

Instructional Considerations for Students Who Are Gifted

Begin with the Program of Studies

With thoughtful planning, the program of studies has potential to appropriately challenge students who are gifted. However, the content, learning activities and/or instruction may need to be adjusted to meet a student's ability level and learning needs. Look for specific learning outcomes that can create opportunities for students who are gifted to explore a concept or skill in greater depth and/or breadth.

Use Differentiated Instruction

Differentiated learning for students who are gifted means enhanced opportunities for thinking and learning, not just for doing more work. Differentiating instruction involves thoughtfully modifying the following elements:

- content
- process
- products
- environment
- assessment.

Although these elements are interrelated and influence one another, it is helpful to consider them separately.

► Content

The content is what students are studying and are expected to learn. Students who demonstrate that they already know some content or can learn the content in much less time than their classmates, will benefit from content differentiation. Differentiating content for students who are gifted means that topics are explored in greater depth or breadth. For example, this could happen by using more advanced texts and resource materials. Differentiated content can be part of an individualized program planning (IPP) goal or can be identified as an accommodation.

There are a number of ways to differentiate content for students who are gifted, including making it more:

- abstract
- complex
- interrelated
- constrained (Harvey 2000, pp. 70–71).

Instructional Considerations for Students Who Are Gifted *continued*

Making content more abstract

Abstract content focuses less on specific, factual information and more on concepts and generalizations. Building in abstraction means encouraging students to consider ideas in general terms, and to move more fluidly between facts and broad understandings. For example, a student who is gifted in mathematics could quickly move beyond manipulatives into identifying patterns and relationships. Thinking in more abstract terms can provide greater challenge and complexity for students.

Making content more complex

Content can be made more complex by introducing additional variables, other considerations, different sources and alternate viewpoints to a learning task. The original content remains, but is compared, contrasted or combined with other information or concepts. For example, a basic learning activity of surveying the class to find out how many students come to school by walking, biking, bussing or car could be made more complex by asking students to gather additional information in the survey and use this to compare distance from school with various modes of transport.

Making content more interrelated

Students who are gifted often spot the potential for applying ideas or methods from one field of study to another. Teachers can build on this ability by looking for potential connections from one subject to the next, and challenging students to use knowledge, process and skills in different combinations. For example, students could take science knowledge about weather and climate, and use it in a social studies inquiry about how people adapt to their environment.

Interrelatedness can also be explored across space and/or time. For example, students could be challenged to think about how humans adapt to their physical environments across geographic regions or what meaning humans have ascribed to weather conditions throughout history.

Making content more constrained

Interestingly enough, making content more constrained can sometimes present as many worthwhile challenges as making it more complex. By lessening the degrees of freedom in an activity, it is possible to concentrate students' focus and encourage them to go more deeply into a particular aspect of the curriculum. For example, a basic assignment to write a poem about traffic during rush hour could be channelled into a more constrained assignment of writing the poem only about the traffic sounds during rush hour.

Instructional Considerations for Students Who Are Gifted *continued*

► **Process**

The process is how students make sense of concepts, generalizations and learning outcomes. It is how the teacher adapts the instructional strategy and what type of learning strategies the students use. Differentiated process focuses on such things as higher-order thinking skills, open-ended and problem-solving tasks, and learning at more complex levels. Process can be differentiated in a variety of ways, including creating opportunities for choice, collaboration and meaningful research. Students benefit from opportunities to make choices, set goals, engage in self-reflection and participate in self-assessment. Many students who are gifted will benefit from processes that develop effective study, and organizational and interpersonal skills. Flexible pacing, questioning techniques, anomalies and paradoxes, tiered assignments, and independent projects are all effective strategies for differentiating process.

Flexible pacing

This strategy allows students to move through the graded curriculum at a different rate. Flexible pacing can take a variety of forms. Some examples include:

- allowing students to complete some outcomes more quickly and to spend additional time on more challenging activities
- allowing students to do a deeper exploration of specific learning outcomes that are especially meaningful to them
- moving students to an appropriate starting point in the program of studies based on pretesting
- compacting or streamlining the grade-level program of studies to eliminate repetition of previously learned materials.

The goal of all of these flexible pacing strategies is to provide opportunities for students to spend more time on outcomes and activities that will enrich their learning. When considering options for flexible pacing, a gradual process may be most effective. For example, teachers could start by accelerating students through small chunks of curriculum and then by moving them onto larger chunks after a number of successful experiences.

Questioning techniques

Questions that draw on advanced levels of information require leaps of understanding and challenge students' thinking. Open-ended questions invite critical and creative thinking, and nurture the development of students' capacities to frame their own questions.

Instructional Considerations for Students Who Are Gifted *continued*

Anomalies and paradoxes

Presenting anomalies and paradoxes can also peak the interest of students who are gifted. Glitches in logic upturn a tidy view of the world and create opportunities for students to enter into a deeper inquiry, to become immersed in the principles and to build a clearer understanding of a particular aspect of a field of study (Harvey 2000, p. 70).

Tiered assignments

Tiered assignments are parallel tasks that have varied levels of complexity, depth, abstractness and support. Students work on different levels of activities, all focused on the same essential concept or learning outcome. These types of assignments allow students who are gifted to work at a more challenging level. Tasks from one tier to the next should differ in level of complexity and should not simply be more or less work.

Designing a tiered assignment involves selecting a skill or concept, developing basic learning activities and then creating higher-level variations by changing variables, such as using advanced materials, moving toward a more abstract concept, reducing support, making it more open-ended, and/or making it faster paced.

For example, a tiered assignment for a Grade 2 science class studying communities might offer the following types of activities.

- | Tier 1 | | Tier 2 |
|---|-----------|---|
| <ul style="list-style-type: none">Describe an ant community in pictures or words. | <i>or</i> | <ul style="list-style-type: none">Describe an ant community using at least three sentences with at least three describing words in each sentence. |
| <ul style="list-style-type: none">Use a Venn diagram to compare an ant community to your community. | <i>or</i> | <ul style="list-style-type: none">Make a PowerPoint explaining how what you learned about ant communities helps you to understand living and working together in a human community. |

Independent projects

Independent projects let students identify issues or topics of interest, plan an investigation and synthesize the findings. Projects can offer enrichment and meaningful engagement for many students who are gifted. It is important to recognize that students may need to be taught the skills to do this kind of independent work.

Instructional Considerations for Students Who Are Gifted *continued*

► Products

The products of learning are the ways in which students explore and demonstrate their understanding of content and process. Differentiating products means providing opportunities for students to demonstrate their thinking and learning in different ways, including written, oral, manipulative, discussion, display, dramatization, artistic, graphic representation and service learning.

For example, conventional writing assignments may not be the best way for some students to show their learning. Some students may think quicker than their hands can write. An action product, such as a PowerPoint slide show, videoconferencing or a performance, could be a better type of learning experience for these students.

Students who are gifted often need to produce, what Dr. Joseph Renzulli calls, “real-life products” for real audiences. These products go beyond the typical research paper or report to alternatives that develop individual students’ talents and curiosities, and can be shared and used by others.

The main purpose for designing alternate products is to:

- broaden the range of students’ experiences
- expand students’ ways of learning and expressing themselves
- challenge students in their areas of strength
- create opportunities for students to explore hidden talents and use gifts they might not otherwise use
- allow students to learn in a deeper and more advanced way through their preferred learning style
- create opportunities for students to develop organization and time management skills.

Encourage higher-order thinking

Bloom’s taxonomy (Bloom 1956) provides a useful framework for designing learning activities that promote higher levels of thinking related to both process and product. Bloom proposes that at the most basic level we acquire knowledge and comprehension. At higher levels we learn how to apply principles and to analyze, evaluate and synthesize. Assuming that students have no background in a topic of investigation, they would move from knowledge and comprehension to application before working with the higher-order skills of analysis, evaluation and synthesis. The latter three levels are associated with critical thinking. Consider how the following chart of this taxonomy of thinking can be used to plan for differentiating products and processes for students who are gifted.

Instructional Considerations for Students Who Are Gifted *continued*

Taxonomy of Thinking¹

Category	Definition	Trigger Words	Products
Synthesis	Reform individual parts to make a new whole.	Compose • Design • Invent • Create • Hypothesize • Construct • Forecast • Rearrange parts • Imagine	Lesson plan to teach other students • Song • Poem • Story • Advertisement • Invention • Other creative products
Evaluation	Judge the value of something vis-à-vis criteria. Support judgement.	Judge • Evaluate • Give opinion • Give viewpoint • Prioritize • Recommend • Critique	Decision • Rating • Editorial • Debate • Critique • Defence • Verdict • Judgement
Analysis	Understand how parts relate to a whole. Understand structure and motive. Note fallacies.	Investigate • Classify • Categorize • Compare • Contrast • Solve	Survey • Questionnaire • Plan • Solution to problem or mystery • Report • Prospectus
Application	Transfer knowledge learned in one situation to another.	Demonstrate • Use guides, maps, charts, etc. • Build • Cook	Recipe • Model • Artwork • Demonstration • Craft
Comprehension	Demonstrate basic understanding of concepts and curriculum. Translate into other words.	Restate in own words • Give examples • Explain • Summarize • Translate • Show symbols • Edit	Drawing • Diagram • Response to question • Revision • Translation
Knowledge	Remember something previously learned.	Tell • Recite • List • Memorize • Remember • Define • Locate	Quiz or test • Skill work • Vocabulary • Facts

1. Adapted from Benjamin S. Bloom et al., *Taxonomy of Educational Objectives: Book 1 Cognitive Domain*, published by Allyn and Bacon, Boston, MA, Copyright © 1956, by Pearson Education, adapted by permission of the publisher and adapted from *Teaching Gifted Kids in the Regular Classroom: Strategies and Techniques Every Teacher Can Use to Meet the Academic Needs of the Gifted and Talented* (Revised, Expanded, Updated Edition) (p. 133) by Susan Winebrenner © 2001. Used with permission of Free Spirit Publishing Inc., Minneapolis, MN; 1-866-703-7322; www.freespirit.com. All rights reserved.

Instructional Considerations for Students Who Are Gifted *continued*

► **Environment**

The environment refers to the physical and social setting where learning takes place, as well as the conditions under which a student is working. Students who are gifted benefit from learning environments in which they have opportunities to:

- gain understanding of self and others
- explore their own learning strengths and needs
- learn and practise coping skills that assist in their growth and development
- take risks and see mistakes as learning opportunities
- practise leadership and service within the school community.

For some students, an enriched learning environment can be provided within the regular classroom by replacing or extending the regular programs of study with activities that foster higher-level thinking skills and problem solving. This type of individualized programming can address learning needs without drawing undue attention to differences. Teachers may also choose instructional strategies and learning activities that challenge students who are gifted and benefit other students in the class as well. For example, activities such as debates, which involve students in creative and challenging learning, may be connected directly to learning outcomes in a variety of subjects.

► **Assessment**

Differentiating assessment for students who are gifted can mean making these students more active partners in their own assessment process. Teachers can involve students in developing and/or using criteria or rubrics that will enable students to reflect on their own work and make adjustments throughout the learning process. Portfolios and other multidimensional strategies can also be used to differentiate the assessment process. The goal is to generate rich and dynamic data to inform programming decisions for individual students.

Instructional Considerations for Students Who Are Gifted *continued*

	Mathematics	Language Arts	Science	Social Studies	
✓	✓	✓	✓	✓	Content
					Make activities more complex (e.g., comparative studies, more variables)
					Accelerate activities from concrete to abstract; move quickly
					Extend activities beyond the learning outcomes
					Increase range and variety of topics available
					Increase quantities of information available
					Increase the variety of information available
					Use tiered assignments according to student readiness
					Investigate related themes or ideas from various disciplines
					Explore related ethical issues
					Do an in-depth study of a related self-selected topic
					Develop expanded library research skills

Charts on pages 8 to 13 adapted with permission from the work of David Harvey, Elk Island Public Schools Regional Division No. 14 (Sherwood Park, Alberta, 2005).

Instructional Considerations for Students Who Are Gifted *continued*

	Mathematics	Language Arts	Science	Social Studies	
✓	✓	✓	✓	✓	Process
					Use pretesting to reduce or eliminate unnecessary learning activities
					Decrease the amount of review
					Decrease the amount of repetition
					Organize mini-tutorials
					Develop a learning contract
					Create opportunities for higher-level thinking skills
					Increase time span for assignments (to allow students to go deeper)
					Increase opportunities for primary research and data collection
					Increase opportunities for in-depth discussion
					Increase opportunities for in-depth reflection
					Increase the diversity of problem-solving opportunities
					Emphasize inquiry processes
					Use mentorship
					Create opportunities to use creativity (e.g., fluency, flexibility, originality, elaboration)
					Create simulations
					Increase opportunities for application to real-world situations
					Use more inductive thinking (e.g., working from the specific to the general)
					Use more deductive thinking (e.g., working from the general to the specific)

Instructional Considerations for Students Who Are Gifted continued

	Mathematics	Language Arts	Science	Social Studies	
✓	✓	✓	✓	✓	Products
					Provide for choice of product
					Incorporate service learning
					Apply to real-life problems and situations
					Challenge student to incorporate higher-order thinking skills (e.g., analysis, evaluation, synthesis)
					Encourage different targets for completions (e.g., focus on learning logs and self-reflection rather than on completed project)
					Create opportunities to reflect and record process

Instructional Considerations for Students Who Are Gifted continued

	Mathematics	Language Arts	Science	Social Studies	
✓	✓	✓	✓	✓	Physical Environment
					Create interest centres that are available throughout the school day
					Increase access to computer laboratory
					Increase access to library
					Increase access to diverse materials and resources
					Share examples of excellence and exceptional achievement
					Increase access to community resources (e.g., colleges, universities, labs)

✓	✓	✓	✓	✓	Social and Psychological Environment
					Flexible grouping
					Partner and small group work
					Ability grouping for some tasks
					Interest grouping for some tasks
					Independent work
					Create opportunities for exchange of ideas
					Encourage intellectual risk taking
					Design self-pacing learning opportunities
					Create opportunities for self-reflection
					Offer choice
					Encourage risk taking and experimentation
					Organize self-directed learning that incorporates pursuit of interests
					Explore opportunities for leadership

Instructional Considerations for Students Who Are Gifted *continued*

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