and classified staff, Principal and District Gifted Coordinator align their efforts to meet student needs?	Define roles.
PROGRAM EVALUATION	How can school leaders promote continuous improvement for teachers and administrators? How might district leaders assess effectiveness?	Develop a process and plan for evaluating the effectiveness. School administrators can track student achievement using standardized and district assessments. Conduct regular classroom walk-throughs. Collect and utilize data to understand how behavior and affective needs of students are met.

Self-Contained Gifted Classroom Model

Definition

Self-contained gifted classrooms are full-time homogeneous classrooms, usually one homogeneous classroom distinct from several general classrooms at each grade level in the school in which all curriculum areas are appropriately challenging and complex.

General Information

This grouping practice gathers children of similar potential or ability together. Grouping gifted learners tends to be the "least restrictive environment" in which their learning can take place, and the most effective and efficient means for schools to provide more challenging coursework, thereby giving these children access to advanced content and providing them with a peer group.[38]

Benefits

- The self-contained setting offers a structured and consistent environment.
- Eases the delivery of appropriately differentiated curriculum to learners with similar educational needs.
- Facilitates the use of appropriately differentiated instructional strategies to learners with similar educational needs.
- Provides opportunities for students of similar abilities or performance levels to learn from each other.
- Has positive impact on affective needs of gifted students?
- All students are strategically placed for maximum growth opportunity.

Duration of Services

- Full-day, year-round service model

Placement

- Students who score at or above the 97th percentile on national norms in any one of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board approved list

[38] NAGC, (2009) Grouping

- Local norms to identify students in comparison to others of the same age, experience, and environment.

Staffing Considerations

In a typical self-contained gifted classroom, one teacher per grade level works with gifted students. Depending upon gifted identification and unique conditions at the school, there may be more than one self-contained gifted classroom per grade level or a split grade-level classroom.

****All educators working with gifted learners should have or be actively working toward earning an Arizona Gifted Endorsement.*

Considerations

- How can we create a continuum of services that builds on itself through the grades? Elementary gifted services should be vertically aligned with secondary services.
- Are gifted students receiving services commensurate with their abilities, does the intensity or rigor match their needs?
- How will the self-contained gifted instruction be differentiated by instructional need? Frequency, intensity, and/or duration? Will you differentiate pace? Content? Processing? Products? Strategies?

Differentiation within General Classrooms- Cluster Grouping

Definition

Cluster Grouping represents a purposeful, mixed-ability placement for gifted and all learners. In this model, gifted students are grouped to address their academic and affective learner needs in the least restrictive environment.

General Information

Gifted learners acquire information differently than other students. Giftedness reflects how the brain processes information. Grouping gifted children is a standard practice within many exemplary gifted education programs. There are many approaches to clustering gifted learners. Research bolsters the use of meaningful grouping practices to meet the needs of gifted and all learners.[39]

Benefits

1. High achievement and continued academic progress for gifted and all learners.
2. Reduce the range of learners in an academic setting to enhance teacher efficacy with lesson planning and instructional delivery.
3. Promote effective differentiation practices to meet student academic needs.
4. Gifted students learn together while avoiding permanent grouping arrangements (i.e. - tracking).
5. Support for gifted learner affective needs.
6. Provide a classroom environment that promotes effective learner collaboration.
7. Gifted learners benefit from a full-day service model.
8. Minimal financial cost to school districts.

Recommendations

1. Meaningful opportunities for grouping learners should be available throughout a student's entire K-12 learning trajectory. Districts should decide on a district-wide approach for placing students into a cluster classroom that benefits gifted learners.

[39] NAGC, (2009) Grouping r

2. Effective applications of cluster grouping are dependent upon the context of individual school districts. Considerations for implementation include the values and specialized needs of administrators, teachers, schools, and the community.
3. Cluster grouping compliments many other pull-out, gifted service models, including advanced and accelerated courses.
4. Professional development is needed to ensure educator efficacy with implementing differentiated instructional strategies. A cluster grouping classroom may utilize differentiated curriculum materials. In these situations, professional development is needed to support teachers' ability to effectively utilize these materials.
5. Teachers working with gifted learners are encouraged to earn their Arizona Gifted Endorsement. The Arizona Department of Education offers several pathways for teachers to earn their gifted credentials.

Duration of Services

Cluster grouping provides gifted students with a full-day service model. It represents one important component of a comprehensive program for gifted students. While students may be "pulled out" for content replacement classes, they spend the majority of their instructional day within the cluster classroom placement.

Grouping of Students

Identified gifted students can be placed in a cluster grouping environment in many ways. Effective grouping structures depend upon the philosophy adopted by the school district. Two models are typically used concerning effective cluster grouping. Both models are research-based and address the needs of gifted and all learners.

1. ***Schoolwide Cluster Grouping Model***[40]
   With the Schoolwide Cluster Grouping Model, gifted learners are grouped into classrooms based upon their cognitive abilities. All other students are placed by their achievement levels. The Schoolwide Cluster Grouping Model carefully structures classroom compositions to ensure a balance of abilities without

[40] Brulles, D. & Winebrenner, S. (2019)

tracking. The Schoolwide Cluster Grouping Model reduces the learning range found in each classroom, to promote differentiation across the grade level. The Schoolwide Gifted Cluster Model ensures all gifted identified students receive academic and affective supports. High achievement is maintained in all classrooms.

2. ***Total Cluster Grouping Mode***[41]
   In the Total School Cluster Grouping Model, students are identified by their academic achievement levels, not cognitive ability. The Total Cluster Grouping Model places the highest-achievement students in one classroom, regardless of gifted identification. Groups of 3-10 high-ability students are placed in classrooms with students of other achievement levels. Teachers differentiate instruction for high-ability learners. Educators in the Total School Cluster Grouping Model demonstrate an interest in working with gifted and high-achieving learners. High achievement is maintained in all classrooms.

Cluster Classroom Placement:

Utilizing Cluster Grouping creates balance among all classes and makes the spectrum of learning smaller for each teacher. Classroom placement may be adjusted in a variety of ways to meet student needs. In a typical Cluster Classroom, gifted students are placed in a classroom setting with a gifted endorsed teacher to meet their academic and affective needs.

Gifted Cluster Classroom Composition

30 students in 3 classrooms	Gifted	High Achieving	Average	Below Average	Far Below Average
Classroom A	**6**	**0**	**12**	**12**	**0**
Classroom B	**0**	**6**	**12**	**6**	**6**
Classroom C	**0**	**6**	**12**	**6**	**6**

[41] Gentry, M. (2021)

Beyond Cluster Grouping: Equitable Achievement Grouping[42]

1. Achievement grouping is only appropriate when the curriculum and/ or programmatic experiences are different from the generalized program.
2. Placement is most effective when schools use data from multiple measures (i.e. - test scores and class performance).
3. Placement into Achievement Grouping structures should be continually assessed and adjusted to allow for regroupings and multiple entry points.

Components of an Effective Cluster Classroom

1. Differentiation
2. Instruction reflecting depth and complexity
3. Flexible grouping
4. Intellectual peer interaction
5. Continuous learner progress
6. Teachers with specialized training

Staffing Considerations

In a typical cluster grouping structure, one teacher per grade level or content area works with gifted students. Depending upon gifted identification and unique conditions at the school, there may be more than one gifted cluster classroom per grade and content area.

****All educators working with gifted learners should have or be actively working toward earning an Arizona Gifted Endorsement.*

Required Skills for Cluster Grouping Teachers

1. Recognize and nurture typical learner behaviors.
2. Understand and support the affective needs of gifted learners.
3. Utilize gifted strategies such as compacting to allow gifted learners to demonstrate previous mastery of concepts.
4. Allow for acceleration or provide opportunities for compacting of new material.

[42] *"Building a Wider, More Diverse Pipeline of Advanced Learners"*, (2023)

5. Include opportunities for students to apply concepts with depth and complexity.
6. Build from gifted students' passionate interests with independent applications and research projects.
7. Provide regular opportunities for flexible grouping structures for the entire class.
8. Encourage students to work independently on learner-directed tasks.
9. Participate in ongoing professional development.
10. Possess and appreciate a sense of humor.
11. Strong classroom management skills in conjunction with flexible structures.

Cluster Grouping Key Factors, Considerations, and Opportunities

KEY FACTORS	CONSIDERATIONS	OPPORTUNITIES
GIFTED PROGRAMMING	What gifted services are currently offered in the school and district? What are the long and short-term goals? How are gifted students receiving services if they are not high academic achievers?	What is working well? What areas may be improved? Develop a timeline for implementation.
PURPOSEFUL PLACEMENT	How are gifted, high-achieving, and all students placed across the grade levels? What measures are in place to avoid tracking?	How might professional development be leveraged to support administrators, gifted specialists, and cluster teachers? Develop a plan for staff development and training.
MEANINGFUL INSTRUCTION	How will classroom instruction be differentiated to reflect the accelerated and advanced learning abilities of gifted learners?	What additional resources and materials may be needed to support the cluster classroom?

	How will instructional content, process, product, environment, and assessment be adjusted to reflect gifted learner needs?	Identify additional resources that may be needed to accommodate differentiation.
MEETING AFFECTIVE LEARNER NEEDS	How will educators support gifted learners' affective needs?	Gifted learners' intellectual development may surpass their affective abilities (asynchronous development). Ensure that curricular decisions are made with the affective needs of gifted students in mind.
SCHOOL CULTURE	How will the cluster classroom placement align with various grade-level configurations and parallel programs (i.e. – English Learner services, Dual Language Immersion, etc.)?	How might the cluster grouping structure vary by school and/ or grade level? Design a plan for student placement that aligns with the unique school culture.
PRACTITIONER ROLES & RESPONSIBILITIES	How will the campus Cluster Teacher, Gifted Specialist, Principal and District Gifted Coordinator align their efforts to meet student needs?	Define gifted educator and administrative roles for supporting cluster grouping.
COMMUNICATION	How will cluster grouping be communicated to students, teachers, parents, and the community? How will parents know if their child is eligible for placement	How might digital platforms be leveraged to support cluster grouping placement and corresponding communication? Create a communication plan that is understood and shared

	into a gifted cluster classroom?	across multiple platforms (i.e. – district website, teacher website, gifted program handbook, parent events, etc.). How will parents be involved in understanding the cluster grouping model?
PROGRAM EVALUATION	How can school leaders promote continuous improvement for teachers and administrators? How might district leaders assess effectiveness?	Develop a process and plan for evaluating the effectiveness of the gifted cluster placement. School administrators can track student achievement using standardized and district assessments. Conduct regular cluster classroom walk-throughs.

Gifted Pull-out: Content Replacement/Honors

Definition

Content Replacement classes, sometimes referred to as honors classes, allow gifted students to learn core content (most commonly Language Arts and Mathematics) at an accelerated and/or enriched level daily. These classes are typically provided to gifted learners in lieu of the standard grade-level curriculum.

Benefits

Gifted learners working with peers with similar ability levels has led to research outcomes for higher levels of student interest and engagement as well as significant skill progress. Teachers can easily differentiate instruction with compacted curriculum or subject-matter advancement when gifted learners are grouped together by grade or grade band.

Duration of Services

Identified gifted students are pulled from class daily, for a scheduled amount of time, with gifted peers. The amount of time students spend in services may be scheduled during the regular content time for the general education class.

Placement

- Students who score at or above the 97th percentile on national norms in any one of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board approved list.
- Local norms to identify students in comparison to others of the same age, experience, and environment.

Staffing Considerations

This pullout model requires additional staffing, though it can also reduce the class sizes in the general education classes in these content areas, as gifted students leave their regular classroom for instruction in these core classes. Grades are assessed by the gifted teacher, as the gifted teacher is the teacher of record for the subject area/s. Students are with their gifted peers in an environment that nurtures their special needs.

Considerations

Offering content replacement classes requires that grade levels schedule core content area classes at the same time period each day. (Gifted students are pulled out of the regular classroom for gifted language arts during language arts instruction in the regular classroom). Cohesive instruction is provided in targeted content areas.

Teachers using this model, need to modify their instructional methods to accommodate the diverse needs of the gifted students in their classes. As with instruction in other models, content replacement classes require that teachers incorporate rigor, acceleration, depth and complexity, and advanced curricula according to the student's learning needs. [43]

****All educators working with gifted learners should have or be actively working toward earning an Arizona Gifted Endorsement.*

Gifted Pull-Out Enrichment Model

Definition

The gifted pull-out enrichment model pulls identified gifted learners from their general education class to work with gifted peers. Enrichment models pull out gifted learners based on subject matter or special interest.

General Information for Pull-out Enrichment Gifted Programming

Program Outcomes & Evaluation

Set clear outcomes for the program using the gifted programming standards outlined by the National Association for Gifted Children. Then determine how the program will be evaluated: additional assessments, portfolio of work, showcases of student learning, etc.

These programs typically focus on developing critical, creative, metacognitive, and problem-solving skills beyond what the general education classroom provides. Students tackle increasingly complex, authentic problems through inquiry and problem-based learning.

[43] Peters, Scott, & Brulles, D. 2017)

Aligning Programming & Identification Practices

Decide on district-wide criteria for placing students to align with programming; consider that students are pulled from the general education classroom to attend services in this programming model.

Additionally, regardless of the area(s) they qualify in, all gifted students attend the same program. Therefore, curriculum and instructional development are imperative to meet the academic needs of a diverse student population.

Duration of Services

Identified gifted students are pulled from class 1-2 days per week, for a scheduled amount of time, with gifted peers. The amount of time students spend in services may vary from a few hours to a full day. Each district should work with their district & school leaders to determine how much time is appropriate based on programming goals and learners' needs.

Grouping of Students

Identified gifted students can be grouped in a variety of ways. Districts may consider the following when deciding how create classes/groups of students:

- Population of students
- Student strength and needs
- Mixed age or same grade
- Staffing allowance

Staffing

Staffing can also be flexible. There are two general staffing structures for pull-out enrichment: (1) one teacher per site; (2) one teacher at multiple sites.

****All educators working with gifted learners should have or be actively working toward earning an Arizona Gifted Endorsement.*

Funding

Consider what funding allocation is necessary based on the above guidance and additional considerations & opportunities below. Funding should consider identification processes, student population, program outcomes, staffing, curriculum resources, etc.

Comparing Other Key Factors for Gifted Programming

KEY FACTORS	CONSIDERATIONS	OPPORTUNITIES
CONSISTENCY OF PROGRAMMING	Determine a structure for evaluating whether the curriculum plan provided is aligned with needs of learners and the program goals.	New teacher onboarding is simplified when there are clear plans for gifted learner outcomes.
SCHOOL & COMMUNITY PARTNERSHIPS	Determine what is loose and tight for best practices in gifted education. Questions to consider: (1) To what extent will different programs (if applicable) be consistent across the district? (2) What type of community support might be needed to align with programming outcomes?	Allows for innovation and agency as educators come together to determine instruction based on programming outcomes and student needs. Invite members of the community to participate in the learning process, providing authentic opportunities for students to demonstrate their learning.
ACCESS TO SERVICES	May require additional gifted personnel, transportation, and/or some adjustment to service time.	Allows all gifted learners to have access to services, regardless of their location.
SCHOOL & TEACHER SUPPORT	Clearly define the gifted teacher role and responsibilities, especially if the teacher works at multiple schools within the district. Establish other expectations	Develop a flexible and enriched curriculum tailored to meet the diverse needs of gifted students across various grade levels.

	for services including interruptions to services, opt-out processes, testing & school event conflicts, professional learning, etc.	Establishing district expectations for pull-out programming may result in more effective gifted programming for learners.
	Provide general guidance for how gifted teachers will support learners in the general education classroom.	Consistency of programming allows for clearer teacher expectations, which may keep good educators in the organization.
PROGRAM SCHEDULING	Coordinate with schools and/or district personnel to create schedules that minimize disruption to regular classroom learning while allowing adequate time for pull-out services.	Facilitate opportunities for gifted students to work together, fostering a community of learners who can challenge and support each other.
SYSTEMS OF COMMUNICATION	Determine a system for determining when services should be interrupted, and how that information will be communicated with different stakeholders.	Gifted educators are more involved in the communication and decision-making process. Create a system to allow students to advocate for their educational needs: interests, strengths, and areas for growth, allowing them to explore subjects more deeply.

Push-In Program Model (Co-Teaching)

Definition

Gifted resource teachers push gifted instruction into general education classrooms to work with gifted students at a particular grade level on a regularly scheduled basis (commonly for one period a week). Instruction in this model usually consists of enrichment activities designed to develop creativity and critical thinking.

General Information

Common characteristics of a push—in model include co-teaching with a gifted specialist and the classroom teacher to develop related lessons. Push-in program models follow the co-teaching models including simultaneous instruction, team teaming, and rotation teaching.

Benefits

Benefits include reduced teacher-to-student ratio, increased instructional options and student engagement time. Gifted learners benefit from differentiated curriculum, small-group support, and models of teamwork.[44]

Recommendations

1. Schedule regular collaboration time and plan jointly
2. Cluster gifted students and use differentiated lessons/materials.
3. Think of both teachers as specialists.

Duration of Services

Identified gifted students are grouped with a push-in teacher for a scheduled amount of time. The amount of time students spend in services may vary from a few hours for single-subject co-teaching to a full day. Each district should work with their district & school leaders to determine how much time is appropriate based on programming goals and learners' needs.

Placement

[44] Christensen, M., (2021)

- Students who score at or above the 97th percentile on national norms in any one of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board approved list
- Local norms to identify students in comparison to others of the same age, experience, and environment.

Considerations

Gifted Specialists must distribute their time across grade levels and content areas to regularly collaborate with classroom teachers and work with all students. Planning time and collaboration allows staff to develop and offer differentiated lessons and identify instructional materials that meet the needs of the students they serve. Other concerns include meshing teaching styles and preferences.

The classroom may also hold more distractions for small groups. Scheduling for multiple grade levels may be difficult without student missing other classes or activities.

During times of school budget cuts, itinerant teaching positions are oftentimes identified as an area in which to reduce staffing because it represents an added position not critical to student's daily instruction.[45]

****All educators working with gifted learners should have or be actively working toward earning an Arizona Gifted Endorsement.*

[45] Peters, S, & Brulles, D. (2017)

Provisions and Interventions

It is crucial when creating effective gifted programs, that they reflect the diverse needs of the school or district's gifted students, which differ across schools, districts, regions, and or states. A uniform curriculum doesn't cater to all, nor will one standard gifted program. Educators need to identify the spectrum of learning needs for the gifted students they serve, and purposefully plan ways to foster, challenge, and expand their development.

> *"Developing program models for gifted students rests with the states or school districts within a state. {There is} no single best way to develop programs for these students, who are so varied in their interests, talents, abilities, and learning styles. Thus, programs should be flexible and dynamic, multi-leveled, and designed to meet the individual needs of each child who receives services. The goal is to expand students' abilities, not just to establish a program."*[46]

Provisions and Interventions are tools to consider for different students and different circumstances. No one provision or intervention is perfect, works in isolation, or works for every student. Each can be seen as part of a repertoire of tools that should be considered to address the varying needs of gifted students. Interventions can be both large and small scale, such as steps a classroom teacher can implement daily to ensure all students are engaged and learning. Interventions typically include content enrichment/and or acceleration and can be accomplished in various ways in multiple settings by a teacher[47].

Program provisions, or interventions, should only be considered as part of comprehensive programming, *not in lieu of* formal gifted programs. Popular provisions and interventions such as flexible grouping strategies, differentiated instructional strategies, content enrichment, and acceleration, are provisions that benefit all students at all levels; gifted students need them at higher levels to engage in appropriately challenging curriculum and instruction.[48]

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[46] Landrum et al. (2001)
[47] Peters, S., & Brulles, D. (2017)
[48] Peters, S., & Brulles, D. (2017)

Gifted Programming Provisions[49]

METHOD	WHO BENEFITS
FLEXIBLE GROUPING STRATEGIES	All students can benefit from flexible grouping, as it allows them to learn with peers according to readiness, pace, learning style, interest, and other factors.
DIFFERENTIATED INSTRUCTIONAL STRATEGIES	All students benefit from the instruction differentiated according to their learning needs. These strategies should be available to all students, regardless of their learning levels. Students with advanced learning needs and those with learning challenges can benefit the most.
CONTENT ENRICHMENT	All students can benefit from content enrichment, and it should be made available to students learning at all levels. Instruction for gifted students is sometimes provided through an itinerant gifted teacher during pull-out periods.
ACCELERATION	Students who are advanced academically in one or more areas benefit from content acceleration. This acceleration can occur in specific subject areas within a regular classroom, in any gifted classroom, or across grade levels. Some highly advanced students may benefit from full grade-level acceleration, especially when the other forms of acceleration are not available or are not sufficiently challenging.

Flexible Grouping Strategies

Grouping gifted children provides a purposeful way for gifted practitioners to provide effective instruction. The research on grouping strategies is consistently positive for gifted students.[50] Flexible grouping provides pathways for all learners to achieve high levels of achievement. Students are placed into flexible groupings by one or more criteria, including learning styles, abilities, interests, and readiness levels. Common

[49] Peters, S., & Brulles, D. (2017)
[50] NAGC, (2009)

grouping frameworks may have rigid or fluid structures. Flexible groups may represent one of the grouping frameworks below.[51]

GROUPING FRAMEWORK	*STRUCTURE*
Ability-Based	Groups based on standardized assessments of intelligence.
Interest-Based	Groups based on learner interest.
Performance-Based	Groups based on student performance on a particular task or assessment.
Readiness-Based	Groups based upon a student's readiness to learn a particular skill.
Preference-Based	Groups based upon a student's preferred mode of learning.
Objective-Based	Groups based upon a unit of study or learning objective.

Differentiated Instructional Strategies

Differentiation is a provision that includes (a) the design and/or selection of curriculum, (b) the selection and use of instructional practices, including grouping strategies, varied resources, and variations to the pacing of instruction, and (c) the assessment of learning, all of which rely on assessment evidence demonstrating learner differences. Differentiation is a necessary provision; however, it is not sufficient by itself to serve as a comprehensive gifted program.[52] Differentiation is supported when school districts provide the following opportunities:

- Access to curricular resources that are designed for gifted students.
- Systematic and substantial professional development for all teachers.
- Qualified resource specialists who support the classroom teacher with assessing gifted learner differences, making adjustments to the curriculum, and implementing differentiated instruction.

[51] Brulles, D. & Brown, K., (2018)
[52] NAGC, (2014)

No one provision or intervention is perfect, works in isolation, or works for every student. General strategies for effective differentiation include:

- Compacting
- Tiered Lessons
- Learning Stations
- Flexible Grouping

Content Enrichment

Content enrichment activities build upon the regular curriculum to offer greater context for students to increase their depth of understanding. Enrichment elaborates upon the basic concepts taught within the general education classroom. Enrichment is offered to all learners, including those who are gifted and talented. Content enrichment does not change the pace or rate of instruction for students. Rather, it adjusts the content being taught. Content enrichment is frequently included as a "replacement activity" within the compacting cycle. As students demonstrate mastery of previously learned concepts, they may be provided with other meaningful learning opportunities.

Content enrichment may include:

- Choice Boards
- Extension Menus
- Research-Based Projects
- Problem-Based Learning
- Projects Including Depth and Complexity

Acceleration Models

Acceleration is a cornerstone of gifted education practices, with more supporting research than any other in the literature on gifted individuals. Acceleration involves providing pathways for students to move through traditional educational organizations more rapidly, based on readiness and motivation. Acceleration serves multiple purposes.[53]

- Adjust the pace of instruction to match the student's capability.

[53] NAGC (2024)

- Provide appropriate levels of challenge to develop a sound work ethic.
- Avoid the boredom from repetitious learning.
- Reduce the time necessary for students to complete traditional schooling.

The most current research and guidance on acceleration opportunities suggest a multifaceted approach for school districts.[54] Effective demonstrations of acceleration include the following provisions:

- Gifted Preschool
- Early Entrance to Kindergarten
- Whole Grade Acceleration
- Single Subject Acceleration
- Grade-Compressed Pathways
- Concurrent/ Dual Enrollment
- Advanced Placement, Honors, and International Baccalaureate Courses (Grades 6-12)
- Continuous Progress with Advanced Education Programs (Elementary, Middle, High School)
- Intentionally Recruit Underrepresented and Underserved Students for Advanced Learning

Culturally and Linguistically Diverse Gifted Students (CLD)

Gifted learners are found in all cultural groups. Gifted programming should foster inclusionary practices that allow all students to feel accepted and valued. Culturally and Linguistically Diverse Gifted Students (CLD) respond with strength-based approaches that reflect culture as value added. NAGC (2011) outlined four dimensions that are pivotal in relevant gifted programming:

- Dimension #1: Culturally Sensitive Identification Protocols
    - Multiple criteria in assessment
    - Combination of formal, informal, and dynamic assessments
- Dimension #2: Early and Continuous Access to Advanced Curriculum
    - Culturally responsive curriculum
    - Inclusionary practices for placement into advanced courses

[54] Fordham Institute, 2023

- Dimension #3: Essential Supports for CLD Gifted Students
    - Establishment of cohort groups for CLD students
    - Culture-specific mentoring programs
- Dimension #4: Effective Home, Community, and School Connections
    - Meaningful relationships across home, school, and community
    - Advocacy training for CLD families

Twice-Exceptional Learners (2E)

There is no universally accepted definition to describe twice exceptional or 2E learners. Emily Kircher-Morris in *Teaching Twice-Exceptional Learners in Today's Classroom (2021)* explains that "A twice-exceptional learner is a student who is both cognitively gifted and has a disability as defined by federal or state eligibility criteria. The term twice exceptional has expanded to include gifted children with any educational, neurodevelopmental, or mental health diagnoses that may entitle them to services through an IEP or a Section 504 plan."

Programming for twice-exceptional learners may differ according to their specialized and individual needs. While programming for 2E learners may vary between districts, addressing the needs of neurodiverse learners should provide the following inclusionary practices.

Incorporate a Strength-Based Approach

- Lead goal setting and instructional design from a place of students' strengths.

Normalizing neurodiversity

- Identify 2E students and adults who are successful because of their uniqueness.
- Identify and use the language of the discipline.

Teaching students about neurodiversity

- Create a culture of respect.
- Teach students to understand functionality of the brain.

Self-Advocacy for 2E Learners

- Help students understand and accept their own neurodivergence.
- Teach students how to request accommodations and modifications.

Considerations for Equity in Gifted Programming Models[55]

PROGRAM MODEL	POSSIBLE BARRIERS	SUGGESTED SOLUTIONS
SELF-CONTAINED/ FULL TIME GIFTED (SCG)	When placement requires evidence of high achievement. Using a one-size fits-all instructional approach within the self-contained class.	Also have a cluster grouping model in the school if the self-contained class is restrictive academically to some gifted students. Create a SCG program based solely on high ability, without the requirement for high achievement.
CONTENT REPLACEMENT/ HONORS	When participation requires demonstration of high achievement. When instruction is predominately based on acceleration.	If the honors program is restrictive academically to some groups also have a cluster grouping model Create an honors program that includes students who demonstrate high ability, regardless of their achievement levels.
ENRICHMENT/ ITINERANT	When students are removed from a homeroom class for services. When students must be bussed to a different school for services.	Include enrichment classes at each school site and each grade level in the school, rather than bussing students to a different school.
CLUSTER GROUPING/ FLEXIBLE GROUPING	When grouping models are confused with tracking. When groups are formed solely by achievement levels.	Make sure that all students who demonstrate high ability are included in gifted cluster classes regardless of the students' levels of achievement.

[55] Brulles, D., Landsdowne, Kl, & Naglieri, J (2022)

A Vision for Shared Responsibility of Gifted Learners

Ensuring success for gifted learners is a responsibility that extends beyond the classroom. Wraparound services for gifted learners require the collective attention and understanding of district administrators, school administrators, and classroom teachers.[56]

District Responsibility – Developing Policies and Programs				
Leadership & Commitment to Excellence	**Defensible Identification**	**Services & Curriculum**	**Stakeholder Support**	**Evaluation of Program Effectiveness**

- Aligning the philosophy, goals, and commitment for the development of students with advanced potential with district goals for the development of all students
- Creating flexible policies regarding student placement to meet the needs of individual students
- Requiring specific training for teachers who have responsibility for students with advanced potential.
- Ensuring that curriculum for gifted students is mapped and articulated K-12 for systematic development of their academic potential.
- Organizing services, programs, classes, personnel, and student placements to facilitate the delivery of advanced and differentiated curriculum.
- Designing and implementing a multifaceted identification plan that includes measures that are valid and reliable and that will find those students with outstanding performance and those with potential for outstanding from all culture groups.
- Involving the stakeholders in the planning of services, in communicating about the program, and designing the evaluation of the effectiveness of those services

[56] Speirs Neumeister, K & Burney, V (2010)

Building Responsibility – Leadership Implementation			
Fidelity of Services	**Support for Differentiation**	**In-Depth Gifted Education Training**	**Assessing Teacher Effectiveness**

- Aligning the implementation of student services with the district design
- Facilitating the delivery of services for students, such as scheduling classes to facilitate differentiation of student instruction through grouping and collaboration
- Providing leadership in the analysis of student achievement data
- Providing in-depth training opportunities in gifted education to maximize both teacher and student performance
- Addressing parental concerns for the appropriate academic challenge for individual students

Classroom Responsibility	
Differentiating Instruction	**Monitoring Achievement**

- Using the developed curriculum and differentiating instruction with students with advanced potential
- Monitoring the achievement of students with advanced potential
- Educating oneself on the unique affective cognitive needs of gifted students

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Gifted Instruction & Methodologies

Section 5

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Section 5:
Gifted Instruction and Methodologies

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National Standards for Gifted Programming

2019 NAGC Programming Standard 3: Curriculum Planning and Instruction

"Educators need to develop and use a comprehensive and cohesive curriculum that is aligned with local, state, and national standards, then differentiate, accelerate, and/or expand it. Curriculum must emphasize advanced, conceptually challenging, in-depth, and complex content. Educators need to possess a repertoire of evidence-based instructional strategies in delivering the curriculum.

(a) to develop students' talents, enhance learning, and provide students with the knowledge and skills to become independent, self-aware learners, and

(b) to give students the tools to contribute to a diverse and global society.

The curriculum, instructional strategies, and materials and resources must engage a variety of gifted learners using practices that are responsive to diversity.[57]"

The National Association for Gifted Children (NAGC) Pre-K-Grade 12 Gifted Education Programming Standards are a set of guidelines designed to ensure gifted and talented students receive an education that meets their unique needs. The NAGC Gifted Standards apply across grade bands and subject-specific material.

- **Focus on Student Outcomes:** The standards set goals for what students should achieve, rather than dictating specific teaching methods. This ensures flexibility for teachers while keeping the focus on student learning.

- **Highlight Six Core Standards:** Emphasizing different aspects of creating a comprehensive gifted program, including:
    - Student development (cognitive, affective, social, etc.)
    - Assessment strategies to identify gifted students.
    - Curriculum design and differentiated instruction.
    - Creating supportive learning environments
    - Program development and management.

[57] NAGC Standards. (2019)

- Professional development for educators

The Gifted Instruction and Methodologies section focuses on the 3rd standard; curriculum design and differentiated instruction.[58]

3.4. Instructional Strategies[59]

Students with gifts and talents demonstrate their potential or level of achievement in their domain(s) of talent and/or areas of interest.

- 3.4.1. Educators select, adapt, and use a repertoire of instructional strategies to differentiate instruction for students with gifts and talents.
- 3.4.2. Educators provide opportunities for students with gifts and talents to explore, develop, or research in existing domain(s) of talent and/or in new areas of interest.
- 3.4.3. Educators use models of inquiry to engage students in critical thinking, creative thinking, and problem-solving strategies, particularly in their domain(s) of talent, both to reveal and address the needs of students with gifts and talents.

3.5. Instructional Strategies[60]

Students with gifts and talents become independent investigators.

- 3.5.1. Educators model and teach metacognitive models to meet the needs of students with gifts and talents such as self-assessment, goal setting, and monitoring of learning.
- 3.5.2. Educators model and teach cognitive learning strategies such as rehearsal, organization, and elaboration.
- 3.5.3. Educators scaffold independent research skills within students' domain(s) of talent.

[58] Read the full NAGC Standards.
[59] NAGC Standards. (2019)
[60] NAGC Standards. (2019)

Differentiation for Gifted Learners

In Accordance with Arizona Revised Statute[61]

The Arizona Revised statute for gifted education specifies that each school district will develop and implement a scope and sequence to support curriculum modifications for gifted students. The differentiation should be commensurate to the academic abilities and potential. Arizona statute specifically addresses the importance of differentiation for gifted students in 4 ways. content, process, product, and environment. Each key area will be systematically addressed:

- **Content:** Adjusting content extends beyond teaching the standard curriculum by offering richer materials, more complex concepts and accelerating material.
- **Process:** Adapting the learning process adjusts how the student acquires content information[62] allowing for a variety of engaging activities like independent research or debates that challenge gifted minds.
- **Product**: Adapting products or tangible artifacts for gifted learners by providing options to showcase learning. These may include creative projects, or in-depth research papers. Student autonomy to choose how they represent learning is encouraged. This approach is crucial for gifted students as it keeps learners engaged, fosters critical thinking skills, and allows a demonstration commensurate to potential.
- **Environment:** Differentiating the physical learning environment means creating a safe and positive learning space that allows for movement, collaboration, and independent work. A differentiated environment caters to diverse learning styles and fosters a sense of agency for gifted learners.

Misconceptions About Differentiation

More of the Same: When they finish a task or master a skill, gifted learners are given the same skill, but more of it. “More of the Same” is not differentiation and can cause disinterest and classroom inattention. The incentive to complete work diminishes as they are granted access to more work.

[61] Arizona Revised Statute. (2024, January)
[62] Pennsylvania Association for Gifted Education (2024)

Instructional Support: When finishing early, gifted learners may be given teacher-aide responsibilities to occupy their time rather than provide meaningful learning opportunities. Gifted learners do not make the best tutors for classmates and while purposeful collaboration and grouping is appropriate, “student teaching” can isolate and de-motivate gifted learners from completing classwork.

Free Play: Unstructured time for playing games, reading books, creating crafts does not constitute instructional differentiation.

Content Differentiation

Differentiating content for gifted learners means providing learning materials and activities that are tailored to their advanced abilities. Instead of a "one-size-fits-all" approach, it acknowledges that gifted students need a deeper challenge to stay engaged and continue learning.

Key aspects of differentiating the content:

- **Complexity:** Offering materials with richer vocabulary, more intricate concepts, or a wider range of perspectives compared to the standard curriculum.
- **Depth:** Going beyond surface-level understanding by encouraging analysis, synthesis, and evaluation of information; adjusting levels of Bloom’s Taxonomy and/or Depth of Knowledge.
- **Acceleration:** Moving ahead in the curriculum through pretesting, targeted instruction of unknown skills and advancing to the next level of standards within the content area.

By differentiating content, educators can ensure gifted students are appropriately challenged and motivated to reach their full potential.

Process Differentiation

Differentiating the process for gifted learners focuses on tailoring the way students learn and engage with the material, rather than changing the content itself. It acknowledges that gifted students might grasp concepts quickly and benefit from a more stimulating learning experience.

Key aspects of differentiating the process:

- **Varied Activities:** Offering a range of activities. This could include research projects, simulations, debates, or independent study opportunities.
- **Depth of Exploration:** Encouraging gifted students to delve deeper into topics by providing challenging research questions, open-ended tasks, or opportunities for independent exploration beyond the core curriculum. Ask higher order thinking questions to support a deeper dive into learning.
- **Tiered Instruction:** Providing tiered activities with varying levels of complexity or difficulty. When developing your learning targets with lower levels of rigor, create a "challenge" learning target with more complex or advanced levels of thinking. Read the Strategy Cards for "Tiered lessons" to learn how to adjust and tier lessons for a gifted student in the general education classroom.

By differentiating the process, teachers can ensure gifted students are actively engaged in the learning, challenged to their full potential, and have opportunities to develop critical thinking and problem-solving skills.

Product Differentiation

Differentiating products for gifted learners focuses on providing a variety of ways to demonstrate understanding and showcase learning. A good project allows learners to apply skills, extend understanding, employ critical thinking, harness creativity, and reflect on learning.

Key aspects of differentiating the product:

- **Choice and Student Voice:** Offer gifted learners options on how to demonstrate learning. Empower them to choose formats that align with their strengths and interests, fostering deeper engagement. Choice menus allow students to show what they know through different modalities such as presentations, songs, models, poems, etc.
- **Variety in Complexity:** Product options range from simple presentations to more complex projects like in-depth research papers, simulations, creating websites, or even composing musical pieces or artistic creations allowing gifted learners to showcase progress through formats that can accommodate their advanced abilities. A teacher can modify the task to better meet the needs of gifted learners without adjusting content.

- **Focus on Depth and Application:** The emphasis for gifted learners should be on demonstrating a deep understanding of concepts, applying knowledge creatively, and proposing innovative solutions to real-world problems. Connecting the depth of knowledge at the highest levels will provide a starting point for creating authentic product tasks for gifted and talented students.

By differentiating products, teachers can gain a richer understanding of what gifted learners have absorbed and how they can apply their knowledge in unique ways. It allows them to demonstrate their critical thinking, problem-solving, and creativity beyond the limitations of traditional assessments and provides an opportunity to showcase their talents.

Environment Differentiation

Differentiating the environment for gifted and talented learners means providing a space in which these students can thrive. While environments are initially determined by class lists and student schedules, accommodations for gifted learning needs can be addressed at the classroom level.

Key aspects of differentiating the environment:

- **Physical Space:** Flexible classroom space is a benefit for gifted and talented students whose emotional intensities co-exist with their intellectual abilities. Quiet work zones, solo study areas, and partner and group activity space acknowledge the variety of ways students accomplish their learning tasks. Allowing gifted students to choose their environment for some of their assignments empowers them to identify and use their strengths for maximum learning.
- **Student Grouping:** Studies show that when gifted learners are grouped with similarly motivated and intelligent peers, they advance as much as a whole year.[63] In contrast, heterogeneously grouped gifted learners, especially when there is a large range in ability, have unmet needs for challenge and pace. This can lead to less engagement, less time on task, underperformance, etc. Working with intellectually similar students creates agency for those involved and provides the academic stimulation needed to thrive.
- **Accommodating a Faster Learning Rate:** Most classrooms need a routine for

[63] Davidson Institute. (2021)

"I'm done, what next?" These routines are especially important for gifted students who need less practice and repetition to master concepts. These situations are opportunities for gifted students to thrive and grow through independent study, depth and complexity extensions, and practice of more advanced skills.

By differentiating the environment through physical space and student grouping, teachers support gifted learners' success with strategies designed to help them thrive.

Differentiating Curriculum

Implementing Curriculum Designed for High-Ability Learners

In its position statement on *Differentiating Curriculum and Instruction for Gifted and Talented Students*, the National Association of Gifted Children recommends that in order for a focus to remain on learning and continued growth, gifted students should be provided with access to curricular resources designed for advanced learners.

Curriculum Compacting in General Education for Gifted and Talented Learners

Curriculum compacting[64] is a technique for differentiating instruction that allows teachers to make adjustments to curriculum for students who have already mastered the material to be learned. Options include replacing content that students already know with new content and providing enrichment/extension activities. Teachers have numerous options when determining how to most effectively differentiate for their high-ability learners. Curriculum compacting is one technique designed to assist teachers as they make appropriate adjustments to the curriculum.

Curriculum compacting involves three steps:

1. Defining the goals and outcomes of a particular unit or segment of instruction.
2. Determining and documenting which students have already mastered most-to-all of a specified set of learning outcomes through pre-assessment.
3. Providing replacement strategies for material already mastered that enable a more challenging and productive use of the student's time.

[64] (Reis and Renzulli)

Curriculum Compacting: At a Glance

Step 1: Name It - Teachers determine the curriculum areas or skills to be considered for compacting – this may be an upcoming unit on fractions in math, a unit on the solar system in science, a Jamestown unit in social studies, or a new pattern within word study. Teachers should also consider any evidence that suggests the need for compacting (exceptional ability levels, advanced reasoning skills, speed with which child acquires new content, pre-assessment data).

Step 2: Prove It - Teachers document how mastery was determined. This may involve a variety of formal and informal assessments, particularly data gathered from pre-assessments and/or relevant data from nationally normed ability tests. Example: Sofia scored 87% on the unit assessment on fractions. Because she has demonstrated mastery, she will receive that score and will be provided with an alternative activity/task.

What is mastery?

Typically, 80%-90% is deemed mastery in education. It is important that educators take time to analyze their beginning of the year grade level assessments to determine which standards their students have already mastered.

Before teaching a unit, teachers ask, “Do my students already know this?”

- If the answer is NO, teach the unit and all the skills and standards in the unit.
- If the answer is YES, students who have demonstrated mastery receive alternative activities.

Step 3: Change It - Teachers/instructional teams determine procedures and tasks for compacting basic material. Working with the gifted resource teacher or gifted coordinator, teams make decisions about the instructional activities and environment with which students interact. This may incorporate advanced content, self-selected tasks, tasks focused on critical/creative thinking, extension activities, choice menus, learning contracts, working at a quicker pace, etc.

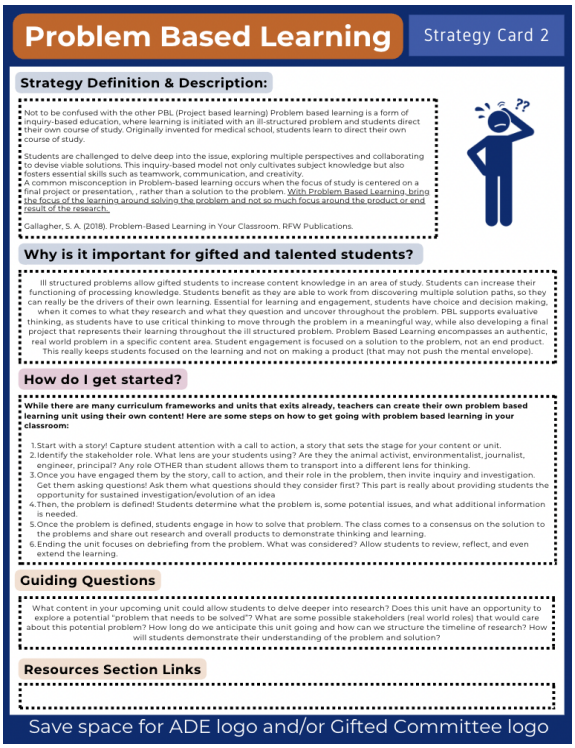
Curriculum Methodologies

Gifted learners are like sponges, eagerly soaking up knowledge and craving intellectual stimulation that often surpasses that of the standard curriculum. Specialized curriculum frameworks act as nutrient-rich pools, offering a vast array of enriched content and challenges that align with their exceptional abilities. These frameworks allow their inquisitive minds to dive deep into subjects, develop profound understanding, and continuously fuel their passion for learning.

Curriculum Methodology Cards

In this section, explicit strategies on the following curriculum methodologies are found. They are frameworks for instruction often used for the gifted and talented and can be used as an overlay to existing curriculum. In the form of a one-pager strategy card, each methodology card includes a description of the methodology, why it is important to gifted learners, instructional support and best practices, examples, guiding questions, and resources for use.

- Project Based Learning
- Problem Based Learning
- Interdisciplinary Studies
- Interactive Simulations



Curriculum Methodology Cards

Instructional Strategies

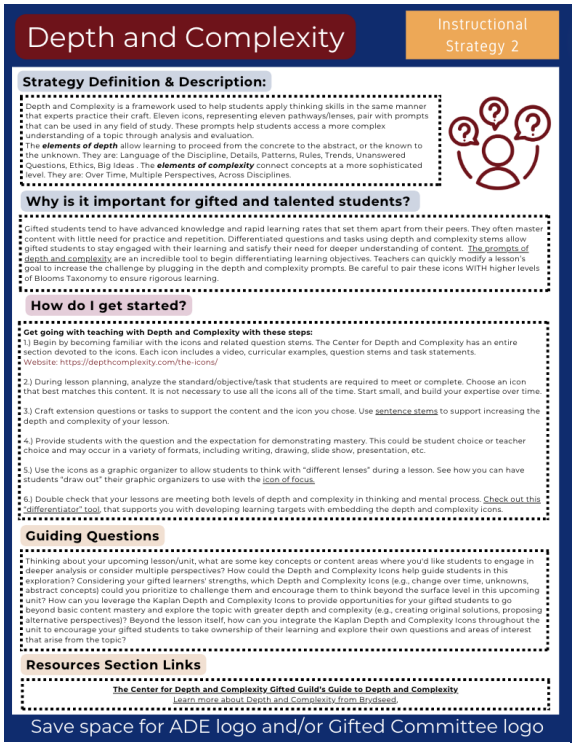
Implementing instructional strategies tailored for gifted learners is vital to challenge their advanced abilities and fuel their insatiable curiosity. Oftentimes, teachers are not provided with instructional methodologies for gifted learners in their educational coursework. Teachers have gifted learners in their classrooms every day. However, they lack access to strategies that are highly impactful and support the diverse needs of gifted and talented students. The strategies in this section below empower teachers to

differentiate content, processes, and products, offering engaging ways to elevate student learning tasks and provide adaptive ways for students to showcase their learning beyond traditional assessments.

Instructional Strategy Cards

In this section, explicit strategies on the following instructional strategies intending to provide instructional differentiation support to gifted learners can be used over any content or subject area. In the form of a one-pager strategy card, each strategy card includes a description of the strategy, why it is important to gifted learners, instructional support and best practices, examples, guiding questions, and resources for use.

- Active Questioning
- Depth and Complexity
- Divergent Thinking
- Evaluative Thinking
- Choice Boards
- S.C.A.M.P.E.R
- Tiered Lessons
- 6 Thinking Hats
- Socratic Seminar
- Synectics


Depth and Complexity

Instructional Strategy 2

Strategy Definition & Description:

Depth and Complexity is a framework used to help students apply thinking skills in the same manner that experts practice their craft. Eleven icons, representing eleven pathways/lenses, pair with prompts that can be used in any field of study. These prompts help students access a more complex understanding of a topic through analysis and evaluation.
The ***elements of depth*** allow learning to proceed from the concrete to the abstract, or the known to the unknown. They are: Language of the Discipline, Details, Patterns, Rules, Trends, Unanswered Questions, Ethics, Big Ideas . The ***elements of complexity*** connect concepts at a more sophisticated level. They are: Over Time, Multiple Perspectives, Across Disciplines.

Why is it important for gifted and talented students?

Gifted students tend to have advanced knowledge and rapid learning rates that set them apart from their peers. They often master content with little need for practice and repetition. Differentiated questions and tasks using depth and complexity stems allow gifted students to stay engaged with their learning and satisfy their need for deeper understanding of content. The prompts of depth and complexity are an incredible tool to begin differentiating learning objectives. Teachers can quickly modify a lesson's goal to increase the challenge by plugging in the depth and complexity prompts. Be careful to pair these icons WITH higher levels of Blooms Taxonomy to ensure rigorous learning.

How do I get started?

Get going with teaching with Depth and Complexity with these steps:
1.) Begin by becoming familiar with the icons and related question stems. The Center for Depth and Complexity has an entire section devoted to the icons. Each icon includes a video, curricular examples, question stems and task statements.
Website: https://depthcomplexity.com/the-icons/

2.) During lesson planning, analyze the standard/objective/task that students are required to meet or complete. Choose an icon that best matches this content. It is not necessary to use all the icons all of the time. Start small, and build your expertise over time.

3.) Craft extension questions or tasks to support the content and the icon you chose. Use sentence stems to support increasing the depth and complexity of your lesson.

4.) Provide students with the question and the expectation for demonstrating mastery. This could be student choice or teacher choice and may occur in a variety of formats, including writing, drawing, slide show, presentation, etc.

5.) Use the icons as a graphic organizer to allow students to think with "different lenses" during a lesson. See how you can have students "draw out" their graphic organizers to use with the icon of focus.

6.) Double check that your lessons are meeting both levels of depth and complexity in thinking and mental process. Check out this "differentiator" tool, that supports you with developing learning targets with embedding the depth and complexity icons.

Guiding Questions

Thinking about your upcoming lesson/unit, what are some key concepts or content areas where you'd like students to engage in deeper analysis or consider multiple perspectives? How could the Depth and Complexity Icons help guide students in this exploration? Considering your gifted learners' strengths, which Depth and Complexity Icons (e.g., change over time, unknowns, abstract concepts) could you prioritize to challenge them and encourage them to think beyond the surface level in this upcoming unit? How can you leverage the Kaplan Depth and Complexity Icons to provide opportunities for your gifted students to go beyond basic content mastery and explore the topic with greater depth and complexity (e.g., creating original solutions, proposing alternative perspectives)? Beyond the lesson itself, how can you integrate the Kaplan Depth and Complexity Icons throughout the unit to encourage your gifted students to take ownership of their learning and explore their own questions and areas of interest that arise from the topic?

Resources Section Links

The Center for Depth and Complexity Gifted Guild's Guide to Depth and Complexity
Learn more about Depth and Complexity from Brydeen!

Save space for ADE logo and/or Gifted Committee logo

Instructional Strategy Cards

Universal Design for Learning Framework

Universal Design for Learning (UDL) is essential for meeting the diverse needs of gifted and talented students. It allows for differentiated instruction, multiple means of engagement, representation, action, and expression. UDL promotes inclusivity, higher-order thinking skills, and the development of self-regulation and independence. By implementing UDL principles, educators can better support gifted students, ensuring they remain engaged, challenged, and able to reach their full potential.

“UDL is a framework to guide the design of learning environments that are accessible and challenging for all. Ultimately, the goal of UDL is to support learners to become “expert learners” who are, each in their own way, purposeful and motivated, resourceful and knowledgeable, and strategic and goal driven. UDL aims to change the design of the environment rather than to change the learner. When environments are intentionally designed to reduce barriers, all learners can engage in rigorous, meaningful learning.”[65]

Understanding UDL Principles

The three main principles of UDL:

- Multiple Means of Engagement: Tap into students’ interests, offer choices, and foster motivation.
- Multiple Means of Representation: Present information in different ways to accommodate various learning preferences.
- Multiple Means of Action and Expression**:** Allow students to demonstrate their knowledge in multiple ways.

<u>Assess Students’ Needs and Strengths:</u>

- Conduct assessments to understand the specific needs, strengths, and interests of your gifted students. This can involve formal assessments, observations, and conversations with students and their families.

<u>Set Clear Learning Goals:</u>

- Establish clear, challenging, and measurable learning objectives that are flexible enough to accommodate different pathways to success. Ensure these goals are appropriate for the advanced abilities of gifted students.

<u>Design Flexible Curriculum:</u>

- Offer Choices: Provide various options for students to explore content and demonstrate understanding. This can include project-based learning, independent studies, and opportunities for in-depth research.

[65] CAST. (2024)

- Advanced Content: Incorporate advanced materials and resources to challenge gifted students. Use enrichment activities, differentiated reading materials, and opportunities for acceleration.

Incorporate Technology:

- Utilize technology to provide personalized learning experiences. Tools like educational software, online courses, and interactive simulations can cater to the advanced learning needs of gifted students.

Provide Varied Assessment Methods:

Implement assessments that allow students to demonstrate their learning in diverse ways, such as presentations, portfolios, creative projects, and peer teaching.

Encourage Collaboration and Peer Learning:

Create opportunities for gifted students to work with peers who share similar interests or who can provide different perspectives. Group projects, discussion forums, and peer review sessions can be beneficial.

Create a Supportive Learning Environment:

- Flexible Seating and Workspaces: Arrange the classroom to accommodate different learning activities and preferences.
- Mentorship Opportunities: Connect gifted students with mentors who can guide them in their areas of interest.

Universal Design for Learning is designed to make learning more accessible for all students. Implementing a UDL program is recommended for districts looking to develop gifted education programs as benefits a wide range of student sub-populations including gifted learners.

Individualized Learning Plans

(Learning Goals, Accommodations, and Modifications)

Based on the needs and the capacity of the school and/or district, individualized learning plans may be created to provide teachers with a guide on how to support gifted learners within a general education classroom. Individualized Learning Plans (ILPs) for gifted learners are tailored to meet unique needs and abilities while also providing challenges to maximize potential. At times a gifted program may refer to these as DLP's (differentiated learning plans), or ALP (accelerated learning plans). While names vary, the intent is very similar.

Individualized Learning Plan Elements:

- Identification of strengths and areas for growth
- Personalized goals
- Acceleration and enrichment opportunities
- Flexible curriculum
- Differentiated instruction
- Support for affective needs
- Regular monitoring and evaluation
- Advocacy and support services

It is important to note that an ILP is optional and differs from an Individualized Education Program (IEP) which is legally required under the Individuals with Disabilities Education Act (IDEA). Students who are twice exceptional (2e) must have their IEP honored with fidelity while receiving gifted services. ILPs are not a replacement for an IEP, nor do ILPs supersede an IEP.

Why Individualized Learning Plans Benefit Gifted Learners:

Personalized Pace and Challenge: ILPs allow gifted learners to accelerate in subjects where they excel, ensuring they are continually challenged and engaged. They also address uneven skill development, providing targeted instruction to develop a well-rounded skill set.

Nurturing Interests and Talents: ILPs provide goals for gifted learners to delve deeply into areas of personal interest, fostering a love of learning and talent development.

Character Development: ILPs include strategies and resources to support the affective well-being of gifted learners with challenges including asynchronous development.

Enhancing Motivation, Engagement, and Maximizing Potential: ILPs help gifted learners reach their full potential by setting ambitious yet attainable goals and offering appropriate resources and regular feedback.

Encouraging Independence and Self-Advocacy: Through ILPs, gifted learners learn to set goals, monitor their progress, and advocate for their own learning needs.

Preparation for Future Challenges: ILPs might include advanced coursework and enrichment activities to prepare gifted learners for higher education and future careers. ILPs may also create an avenue for vertical alignment unique to the gifted learner.

Recognizing and Addressing Diverse Needs: ILPs cater to the diverse forms of giftedness, ensuring that each student's unique needs are met. Students with 2e or 3e combinations may benefit from an ILP to coordinate the various services.

How to get started:

Creating an Individualized Learning Plan (ILP) for a gifted learner involves several key steps:

1. Identify the need for an ILP based on performance, engagement levels, and areas of giftedness.
2. Assemble a team comprising the student, parents, teachers, gifted education specialists, and relevant school staff.
3. Gather comprehensive data on the student's academic performance, learning style, interests, and strengths.
4. Set specific SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) goals tailored to the student's abilities and interests.

5. Develop the ILP outlining any enrichment activities, and methods of instruction including accommodations* when deemed necessary. See the Gifted Learning Template for an idea on how an ILP can support students in class.
6. Implement the plan in the classroom with the support of all teachers and staff involved.
7. Monitor the student's progress and adjust the plan as necessary.
8. Involve the student in setting personal goals and self-monitoring their progress.
9. Ensure ongoing communication between all ILP team members (student, parents, teachers, gifted education specialists, and/or relevant school staff) with documentation of any classroom observations, assessment results, and any modifications to the plan.

*According to Arizona State Board of Education rules, "accommodations" refers to the provisions made to allow a student to access the general education curriculum and demonstrate learning. Accommodations do not substantially change the instructional level, content or performance criteria, but are made in order to provide a student with equal access to learning and equal opportunity to demonstrate what is known. Accommodations shall not alter the content of the curriculum or a test or provide inappropriate assistance to the student within the context of the test." [A.A.C. R7-2-401(B)(1)]

Gifted Enduring Understandings and Terminology Descriptions

TERM	DEFINITION & DESCRIPTION
RIGOR	Rigor is the result of work that challenges students' thinking in new and interesting ways. Rigor occurs when students are guided toward a sophisticated understanding of fundamental ideas and are driven by curiosity to discover what they don't know. Once the teacher has determined students' functional level, they can increase rigor by moving higher on the rubric, depth of knowledge, or taxonomy. For example, a teacher using Level One assessment would strive to move to Level Two, with the ultimate goal of reaching Level Four.[66]
DEPTH	Depth, in the context of gifted education, refers to a deep exploration of a content area. In contrast to general, surface-level understanding, various lenses are used to help students "think like a disciplinarian" and develop expertise knowledge. Developed by Sandra Kaplan, Bette Gould and Sheila Madsen in the 1990s, these lenses (and their accepted icons) include: big ideas, details, language of the discipline, rules, patterns, ethics, trends and unanswered questions. It is important to note that these lenses alone don't create depth; rather, they are a framework for crafting higher level learning tasks.[67]
COMPLEXITY	The complexity of content in a lesson, unit or course is determined by the density and sophistication of connections between concepts involved in it. In other words, it focuses on the interconnections among concepts, principles, generalizations and theories. Complexity differs

[66] Matusevich, Melissa N et al. (2009)
[67] Depth and Complexity Icons. (2024)

TERM	DEFINITION & DESCRIPTION
	from difficulty. Completing 35 fact-based questions can be difficult, whereas a problem-based question that requires a multitude of skills to complete is more complex. It can be difficult to tie your shoes 100 times. It is complex to tie your shoelaces into a sailor's knot. Some work focusing on expanding the complexity of thinking was developed in the mid 1990's by Dr. Sandra Kaplan, Bette Gould, and Sheila Madsen in the framework "Depth and Complexity." Its lenses/icons include over time, multiple perspectives and across disciplines.[68]
FLOW	Flow described by Csikszentmihalyi[69] is the balance between challenging work and skill level. Students with a low skill-level working with a low level of challenge are destined to be apathetic. Pump up the challenge without increasing skill and your students become worried and anxious. Correctly matching a student's level of skill with an appropriate challenge leads to flow. Engaged students experiencing flow are excited learners whose skill levels are matched to appropriate challenges.[70]
CREATIVITY	Creativity is the ability to generate new and innovative ideas. Creativity is often something quite natural for gifted learners and can be used in all classes. Gifted children tend to have the requisite "ingredients" to become highly creative adult contributors to the arts and sciences. To help gifted learners realize their creative potential, particular attention must be paid to the promotion and maintenance of their intrinsic motivation in the classroom. Creative-productive giftedness results in the production of

[68] Possibilities for Learning. (2024)
[69] Csikszentmihalyi, M. (2008)
[70] Byrdseed.

TERM	DEFINITION & DESCRIPTION
	original material and tangible products that are intended to be shared with and to impact others.[71]
LEARNING PREFERENCES	Gifted education research demonstrates that modifying the task to accommodate different learning preferences increased incentive and motivation in students to complete their specified learning tasks. Everyone has learning strengths. Most educators are familiar with the modes of visual, auditory, or kinesthetic learning. Tailoring lessons to learning styles can improve learning.[72]
MULTIPLE INTELLIGENCES	Howard Gardner first proposed the theory of multiple intelligences in his 1983 book *Frames of Mind*, where he broadens the definition of intelligence and outlines several distinct types of intellectual competencies. They are Visual-spatial, Linguistic-verbal, Logical-mathematical, Body-kinesthetic, Musical, Interpersonal, Intrapersonal and Naturalistic intelligences. The linguistic and logical-mathematical modalities are the most valued in school and society, but not all gifted learners shine in ELA or Math. Allowing students to demonstrate learning through their preferred modalities and strengths gives them agency in their learning tasks.[73]
NOVELTY	To create stimulating experiences for all students, educators should consider the novelty of both their curricular content and instructional delivery. Novelty is exposure to new material or varied modes or processes of learning, such as using a new technology tool during instruction. The novelty in content delivery is a way to engage students, especially when the content is not very

[71] Renzulli. (2022)
[72] Ballinger, V, & Ballinger, R. (1983)
[73] Garder, H. (1983)

TERM	DEFINITION & DESCRIPTION
	engaging to most learners. Examples include personalizing concepts and themes to achieve individualized meaning, express ideas in original and creative ways, and providing students with a completely original curriculum.[74]
TEACHING THINKING	Teaching students to truly think in an abstract and complex way requires a systematic approach and a variety of tools, including problem-solving and creative, critical and logical thinking strategies. An important component of maximizing the gifted brain is to teach thinking in addition to accelerated content. Development of students' understanding of these thinking tools improves higher level thinking and the ability to apply these tools across disciplines. Teaching "thinking" is a high impact strategy that can be used in any subject/situation.[75]
UNIVERSAL THEMES	Universal themes are overarching concepts that connect all learning throughout a unit, or throughout the year. These themes are abstract, organizing concepts that incorporate all subject areas. Examples include Change, Exploration, and Force. [76]
UNDERACHIEVEMENT	Underachievement is when gifted students perform below their potential. This can happen for many reasons, such as boredom, lack of challenge, or difficulty with affective needs. The seeming lack of motivation of many academically gifted students is an area of frustration and concern for many parents and teachers. The opportunity for interesting, independent, and authentic projects provides gifted students more control over their learning.

[74] Jung, S.B., & Shelton, A.L. (2023)
[75] Treffinger, D.J. (2008)
[76] Possibilities for Learning. (2014)

TERM	DEFINITION & DESCRIPTION
	Coupling this with the support of a gifted teacher allows them to build a deeper relationship with one teacher outside of the regular classroom.[77]

[77] Baum et al. (1995)

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Professional Development & Endorsement

Section 6

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Section 6
Professional Development

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Professional Development

Instructional expertise is one of the three essential elements for gifted services. As such, it is imperative that teachers and staff who support gifted learners have current and relevant professional development related to the academic and affective needs of gifted learners.

"All teachers who have primary responsibility for teaching gifted pupils have obtained or are working toward obtaining the appropriate certification endorsement as required by the state board of education."[78]

School personnel specifically mentioned in Arizona Revised Statute needing professional development include:

- Administrators
- Teachers (general education and gifted education teachers)
- School Psychologists
- Counselors

Other staff to consider include:

- Gifted Program Coordinator
- Curriculum Coordinator

Professional development specific to gaining the gifted endorsement program is outlined in Initial Practice-Based Gifted Education Professional Preparation.

Professional Development Recommendation by Role

Select the relevant roles for the program models and the related personnel. General education teachers in the following section refer to teachers who do not have the primary responsibility for teaching gifted learners. For Gifted Education Teachers and in program models that gives the classroom teacher the primary role of teaching gifted learners, use the professional development descriptions for BOTH the general education teacher and gifted education teacher.

[78] Arizona Revised Statutes, (year)

General Education Teachers:

Affective Needs of Gifted Learners: Understanding and addressing the unique social-emotional and psychological needs of gifted students. This can include:

- **Perfectionism and High Standards:** Many gifted students hold themselves to exceptionally high standards and may experience anxiety or frustration when they fall short.
- **Asynchronous Development:** Gifted students' intellectual abilities may be advanced compared to their emotional or social development, leading to challenges in same age peer relationships.
- **Existential Questions and Social Justice:** Gifted students may grapple with profound questions about life, meaning, and fairness at a young age, and can become frustrated by the world's imperfections.
- **Sensitivity and Intensity:** Gifted students may be more sensitive to their environment, criticism, or injustice, experiencing emotions with greater intensity.
- **Underachievement:** Due to boredom with unchallenging curriculum, social isolation, or perfectionism, some gifted students may underachieve in school.

Closing the Achievement Gap: Strategies to address inequities in academic achievement and ensure all students have equal opportunities for success.

Culturally Responsive Teaching: Building curriculum and instruction that acknowledges and celebrates student diversity.

Differentiation Strategies: Techniques to tailor instruction to meet the diverse needs of all learners, including gifted students in the general classroom.

- Acceleration: If a student has already mastered a topic, move them on to learn more advanced concepts within the subject area.
- Enrichment: Provide additional learning experiences that supplement the core curriculum.
- Compacted Curriculum: Identify and remove content that students already know.

Technology Integration: Effectively using technology tools to enhance learning and personalize instruction.

Gifted Education Teachers:

Identification and Assessment of Giftedness: Strategies for recognizing gifted students and assessing their specific needs and talents.

Content Depth and Complexity:

- Go beyond basic facts and procedures, offering in-depth exploration of concepts, theories, and historical events. Encourage critical thinking, analysis, synthesis, and evaluation.
- Provide opportunities for independent research, allowing students to delve deeper into topics of personal interest.
- Integrate real-world applications, connecting curriculum to real-world problems and challenges, encouraging students to apply their knowledge and skills to solve authentic problems.
- Offer opportunities for open-ended inquiry, presenting problems or questions that have multiple solutions or interpretations, fostering creativity and divergent thinking.

Curriculum Development for Gifted Learners: Recent research underscores the critical need for differentiated curriculum specifically designed for gifted learners. Studies by the National Association for Gifted Children (NAGC) and others indicate that many gifted students are placed in traditional classrooms with little to no modification of the curriculum [1, 2]. This lack of challenge can lead to boredom, underachievement, and a decline in motivation [3].

Curriculum Models:

- Tiered Instruction
- Project-Based Learning
- Problem-Based Learning
- Differentiated Products

Additional Considerations:

- Student Choice and Voice
- Collaboration with Experts and Mentors

Gifted Coaches/ Coordinators

The role of Gifted Coach/Coordinator may be a separate role or combined with a lead teaching position or administration position. If the role of gifted coach/coordinator is combined, combine the professional development as appropriate. Gifted coaches/ coordinators should have competency in the requirements of the gifted education teachers.

Tiered support

- Onboarding
- Connection /Affiliation
- Continuous Improvement

Using and Training Teachers on Curriculum Designed for Gifted Learners: The best practice recommendation is to utilize curriculum specifically designed for gifted learners. These programs often delve deeper into content areas, incorporate higher-order thinking skills, and provide opportunities for creativity and problem-solving. There are a variety of resources available, including online programs, textbooks designed for gifted learners, and curriculum guides developed by gifted education experts.

Classroom Management Techniques

- **Positive Classroom Culture:** Techniques for establishing a positive and inclusive classroom environment where all students feel valued and respected, even those with advanced abilities.
- **Building Student Ownership**: Strategies for involving students in classroom decision-making and fostering a sense of ownership over their learning.
- **Managing Boredom and Disruptive Behavior**: Techniques for proactively addressing boredom and redirecting potentially disruptive behavior in gifted students who may finish assignments quickly or find regular curriculum unchallenging.

Differentiation for Gifted Students: Advanced differentiation strategies specifically for gifted learners, including enrichment, acceleration, and compacted curriculum.

Affective Needs of Gifted Students: Understanding the unique social-emotional needs of gifted students, such as perfectionism, asynchronous development, and existential questions.

Articulation and PLC Meetings Matter for Gifted Educators (K-12): Articulation and Professional Learning Community (PLC) meetings are crucial for gifted educators throughout the K-12 system. Here's why:

- **Collaboration and Best Practices**: Gifted education can feel isolating, with teachers often the only specialist in their grade. These meetings provide a space to share successful strategies, curriculum ideas, and resources for differentiated instruction.
- **Continuity Across Grade Levels**: Articulation meetings allow K-12 gifted educators to discuss how curriculum and learning goals for gifted students progress year-over-year. This ensures a smooth transition for students between grade levels and avoids gaps or repetition in their education.
- **Alignment with Standards**: Working together, gifted educators can ensure their programs align with state standards while also providing the appropriate level of challenge for gifted students.
- **Addressing Specific Needs**: PLC meetings allow teachers to discuss and brainstorm solutions for common challenges faced by gifted students, such as social-emotional learning needs, asynchronous development, or underachievement.
- **Professional Growth**: By learning from each other's experiences and expertise, gifted educators can refine their teaching practices and stay up to date on best practices in the field.
- **Advocacy**: A united front of gifted educators can be a powerful voice for gifted education within the school system. PLC meetings can be a springboard for advocating for resources, programs, and professional development opportunities specifically tailored to gifted students.
- **Collaboration with General Education Teachers**: Building strong collaboration skills to effectively support gifted students in the general classroom setting.[79]

[79] NAGC, (2014)

Campus Administrators:

Campus administrators are welcome to also pursue the gifted endorsement certification. Additional guidance on these topics is recommended for leadership positions.

- **Leadership for Inclusive Schools**: Creating a school culture that values diversity and celebrates the talents of all students, including gifted learners.
- **Supporting Gifted Education Programs**: Understanding the needs of gifted students and providing resources and support for effective gifted programs.
- **Implementing Professional Development**: Identifying PD needs for staff and facilitating opportunities for growth in general and gifted education.
- **Data-Driven Decision Making**: Using data to track student progress and evaluate the effectiveness of gifted programs.
- **Advocacy for Gifted Education**: Promoting the importance of gifted education and securing funding and resources.

Related Services:

Personnel including, but not limited to counselors, curriculum coordinators, student study teams, etc. may benefit from professional development on the following gifted topics:

- **Understanding Giftedness**: Learning about the characteristics and needs of gifted students from a counselor, psychologist, or social worker perspective.
- **Collaboration with Teachers**: Developing strong collaboration skills to work effectively with general and gifted education teachers to support the social-emotional well-being and academic success of gifted students.
- **Affective Development of Gifted Students**: Understanding the unique affective needs of gifted students and providing support strategies.
- **Identification and Assessment**: Learning about the identification process for gifted students and collaborating with gifted education specialists.
- **Advocacy for Gifted Students**: Collaborating with teachers and administrators to ensure access to appropriate services for gifted students.

This is not an exhaustive list, but it provides a good starting point for identifying appropriate professional development opportunities.[80],[81],[82]

[80] National Association for Gifted Children, (year)
[81] Baccassino, F., Pinnelli, S. (2022)
[82] Wright, B.L., (2022)

Gifted Professional Development Framework

Certificate criteria for the Gifted Endorsement as outlined by the Arizona Department of Education's Certification department requires 12 semester hours or 180 hours of professional development to topics aligned to the Teacher Preparation Standards in Gifted and Talented Education adopted by the National Association for Gifted Children and the Council for Exceptional Children.

Initial Practice-Based Gifted Education Professional Preparation

This table is based on the 2024 updated gifted education preparation standards[83] as approved by the National Association for Gifted Children (NAGC) and the Council for Exceptional Children's special interest division, The Association for Gifted (TAG). The initial-level standards are intended to prepare educators obtaining their first special educator credential, i.e., the gifted educator endorsement. Additional advanced standards are approved by both organizations for seasoned educators working to deepen skills and broaden their knowledge.

Standard 1: Engaging in Professional Learning and Ethical Practice

Candidates engage in ongoing professional learning; conduct action research; and use foundational knowledge of the field of gifted education, legal policies and procedures, research, professional ethical principles, evidence-based practices, and reflections to create inclusive environments, inform gifted education practice, and advocate to meet the needs of each learner while considering their diversity.

NAGC Sub-Standards	Professional Development
1.1. Candidates communicate their professional learning needs and engage in activities to improve their overall knowledge of and effectiveness with students with gifts and talents. 1.2. Candidates model respect for	<u>History of Gifted Education</u> NAGC/CEC Accepted Standards - Faculty Standards - Pre-K to Grade 12 Gifted Education Programming Arizona Revised Statute Gifted Myths (NAGC)

[83] Council for Exceptional Children. (2024)

diversity, make decisions that promote equity, and create inclusive learning environments for students with gifts and talents, utilizing foundational knowledge of gifted education, and reflecting how diverse perspectives and historical and current issues influence professional practice. 1.3. Candidates' practices are guided by standards, ethical principles, and legal policies and procedures relevant to diverse populations of students with gifts and talents. 1.4. Candidates use evidence-based practices to guide instruction and advocate for improved outcomes for students with gifts and talents and their families, paying particular attention to traditionally underserved and underrepresented populations. 1.5. Candidates advance the profession by applying evidence-based research to practice, conducting action research, and using reflection to improve their practices.	1.1 Self-Assessment of Gifted Knowledge 1.2 Gifted Education Special Populations & Considerations - Gifted Population - Twice Exceptional - Gifted & English Language Learners 1.3 District Program 1.4 Outcomes-Based Decisions 1.5 Evidence-Based Research - Resources - Organizations

Standard 2: Understanding and Supporting Learner Characteristics, Development, and Individual Learning Differences

Candidates understand how gifted learners grow and develop in cognitive, social, and emotional areas, recognizing that patterns of learning and development vary individually and asynchronously within and across domains and are influenced by cultural, economic, and individual abilities and disabilities. They use this understanding to design learning experiences, provide responsive instruction, and advocate for students' interests, strengths, and needs.

NAGC Sub-Standards	Professional Development
2.1. Candidates apply their understanding of how cognitive, social, and emotional characteristics of students with gifts and talents interact with their environment to provide responsive instruction and advocate for their needs. 2.2. Candidates apply their understanding of asynchronous human development and individual differences to respond to the interests, strengths, and needs of students with gifts and talents. 2.3. Candidates apply their understanding of how diversity influences the characteristics, learning, and development of students with gifts and talents and design meaningful and challenging learning experiences.	2.1 & 2.2 Getting to Know Gifted Learners - Traits - Intensities & Overexcitability - Asynchronous Development 2.3 Gifted Development - Academic & Affective Challenges & Supports (by grade band) 2.2 Understanding Self as a Gifted Learner - Cognitive development - Self-Regulation - Executive Functioning 2.2 Designing Gifted Learning - FFOE (Fluency, Flexibility, Originablity, Elaborative) -Pre-Assessment (Harvard Project Zone) & Follow-Up Coordination of Services for SPED and ELL gifted learners

Standard 3: Demonstrating Subject Matter Content and Specialized Curricular Knowledge

Candidates implement advanced content and culturally responsive curriculum by modifying the general or selecting, modifying, or designing specialized curriculum to advance the learning progress for students with gifts and talents.

NAGC Sub-Standards	Professional Development
3.1. Candidates organize knowledge, integrate cross-disciplinary skills, and develop meaningful learning progressions within and across grade levels to support culturally responsive curriculum by applying knowledge of the role of central concepts, structures of the discipline, and tools of inquiry of the academic subject-matter content areas they teach. 3.2. Candidates design and implement learning and performance modifications for diverse students with gifts and talents that enhance creativity, support acceleration, and ensure depth and complexity in academic subject matter and specialized domains with fidelity. 3.3. Candidates modify the general or select, modify, or design the specialized curriculum to produce and implement advanced content and culturally responsive curriculum with fidelity by understanding that diverse students with gifts and talents demonstrate a wide range of advanced knowledge and performance levels.	3.1 Delivery Models for Gifted Learners - Options & grade bank alignment - MTSS (low & high) - UDL - How Compacting & Acceleration affect district progressions - Personalized Learning 3.1 Evaluate District Plans (Elementary or Union districts consider inter-district progressions) 3.2 Individual Learning Plans *General education classroom work expectations (for pull-out). ** Scheduling considerations for gifted SPED and gifted ELL learners. **--- Deep Dive (91-180) ---** 3.3 Tailoring Curriculum Practicum

Standard 4: Using Assessments to Identify Students, Measure Their Progress, and Evaluate the Effectiveness of the Assessments, Curriculum, Services, and Programs

Candidates consider state requirements and effectively use multiple methods of assessment data sources, and norms that are reliable and valid in making educational decisions about the identification of all students with gifts and talents in specific domains, in assessing student learning, and in evaluating the assessments, curriculum, services, and programs designed for these learners.

NAGC Sub-Standards	Professional Development
4.1. Candidates align identification instruments and selection procedures to state requirements for gifted services and programs, domains served within the district, evidence-based practices, and student characteristics.	4.1 Arizona State Board Approved Tests - Test Overview - Qualification Areas - Testing requirements - AzEDS Reporting
4.2. Candidates use norming, reliability and validity data, and information related to minimizing bias in selecting and interpreting assessments to identify and guide all students with gifts and talents, including those from traditionally underrepresented populations.	4.2 Using Identification Assessments - Universal Screening - State & Local Norms - Identification Assessment Best Practices (including special population considerations)
4.3. Candidates select, adapt, and/or create classroom assessments that are valid measures of learner progress and content acquisition of curriculum differentiated to meet the needs of students with gifts and talents.	4.3 Classroom Measures of Learner Progress - Using the Pre-Assessment - Measuring Progress & Content Acquisition
4.4. Candidates use qualitative and quantitative data and multiple sources to evaluate the effectiveness of the curriculum, services, and programs for students with gifts and talents.	4.4 Evaluating the Effectiveness of Gifted Programs

Standard 5: Supporting Learning and Career Development Using Effective Environments and Instruction

Candidates use data and knowledge of each student with gifts and talents, including twice exceptional and other diverse populations, when selecting strategies and technology to differentiate instruction. They design effective learning environments that engage students in learning and prepare them for creative and productive careers in a global, multicultural society.

NAGC Sub-Standards	Professional Development
5.1. Candidates select from a repertoire of evidence-based instructional strategies to differentiate, accelerate, and enrich the curriculum and address the diversity of students with gifts and talents by using knowledge of each student's interests, strengths, needs, and data. 5.2. Candidates differentiate instructional approaches and use technology to increase access and engage students in authentic learning experiences, increase their level of skill and performance, and assist them in becoming increasingly more independent learners. 5.3. Candidates assess students and use data to vary the grouping arrangements and learning environments to accelerate learning progress and encourage interactions with peers with similar interests and abilities.	**--- Deep Dive (91-180) ---** In-depth Curriculum and Instruction Learning & Practices **Using:** - Case Students - Building Lesson Plans - Evaluate Lesson Plans **Covering:** 5.1 Differentiation Techniques: - Content - Process - Product - Environment 5.1 Methodology (see cards: project based learning, problem based learning, interdisciplinary studies, interactive simulations) 5.1 Instructional Strategies (see cards: including active questioning,

5.4. Candidates provide career education, mentorships, and internships and develop communication skills that prepare students for creative and productive careers in a global, multicultural society by using knowledge of each student's interests, strengths, and needs.	depth & complexity, choice bards, Socratic seminar, etc.) 5.2 Authentic Learning Opportunities 5.2 Technology - AI Considerations 5.3 Flexible Grouping Best Practices 5.4 Career Explorations - Early Career Explorations (K-8) - CTE (with or without college) - Mentorships

Standard 6: Supporting Social, Emotional, and Psychosocial Growth

Candidates proactively support the social-emotional and psychosocial development of students with gifts and talents, including twice-exceptional and other diverse populations, through targeted services, programs, and inclusive learning environments that are responsive to students' particular social, emotional, and psychosocial needs and their identities.

NAGC Sub-Standards	Professional Development
6.1. Candidates create safe, inclusive, and culturally responsive learning environments to support students' identities and social-emotional and psychosocial growth. 6.2. Candidates use a variety of classroom approaches to explicitly teach and practice students' use of social-emotional and psychosocial skills in developmentally, contextually, and culturally responsive ways.	**--- Deep Dive (91-180) ---** Affective Challenges & Supports building off Standard 2 (Supporting Learner Development & Differences) 6.1 Creating Safe and Responsive Learning Environments 6.2 Classroom Considerations

Standard 7: Collaborating with other Stakeholders

Candidates apply effective processes and communication strategies to collaborate in a culturally responsive manner with families, professionals within the school, and the community to build awareness and capacity, plan and implement services and programs for individuals with gifts and talents in a process that is iterative and promotes continuous progress.

NAGC Sub-Standards	Professional Development
7.1. Candidates utilize communication, collaboration, facilitation, and problem-solving strategies to share expertise and knowledge with other professionals to assess students with gifts and talents and plan services and programs based on evidence-based practices for students with gifts and talents in their talent domains.	7.1 Joining the Gifted Community - ADE resources - Connecting with gifted professionals - Establish goals for gifted services & programs (based on 1.1 Self-Assessment of Gifted Knowledge & 3.0 District Assessment of Programs & Services)
7.2. Candidates actively communicate, collaborate, and coordinate with families, and other stakeholders within educational and community setting(s) in a culturally responsive manner to build awareness and capacity to address students with gifts and talents' instructional, social-emotional, and behavioral needs.	7.2 Building a School / District Network - Communication strategies - Leveraging community resources to improve gifted programs. - Educating stakeholders

Gifted Education Endorsement, PreK-12 in Arizona

The gifted endorsement certificate is required for "district teachers who have primary responsibility for teaching gifted pupils have obtained or are working toward obtaining the appropriate certification endorsement."[84]

The gifted endorsement certificate is offered in a provisional option and a full-gifted option with learning options for semester hours and in-service training following the National Association for Gifted Children and the Council for Exceptional Children teacher preparation standards.

Overview: The Gifted, PreK-12 Endorsement authorizes the holder to teach gifted students within the grade range and subject area of the prerequisite certificate. This endorsement is required for all district teachers who have primary responsibility for teaching gifted pupils. Requirements may be subject to change and are fully referenced in the Arizona Revised Statutes and Administrative ***Code: R7-2-607, R7-2-615, and R7-2-621.***[85]

The Arizona Department of Education's Gifted website is updated with professional development opportunities.

[84] ARS §15-779
[85] Arizona Department of Education's Educator Certification

Requirements for the Provisional Gifted, PreK12 Endorsement

The Provisional Gifted, PreK-12 Endorsement is valid for 3 years and is not renewable. The requirements are:

Prerequisite Certificate: A valid Arizona International or Standard Professional Teaching certificate; **-AND- One of the following:**

- **Option A - Coursework:** Completion of six semester hours of courses in gifted education; **-OR-**
- **Option B - In-Service Training:** Verification from a public-school superintendent or personnel director that the applicant completed a minimum of 90 clock hours of training in gifted education, or the equivalent through competency-based credentials, that are aligned to the Teacher Preparation Standards in Gifted and Talented Education adopted by the National Association for Gifted Children and the Council for Exceptional Children.

Requirements for the Full Gifted, PreK12 Endorsement

The full gifted, prek-12 endorsement is automatically renewed with the certificate on which it is posted. The requirements are:

Prerequisite Certificate: A valid Arizona International or Standard Professional Teaching certificate; **-AND- One of the following:**

- **Option A - In-Service Training:** Verification from a public-school superintendent or personnel director that the applicant completed a minimum of 180 clock hours of in-service training in gifted education, or the equivalent through competency-based credentials, that are aligned to the Teacher Preparation Standards in Gifted and Talented Education adopted by the National Association for Gifted Children and the Council for Exceptional Children; **-OR-**
- **Option B - Coursework:** Completion of 12 semester hours of courses in gifted education. No more than six semester hours of courses in gifted education may be obtained through completion of in-service training that is aligned to the Teacher Preparation Standards in Gifted and Talented Education adopted by the National Association for Gifted Children and the Council for Exceptional Children. Fifteen clock hours of in-service training is equivalent to one semester hour. In service hours shall be verified by the public-school superintendent or personnel director.

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Gifted Resources

Section 7

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Task Force Members

Section 7
Gifted Resources
Table of Contents

Resources for Gifted Education

Resources for Schools

- **Arizona Department of Education:** Provides guidance and resources for Gifted Education in Arizona. Arizona Department of Education Gifted Webpage
- **AAGT - Arizona Association for Gifted and Talented:** Provides resources for teachers and students who support the gifted & talented community in Arizona. Arizona Association for Gifted and Talented
- **National Association for Gifted Children (NAGC):** Provides professional development opportunities, curriculum resources, and research on gifted education. National Association for Gifted Children (NAGC) logo
- **Jacobs Center for Talent Development:** Provides online resources and professional development for educators of gifted students, including differentiation strategies and curriculum materials. Image of Jacobs Center for Talent Development logo

Resources for Parents

- **AAGT - Arizona Association for Gifted and Talented:** Provides resources for parents, caregivers, and students who support the gifted & talented community in Arizona. Arizona Association for Gifted and Talented
- **National Association for Gifted Children (NAGC):** Provides resources for parents, including articles, webinars, and a parent network. National Association for Gifted Children (NAGC) logo
- **Supporting Emotional Needs of the Gifted (SENG):** Offers resources and support for parents of gifted children, with a focus on social-emotional development. Supporting Emotional Needs of the Gifted (SENG) logo
- **Hoagies' Gifted Education Page:** A comprehensive website with articles, resources, and book recommendations for parents of gifted children. Parents of Gifted Children | Hoagies' Gifted
- **Davidson Gifted Education Institute:** Offers online resources and programs for gifted students, which parents can explore with their children. Davidson Institute logo

Classroom Resources

Challenge resources include competitions, club resources, and other extensions.

ADE Gifted Challenge Resources

STEAM

- Odyssey of the Mind (OM): An international creative problem-solving competition where teams work together to solve problems and present their solutions.
- Future City Competition: Student teams design a virtual city and present their solutions to an annual challenge related to urban planning.
- Destination Imagination (DI): Teams work together to solve open-ended STEM, fine arts, and service-learning challenges.
- Science Olympiad: Teams compete in various events covering biology, earth science, chemistry, physics, and engineering.
- Slingshot Challenge: We believe that no problem is unsolvable and that great ideas come from ALL places. Our community of 13–18-year-olds rose to the challenge and created 1-minute videos describing their ideas for solving environmental issues. We believe that, together, our ideas can lead to taking action to protect our planet and improve our future.
- 3M Young Scientist Lab: the 3M Young Scientist Challenge gives students in grades 5–8 the chance to change their world for the better with a single innovative idea. This premier science competition is a one-of-a-kind project-based learning opportunity designed to spark creativity, collaboration, and connection for students from every background.
- ASU Epics program: Problem-based design challenges with field trips and support from ASU.

Robotics

- FIRST LEGO League (FLL):
    - FIRST® LEGO® League guides youth through STEM learning and exploration at an early age. From Discover, to Explore, and then to Challenge, students will understand the basics of STEM and apply their

skills in an exciting competition while building habits of learning, confidence, and teamwork skills along the way.

- VEX Robotics
    - All students are natural scientists and engineers. They love to question, tinker, experiment, and play. VEX competitions foster these skills and capitalize on the motivational effects of competitions and robotics to help all students create an identity as a STEM learner. VEX competitions are also a great way to expose students to valuable soft skills like communication, collaboration, and time management in a fun and authentic way. The VEX Robotics competition prepares students to become future innovators with 95% of participants reporting an increased interest in STEM subject areas and pursuing STEM-related careers. Tournaments are held year-round at the regional, state, and national levels and culminate at the VEX Robotics World Championship each April!
- FIRST Tech Challenge (FTC):
    - FIRST Tech Challenge students learn to think like engineers. Teams design, build, and code robots to compete in an alliance format against other teams. Robots are built from a reusable platform, powered by Android technology, and can be coded using a variety of levels of Java-based programming.

Coding

- The Congressional App Challenge
    - Members of the U.S. House of Representatives host district-wide Congressional App Challenges for middle school and high school students, encouraging them to learn to code and inspiring them to pursue careers in computer science. This is a wonderful opportunity for students to shine in coding.
- New Year ICPC Online Challenge
    - The ICPC (International Collegiate Programming Contest) is renowned for its intellectually stimulating environment. Participants can expect a series of intricate and thought-provoking problems that not only test their coding skills but also their ability to think algorithmically and work collaboratively

under pressure. The contest's online format adds an extra layer of accessibility and convenience, allowing talents from various parts of the world to participate. This competition demands a deep understanding of algorithms, data structures, and efficient coding practices. It's not just about writing code; it's about crafting solutions that are both elegant and efficient.

- Code/Art All-Girls Creative Coding Competitions
    - Let's turn our spotlight to the Code/Art All-Girls Creative Coding Competitions, a vibrant contest that celebrates the coding talents of female students in grades 3-12. This competition fuses art and technology, where participants use their coding skills to create visually stunning projects. It's about weaving creativity and innovation into digital masterpieces. These range from self-portraits to animated art, game design, or projects addressing service learning. In this competition, participants develop a wide range of skills – from technical expertise in coding to creative expression and problem-solving abilities. They're encouraged to think outside the box, to view coding not just as a tool for building software, but as a medium for artistic expression and social commentary.
- WWCode Days of Code Challenge
    - The WWCode Days of Code Challenge 2024 is a dynamic event designed to enhance coding skills in a supportive, community-driven environment. It offers participants the flexibility to choose their commitment level, making it accessible to everyone, regardless of their schedule or current coding proficiency. The challenge involves coding daily for a selected number of days, ranging from 7 to 100, providing a structured yet flexible platform for skill development. Events by Women Who Code have consistently been known for their inclusivity and empowerment in the tech community. These challenges have built a reputation for nurturing a supportive environment that encourages learning among technologists of all levels. It caters to various coding levels, from beginners to advanced, offering many learning opportunities.

- Technovation Challenge 2024
    - Technovation Challenge 2024 is a global competition that inspires and empowers young girls to solve real-world problems through technology. By forming teams, girls from diverse backgrounds innovate mobile apps or AI projects addressing critical topics like climate change, violence, and equality. Supported by mentors and a vast community, participants, regardless of prior tech experience, are encouraged to learn, innovate, and lead. This competition boosts their interest in computer science, entrepreneurship, and leadership. It's a transformative experience that encourages girls to pursue careers in STEM and make impactful societal contributions.

- Code Cup 2024
    - The Code Cup 2024 stands out with its special take on the classic Sudoku. The competition adds a strategic layer to the game by starting with an entirely empty grid. Contestants take turns to place digits, aiming to create a unique Sudoku grid. This twist on the traditional game tests not just coding skills but also strategic thinking. A significant feature of the Code Cup is its inclusivity, welcoming participants from all walks of life. Regular competitions starting from August offer participants a chance to test their programs against others.

- The Code Cup fosters a collaborative environment through its forums. This platform allows participants to discuss, give feedback, and evolve their programming tactics. It's a space where ideas flourish and participants can grow together.

Technology Programs to also consider:

- Code.org: This program is free for all. It has comprehensive year-long plans for all grade levels, as well as al-a-carte options for teachers. The courses begin with visual coding and move into more complex concepts. Some lessons occur off of the computer. Computational thinking practices and Science and Engineering practices are embedded throughout. Code.org includes lesson plans, slide decks, assessments, a web lab, an app lab, a game lab, and more.

There is a new AI unit in 6-8. They have resources for single-day activities and challenges, like Hour of Code, as well.

- Tynker: This program goes a bit deeper into programming languages and can support high school-level courses. There is a fee for using this program.

Social Studies

- National History Day:
    - NHI's Great Debate is a communications and leadership development program for ambitious and courageous young people. If you are or know a young person committed to making meaningful change in the world, and are driven toward building up our community, NHI and the Great Debate experience is a must.
- Great Debate
    - The Great Debate is the HA's annual public-speaking competition for school years 10 - 13.

Academic Challenges

- National Science Bowl: A nationwide academic competition that tests students' knowledge in all areas of science and math.

Math Competitions

- MathCounts: A national math coaching and competition program that promotes middle school mathematics achievement.
- Pi Math Contest is a two-round math competition for elementary and middle school students.
- mathleague.org As the largest network of local and state math competitions at the elementary, middle, and high school levels in the United States and abroad, mathleague.org runs more than 400 contests globally and reaches over 30,000 students each year.
- Math Olympiad: MOEMS - problem of the week for math challenges Mathematical Olympiads for Elementary and Middle Schools (MOEMS) is a very large elementary and middle school math competition.

- Math League - Math contest for all grades
- AMC 8 - hosted by the American Mathematics Competitions is a very large middle school math contest taken in school.
- America Scholastic Mathematics Association: A middle/high school team competition with the top eight scorers of each team counted towards the team's total. The test is 35 minutes long and assumes the use of a calculator.
- IMC-IMPEA is an offline/online math contest for all grade levels. The contest offers individual rounds, team rounds, and math modeling rounds.
- Archimedes Math Competition
- Beestar National Competition: The largest online math contest for students in grades 2-8.
- Continental Mathematics League
- Math Madness (AoPS Forum) 100% Online league and bracket tournament held in the fall (Mini-Madness is held in the spring)
- The Mustang Math Tournament is a national team-based competition hosted by mathematically inclined high school and college students from around the nation.
- Noetic Learning Math Contest: a popular problem-solving contest for students in grades 2-8.
- MathCon: Hosts an annual math competition for students in grades 4-12, with more than 200,000 participants since 2008.
- Perennial Math is an International Math Competition, for middle-high school students. Participate in Individual or League Math Competitions.

Summer Opportunities

ASU: https://eoss.asu.edu/bss (Summer Camp for Enrichment)

ADE Classroom Extension Resources

ADE Best Practices Resources for ELA

- Read Write Think - ReadWriteThink provides access to a vast collection of standards-based lesson plans and resources designed to improve literacy and critical thinking skills, suitable for gifted students.
- Newsela - Newsela allows you to teach skill-building strategies without ever sacrificing engagement with rigorous, standards-aligned activities, quizzes, and resources that connect with students' interests, background knowledge, and lived experiences. Articles are differentiated so students can work at their level.
- The Kid Story - Book recommendations for all ages
- Davidson Institute - The Davidson Institute's Gifted Lesson Plans: A List of Resources provides links to gifted lesson plans and resources. Includes books for teachers about gifted students as well as curricula and lesson plans. There is a list of websites included as well.
- The Gifted Guide - The Gifted Guide is a one-stop guide to gifted curriculum. Curriculum is available for Grades 1-12 in ELA as well as Math, Science, Social Studies, SEL, and STEM. There is a section for teacher learning included. For those looking for one place to get everything.
- Exquisite Minds - Provides a list of free curriculum and resources for gifted students. Includes free resources as well as some paid resources. Includes sections listing best books for kids and teens, games, and teacher information.
- Fort Bend ISD - Elementary Extended Learning for Gifted Learners - A listing of websites appropriate for elementary learners. Includes other subject areas as well.
- Middle School Extended Learning for Gifted Learners - A listing of websites appropriate for middle school learners. Includes other subject areas as well.
- Byrdseed - Meeting Advanced Learners' Needs in Language Arts has ideas for differentiating for advanced students in any field within language arts. This subscription has tons of student facing and educator professional development videos on ways to differentiate instruction and provide complex lessons and resources to build creativity and critical thinking in the classroom.
- Great Minds - Includes links to some free resources. "*Wit & Wisdom*® ELA is recognized by the Knowledge Matters Campaign as one of only six knowledge-

building curricula crafted to ensure that students build critical ELA skills while also building knowledge of the world."

- Mensa for Kids - A wealth of resources for gifted students. Has resources for kids, parents, and teachers.
- Gifted Guru - What to do with an advanced language arts student is an answer to a parent about the needs of her gifted student not being met by the school. The answer is applicable to teachers and the blog list has sections for teachers and parents. The "Resources for educators" tab has links to websites helpful for teachers seeking help with differentiation and curriculum, identification, creativity and instructional strategies, and affective needs.
- Pennsylvania Association for Gifted Education - This page has an extensive list of resources for teachers that covers many areas including ELA.
- Create your own Escape Room - Students (and teachers) can create their own digital escape room. This is simple to manipulate. This is a free resource, but you must "sign up."
- Renzulli Talent Development - is an interactive online system that provides students with a personalized learning environment, allowing teachers to easily differentiate instruction to increase engagement and achieve higher academic performance. Renzulli Learning has resources that promote and enable ALL students to pursue their interests, providing equity, innovation and creativity for grades Pre-K through 12. Students are empowered by doing creative, imaginative projects that provide rigorous learning outcomes.

ADE Best Practice Math Resource Links

Critical Thinking and Content Tasks

- NRich - Developing mathematical mindsets with low floor high ceiling prompts - ages 5-11. Includes problems, getting started, student solutions and teachers' resources. Low-floor high-ceiling prompts are defined as tasks that all students can access but that can be extended to high levels. LFHC tasks allow students to work at different paces and take work to different depths at different times.
- NRich - Developing mathematical mindsets with low floor high ceiling prompts - ages 10-16. Includes problems, getting started, student solutions and teachers' resources.

- YouCubed - From Stanford Graduate School of Education. Rich math tasks in all areas for grades K-12 that intersect with other curricular areas.
- Problems of the Week - NCTM
- Notice and Wonders - NCTM
- Math and Logic Problems Bank - A+Click helps students become problem solvers without any ads and without signing up. More than 16,000 challenging questions with answers for students in grades 1 through 12, starting from the very simple to the extremely difficult. The problems concentrate on understanding, usefulness, and problem-solving.
- Printable Logic Puzzles - From Dadsworksheets.com this site includes magic squares, sudoku, number grid puzzles, and number snake puzzles. The site also includes links for general math practice.
- The Gifted Guide - Sarah Young, a free attribution site with lots of resources by grade level
- Virtual Math Club Problems Bank - The Virtual Math Club is for students who are interested in developing their mathematical problem-solving skills using problems similar to those found in math contests such as the AMC 8, AMC 10, MATHCOUNTS, or the middle school math olympiads. Geared to middle school and early high school students.
- Math Count - Math Counts provides ongoing problems of the week, and math challenge questions with solutions posted the following week.
- MOEMS - Mathematical Olympiads for Elementary and Middle School problem of the week for math challenges. Posted throughout the school year.
- Online Math League - From the Math League's previous contests with sample questions posted for grades 4-12. Includes the solutions.
- MathCon - A math competition site with weekly practice tests to work through with young learners. Requires a sign on account with limited access unless registered for the contest.
- Imagination Zone - Engineering and Design - Get to the Math! - a selection of engineering and design activities for all grade levels.
- Imagination Zone - Money Honey! Resources for financial literacy for grades K-8.
- NCTM POWs - Problems of the week from the National Council of Teachers of Mathematics. Includes problems for all grade levels.

- Open Middle - Provides challenging math problems worth solving for all grade levels. Also, some Google Slides versions.
- Mathematics Task Center - Visual, hands-on and explored with a partner, tasks invite students to work with problems like those of a professional mathematician. For grades 1-9.
- George Mason University - An index of challenge problems with solutions provided. PDF
- Brooklyn Challenge Questions

Instructional Routines

- NCTM Standards (2020) Reviewer Rubrics – Middle Level
- Math Instructional Routines - A listing of collaborative strategies to work through word problems.
- Mix and Math - a choice board of strategies to get students to synthesize and summarize their thinking

Other Resources

- 6-12 Student Reflection Math Learning Continuum - An easy-to-read outline of meaningful math instruction continuum for grades 6-12.
- Math Homeschool Worksheets - Worksheets for Grades 1-8, whose purpose is to challenge students beyond the classroom setting. Math Stars are in sets for Grades 1-8 and include commentaries for teachers. All Math Stars Newsletters are ready for classroom use and available for download as PDF files.
- Imagination Zone - Brain Games, Research, Field Trips, and More - a site providing links to online logic games and puzzles to encourage mathematical thinking. Includes activities for other areas as well.
- Imagination Zone - Weekly Challenges created for Ft. Huachuca school district for the 2020-2021 school year. Includes challenges for math as well as other academic areas. Some links may be district accessible only.

Online Math Manipulatives & Interactives

- Mathagon - great visualization tool for any math class, links to Polypad which has lesson-building options.

    - Visual Flashcards
    - Fractals
    - Graph Theory
    - Symmetry
    - Sequences
    - Origami
    - Fractris like Tetris but for showing arrays
- Solve Me Mobiles (Algebra) - This site uses mobiles for students to solve balanced equations. It includes 40 puzzles with increasing difficulty.
- Math Gizmos - Provides interactive math simulations for students in Grades 3-12. Great to practice a skill or for number talks. Provides some free resources and has a subscription option for districts and schools.
- CoolMath4Kids - A collection of free math activities that include games, lessons, manipulatives, quizzes, and brain teasers.
- Dreambox - Part of Discovery Education. Provides a personalized adaptive program for students. Requires a paid subscription.
- IL Classroom - Imagine Learning (formerly known as LearnZillion). Requires a paid subscription.
- ABCYA - Provides games for math as well as ELA for Grades K-6. Can be searched by standards.
- Khan Academy - Free lessons for Math. Khanmingo - a free AI for teachers is available.
- Freckle - Self-paced math exercises that meet students exactly where they are. Can sign up for free and a paid premium account is also available.
- Open Up Resources - An open educational resource that provides math curricula as well as supplementary materials. Sign up for an account and it provides access to curricula for Grades K-5.
- CK12 - An open education resource that provides curricula for all grade levels.

Math Challenges

- MATHCOUNTS - Math Counts provides a competition for middle schoolers as well as Math Club." The Competition Series has 4 levels of competition—school, chapter, state and national. Each level of competition consists of 4 rounds—

Sprint, Target, Team and Countdown Round. Altogether the rounds are designed to take about 3 hours to complete. The National Math Club is designed to be flexible so many types of groups can participate. We provide game instructions, math explorations, problem sets and monthly challenges that can be enjoyed by students of all skill levels."

- Mathematical Olympiads for Elementary and Middle Schools (MOEMS) "MOEMS® provides monthly problem-solving contests for elementary and middle school students. We offer two divisions; the Elementary division is for grades 4, 5 and 6, and the Middle School division for grades 6, 7 and 8. You may enroll up to 35 students per team."
- MathCON - "MathCON is a nonprofit, prestigious two-round math competition that was founded in 2008 in Chicago, Illinois. MathCON invites *all students from 4th to 12th grade across the United States and Canada* to participate! Over the course of its history, MathCON has proudly engaged more than 280,000 students from over 3,000 schools. Our registration options cater to diverse needs, offering separate pathways for schools and individual students."
- Math League - This site provides math contests for elementary, middle, and high school students. It also provides online classes to prepare for contests.

ADE Best Practices Resources for HSS

- Smithsonian's History Explorer - Provides a variety of resources, including primary sources, artifacts, and interactive activities designed to engage students with history.
- Library of Congress for Teachers - A repository of primary sources, lesson plans, and professional development materials that can be adapted for gifted learners.
- Stanford History Education Group (SHEG) - Offers "Reading Like a Historian" and "Beyond the Bubble" programs that encourage critical thinking and historical analysis.
- Gilder Lehrman Institute of American History - Provides access to a wealth of primary sources, lectures, lesson plans, and multimedia resources.
- Primary Source Nexus - A resource from the Library of Congress that offers primary source sets, lesson plans, and teaching strategies.

- National History Day - Encourages students to engage in historical research and present their findings through various projects, fostering deep historical understanding and critical thinking.

ADE Gifted Science Resource Links

Science Projects

- Going 3D with GRC

  GRC Phenomenon-Based Lessons

  This site is a collection of vetted, three-dimensional lessons aligned to the Next Generation Science Standards and state standards developed from the Framework for K-12 Science Education. The lessons were developed by teachers across districts and states utilizing local phenomena. Bank for K-12, great for hands-on and science extension.
- Teach Engineering - K-12 Engineering Bank of Projects. Can be searched by standard.
- Science Buddies - Hands-on STEM exploration for home and school. Projects and guidance for teachers
- Science Dogo News - Non-fiction, high-interest current articles for students. Does include workbooks tied to the articles for a price. Also includes ELA and Social Studies articles.
- BrainPop - quick facts and quizzes. May require a subscription to access all resources.
- Complete Guide 6-12 Science Fair - complete packet with checkpoints to break up the workload and guide students through the process, rubrics included.
- Teacher Created
  - The Gifted Guide Science, Sarah Young, a free attribution site
  - The Gifted Guide STEM, Sarah Young, a free attribution site
  - Imagination Zone - Weekly Challenges, a free attribution site
  - Imagination Zone - Plants and Animals, a free attribution site
  - Imagination Zone - Escape Rooms, a free attribution site

Science Challenges and Competitions

- **Odyssey of the Mind**: https://www.odysseyofthemind.com

  Odyssey of the Mind (OM™) teaches students how to develop and use their natural creativity to become problem-solvers.

- **Future Cities**: https://futurecity.org
  "Future City starts with a question – how can we make the world a better place? To answer it, middle school students imagine, research, design, and build cities of the future that showcase their solution to a citywide sustainability issue."
- **State Science Fai**r
  - AZSEF for the Phoenix area - Sponsored by the Arizona Science Center
  - SARSEF for Tucson
- **Lego** Mindstorm - STEM competitions for PreK/K, Elementary, and Middle School
- **VEX** Robotics - STEM competition for Grades 4-8 and 9-12.
- **EPICS** at ASU - Engineering Projects in Community Service - Teams design, build, and deploy systems to solve engineering-based problems for charities, schools, and other not-for-profit organizations

Science Interactives

- CK12 - Free online curriculum. Student and Teacher areas for all Science topics.
- Gizmos - Math and Science simulations that excite curiosity and inquiry. Sponsored by Explore Learning.
- Bio-Interactive - "HHMI BioInteractive brings the power of real science stories into tens of thousands of high school and undergraduate life science classrooms through free classroom resources and professional development."
- Mystery Science - Standards-aligned curriculum for students in Grades K-5. May require a subscription to gain access.
- Bio Labs - Biology teaching resources from The Biology Corner.
- Phet - Interactive Simulations for Science and Math sponsored by the University of Colorado, Boulder.
- Praxis Labs - Offers virtual labs in biology, chemistry, and physics. One-month free access.
- Royal Society of Chemistry - Activities for All ages
- NSTA Virtual Lab Bank - From the National Science Teaching Association
- Interactive Sites for Education - Links to the Science page of the site. Also includes interactives for ELA and Math.

Books About Gifted and Talented Students for Educators

Teaching Gifted Kids in Today's Classroom

by Susan Winebrenner

This book provides practical strategies for differentiating instruction and meeting the needs of gifted students in a regular classroom setting.

Differentiating Instruction in the Regular Classroom

"Differentiating Instruction in the Regular Classroom: How to Reach and Teach All Learners, Grades 3-12" by Diane Heacox

A useful guide for teachers to tailor their ELA curriculum to the diverse needs of their students, including the gifted.

"Literacy Strategies for Gifted and Accelerated Readers: A Guide for Elementary and Secondary School Educators" by Vicki Caruana

This book focuses on developing literacy strategies that challenge and engage gifted readers.

Gifted and Distractible - Twice Exceptional Students

This much-needed and empowering guide reveals the unique challenges these remarkable kids face, and offers strength-based, hands-on strategies for understanding, supporting, and advocating for twice-exceptional kids.

Gifted Overexcitabilities

Psychologist Kazimierz Dabrowski identified five areas in which children exhibit intense behaviors, also known as "overexcitabilities" or "supersensitivities", and "Sensory Processing". They are psychomotor, sensory, emotional, intellectual, and imaginational. Gifted children tend to have multiple intensities, although one is usually dominant.

Fordham Institute

Fordham Institute has created a National Working Group on Advanced Education that is keeping up with current research. This link goes to all educational areas of research.

Resource for Serving Underserved Gifted Students:

- Ritchotte, J. A., Lee, C.-W., & Graefe, A. (2019). *Start Seeing and Serving Underserved Gifted Students: 50 Strategies for Equity and Excellence*. Free Spirit Publishing

Local and National Gifted and Talented Organizations

- **Arizona Association for Gifted and Talented**
  https://arizonagifted.org/
- **National Association for Gifted Children**
  https://nagc.org/
- **SENG: Supporting Emotional Needs of the Gifted**
  https://www.sengifted.org/

Research and Resources for Educators, Administrators and Coordinators:

- **Diversifying Pipeline of Advanced Learners:**
  https://fordhaminstitute.org/national/research/building-wider-more-diverse-pipeline-advanced-learners
- **Equitable Gifted Programming:**
  https://www.edweek.org/teaching-learning/how-to-make-gifted-programs-more-equitable/2024/06
- **Increasing Local Advanced Education**
  https://fordhaminstitute.org/national/research/broken-pipeline-advanced-education-policies-local-level
- **States of the States Gifted Report:**
  https://nagc.org/page/state-of-the-states-report

- National Association of Gifted Children - www.NAGC.org
    - NAGC: Young Bright Children
    - NAGC Position Paper: Early Childhood (2006)
- Supporting the Emotional Needs of the Gifted - www.SENGifted.org
  Servicing 2e and 3e Learners Using Collins' Culturally Responsive Multi-Tiered System of Supports (sengifted.org)
- Mensa:
  https://www.us.mensa.org/learn/gifted-youth/insights-into-gifted-youth/gifted-characteristics/
- Davidson Institute –
  Davidson Institute | Programs & Support for the Profoundly Gifted (davidsongifted.org)
- Creatively Gifted: Redesigning the Core of Education
  https://collins-edna.institute/
- Dr Donna Y Ford:
  https://www.drdonnayford.com/
- Teacher Vision
  https://www.teachervision.com/

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