

THE GIFTED EDUCATION REVIEW



What is Advanced Content in Curriculum Design?

Advanced content is a foundational component of curriculum for gifted students.

by Todd Kettler, PhD

Curriculum is the intentional, systematic organization of learning experiences to accomplish our desired student outcomes. In its simplest conception, curriculum is about what should be taught. Gifted education is a multifaceted enterprise, and curriculum is always at the heart of what we do. While there are a number of models for curriculum in gifted and talented education, some elements of gifted curriculum consistently appear across almost all models—advanced content, complex thinking/authentic products, and conceptual understanding. Though we frequently talk about advanced content, clear parameters of

what makes some content advanced and other content typical remains vague. Thus, to help teachers and curriculum designers, I want to offer some clarification on how to recognize and develop advanced content.

While learning standards such as Common Core, Next Generation Science Standards, or other state standards provide the framework for curriculum, learning designers must select content to systematically accomplish the student outcomes delineated by the standards. One way in which gifted and talented curriculum differs from typical curriculum is the use of advanced content to teach the standards

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The Gifted Education Review welcomes submissions from teachers and academics in the field of Gifted and Talented Education. Please send queries or submissions to the editors at the address above.

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(VanTassel-Baska, 2011; VanTassel-Baska & Stambaugh, 2006). Advanced content is characterized in two primary ways: (a) accelerated or above grade-level and (b) enriched for increased depth and complexity. Curriculum design for gifted and talented students includes intentional and systematic differentiation applying a combination of acceleration and enrichment. For instance, the Texas State Plan for the Education of the Gifted and Talented requires that schools “modify the depth, complexity, and pacing of the curriculum and instruction ordinarily provided by the school” (Texas Education Agency, 2009, Section 3).

One way teachers and curriculum designers can develop curriculum for gifted students is to accelerate learning standards. Gifted and advanced students often master many grade-level standards at the beginning of the academic year. Teaching to standards that students have already mastered leads to minimal or no academic growth, and it also creates a learning environment incapable of challenging

students to achieve at advanced levels.

Content standards in gifted education are often accelerated so that students are learning knowledge and skills that are typically expected to be mastered one or more years later. For instance, Mofield and Stambaugh (2016) developed a series of gifted and talented language arts curriculum units for middle school students, and they used learning standards to define knowledge and skill expectations from grades 9 and 10. Thus, when a school adopts the *Perspectives of Power* curriculum (Mofield & Stambaugh) for use in a grade 7 gifted and talented language arts program, the gifted students are working on standards that are accelerated by two or three grade levels compared to typical grade 7 students. In this way, acceleration is accomplished not by moving students up to another grade but by moving advanced standards down to challenge the students where they are.

Similarly, Kettler and Curliss (2003) demonstrated a tiered-objective model

for creating differentiation in cluster-grouped mathematics classes. In the tiered-objective model, teachers create advanced content by scaling-up objectives so that gifted and advanced students are working on the same concept but one or more grade-levels above their peers. Developing curriculum with advanced content using accelerated standards yields an aligned approach that can be systematically implemented in a variety of settings. Good curriculum for gifted students ought to include above grade-level content standards.

Another approach to design curriculum with above grade-level content is the selection of texts that are considered more complex with substantive content (Little, 2011). When designing language arts curriculum, literature selections should include works which yield rich and rigorous reading experiences for gifted students. It is recommended for verbally gifted students (Hughes, Kettler, Shaunessy-Dedrick, & VanTassel-

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The Power of the Passion Project

Part One: Overcoming Challenges and Finding Time

by Kelly Margot

Jean, a gifted and talented student, is fascinated by snakes. Jean's early research into herpetology led him to believe that snakes adapted to almost any environmental situation, so he was boggled by the fact that there were no snakes in Ireland. Last year, Jean's pursuit of an explanation and his research on the evolution of snake eyelids led to his publication on the American Herpetology Society website. Today, he is busy writing research questions that will continue to guide his field of inquiry.

While Jean works on his herpetology project, Max watches a video the Center for European Nuclear Research (CERN) posted about how their particle accelerator functions. He changes his research question to investigate why CERN chooses helium to conduct these experiments. Max explains to a classmate that stripping the electrons off of calcium seems much simpler, as the valence shell is unstable.

Every Friday, in my third grade classroom, you see students at various stages investigating the topics of their choice. There is no doubt, as you look around the room, that these kids are passionate about their topics.

Where Did This Idea Come From?

In 2002, Google began allowing their employees to spend 20% of their time on passion projects. These projects were meant to benefit Google and were brought to fruition through innovations like Gmail and AdSense. Other companies (such as Microsoft and LinkedIn) adopted this same policy and found equally beneficial results. The philosophy of many companies participating in this policy is that employees will be more productive the remaining 80% of the time if they are allowed to pursue an idea or project of their choice (Page & Brin, 2004).

In classrooms, passion projects

have evolved into what is presently known as *Genius Hour*. Gifted classrooms around the country began allowing students to spend an hour of their week pursuing an area of interest. The hour is structured differently in each classroom but always includes time for students to explore and learn about their topic of choice. Teachers have the students brainstorm topics and then create research questions which will guide the student's investigations.

Overcoming Realistic Obstacles

The main obstacle I find with *Genius Hour* is a young student's lack of experience with various topics. They struggle with knowing what they are interested in learning, because they lack exposure to various topics of exploration. Renzulli (1984) called these *Type I* experiences. I find that if I build up these *Type I* experiences in my younger

students (grades 1 and 2), by the time students are in third grade, they are ready to start researching an area of interest. Throughout first and second grade we explore various topics in science (such as worms, meteorology, caves, mammals, birds, geology, earthquakes, and insects) as well as cultures around the world. This exposure builds a solid line of inquiry for their passion project.

I also allow flexibility in the student's research. If, after a few weeks, the student would like to change their topic, we simply look back at his or her brainstorming list to find a new research interest. Students are often reluctant to do this (as it means they must create new research questions and start from the beginning).

Sometimes students make connections from prior genius hour studies. In one example, a little girl researched the Alexandria Library and, a few months into her research, approached me excitedly explaining that the library was related to Plato (her previous year's topic). As she explained to me how they were related, I realized she truly understood the topics. How else would she link Plato's love of learning and text to Alexander through Aristotle?

Student expectations should be clearly outlined and explained. Each student needs to understand what they will be doing and what you expect the time to look like in the classroom. Also, in order to keep all students engaged and actively working, a few guidelines should be followed. First, state the goal for each Genius Hour session and post it in the room. If students are in the research phase, this goal could be a specific amount of information each pupil should have by the end of class. Students can also set their own goals, but I find a class goal with minimum expectations to be helpful. Second, if students are found to be off-task, they are redirected back to their work. In the event a second warn-

ing is issued, an alternate assignment is given. It is unlikely that the teacher will need to exercise this option often as the students love their Genius Hour choice time. Once you state your expectations clearly and firmly, students generally require only one warning. Third, it is important that the students understand they need to help you restore the room to order. Genius Hour can be a messy business, with iPads, papers, and every school supply you own strewn about the room. Assign the students specific jobs for each week to help facilitate the cleanup phase before the end of class.

The last suggestion I have for facilitating this time with your students is to track their progress. I find individually conferencing with each student at least once every two weeks helps keep the student on track. While we conference, I have students set a personal goal to accomplish as their next step. It is important to keep students focused on their questions and to help them remain aware of where they stand on the project at any given time.

The Secondary Classroom and Finding Time

The question secondary teachers most often pose to me, as a Genius Hour advocate, is, "How can I make time for this in my classroom?" To answer this, it is important to remember Google's original intent in the 20% project. Google intended for this time to benefit its company. Within subject-specific courses, Genius Hour projects should reflect your discipline. This benefits your class by increasing student understanding within your specific domain. Have the students choose a topic that is domain specific. This could be accomplished by allowing students to choose a content-related topic or by providing a list of various topics that will be covered throughout the year. Students will still build research ques-

tions and find answers, but will do so in order to gain a greater understanding of that particular domain.

In order to make time for this hour, teachers can use methods such as curriculum compacting for gifted learners. Doing this, in addition to replacing some assignments with the greater depth of content (Genius Hour exploration), should allow enough time for Genius Hour projects throughout the year. Practitioners can also assign portions of the project, such as the brainstorming list, choosing a topic, or writing the research questions, as an outside assignment or as part of a summer assignment.

During the school week, students could be challenged to "buy time" for Friday's Genius Hour by working efficiently Monday through Thursday. Using blended lessons can help facilitate this efficiency. All assignments and videos are posted to the classroom website, and students can watch a video that is a direct teaching of the lesson while taking notes. These notes can be referenced while completing their assignments. A benefit to such videos is that students can watch them again if needed. This flexibility allows students to control their own rate of learning and progression in the class. Students who work diligently Monday through Thursday are rewarded with time to work on their projects during Genius Hour on Friday.

What Genius Hour May Look Like in Your Classroom

In a secondary math class, a Genius Hour project might allow students to spend time with pure math concepts to which they would not ordinarily be exposed. Students could examine proofs, theorems, and conjecture from their math course and dig deep into the "why" and "how" behind the math. Even if a teacher only has a six-week or nine-week period to allow students

this type of exploration, it would benefit the students' learning and understanding of the domain.

In a secondary history course, students could examine, in depth, a particular culture, time period, or conflict. When all student discoveries are presented, the instructor could lead students to make new connections between their research. One student might examine the reasons behind a conflict on one side, while another student examines the reasons behind the conflict from the other side. Even more, a third student might examine the industry within the countries at the time. A practitioner can then develop questions to guide student connections between these topics. Student choice is an important aspect of the passion project; therefore students must be allowed to choose a topic of interest even within the confines of a particular domain. Even though multiple students may choose the same topic, their learning experience will still vary as they each write their own research questions.

A secondary science classroom might use this type of project as a culminating assignment for students. The students could brainstorm topics based on the things they learned in the course throughout the year or semester. They can choose a topic they were intrigued by earlier in the course. This would be particularly powerful if students were told at the beginning of the course so they could keep a journal of topics that might pique their interest throughout the course. Jack Andraka, a teen prodigy who developed a test to detect pancreatic cancer, once spoke about working on his test in his biology class and getting in trouble for being off-task. Would it not be better to give children time within the course to pursue these topics? I know all students will not create a test for cancer, but they will all be empowered to create questions and find answers about areas that interest them.

It is interesting to me that many students choose similar lines of inquiry year after year. Jean (whom I previously mentioned) chose a herpetology-re-

lated topic for the last three years. He digs deeper and deeper into this specialty and becomes increasingly interested. Max chooses a physics-related topic each year. One year it was black holes, then wormholes, and currently it is particle acceleration. I am very interested to find out if these will correlate with the fields these children pursue as adults. ■

Part Two of this article will be presented in the next issue of Gifted Education Review.

References

- Page, L. & Brin, S. (2004). *An owner's manual for google's shareholders (Founders' IPO Letter)*. Retrieved from Google website: <https://investor.google.com/corporate/2004/ipo-founders-letter.html>
- Renzulli, J.S. (1984). *The three-ring conception of giftedness: A developmental model for promoting creative productivity* (ERIC Document Reproduction Service ED2492728). Retrieved from ERIC database.

Office for Giftedness, Talent Development, and Creativity Gifted Education Summer Conference—July 28 & 29



THURSDAY, JULY 28

9:00 – 12:00

Teaching for Deep Learning with Gifted Students - Todd Kettler, University of North Texas

Teaching advanced students requires differentiated curriculum and instruction and complex learning design. In this seminar, we will focus on ways to design challenging and engaging learning through differentiation of curriculum. Specifically, we will focus on ways teachers can create meaningful and engaging learning environments.

1:00 – 4:00

Teaching Critical Thinking with Debate & Deep Reading Seminars - Todd Kettler, University of North Texas & April Walker, Yorktown Education

Teaching critical thinking is often talked about, but harder to define. In this seminar, we clearly describe the elements of critical thinking and demonstrate how to teach and assess for critical thinking across subject areas. We will focus primarily on two evidence-based approaches that students typically love: debate and seminar discussions.

FRIDAY, JULY 29

9:00 – 12:00

It's More than Technology: Engaged & Connected Learning - Laila Sanguras, Dallas ISD & Suzanne Johnson, Coppell ISD

How can teachers engage gifted students in challenging and interesting learning? We will demonstrate twenty ways teachers can design learning tasks that students find super exciting with some technology tips, individual and group learning examples, and connections to outcomes of significance.

1:00 – 4:00

Teaching for Creativity & Innovation - Kelly Margot, Royce City ISD & Shannon Kirby, Lewisville ISD

Teaching gifted and talented students has always focused on developing creative productivity alongside expert content knowledge. How can teachers develop a climate and an instructional approach to nurture the innovative mind in gifted and advanced classrooms? This seminar will focus on practice ways to teach creative thinking through genius hour and other divergent and innovative instructional models.

Registration: \$100 for one day, \$150 for both days *Space is limited so register early* <https://lifelong.unt.edu/GiftedatUNT>

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Table 1. Create Advanced Content by Adding Depth

Element of Depth	Description
Specialized Language	Each discipline contains specialized language that is used by experts in the discipline. Advanced content includes the introduction and use of specialized language in early stages of learning.
Details	Learning details of a topic leads to deeper understanding of the concept and increases opportunities for critical and creative thinking. Advanced content includes more details than typical grade-level content.
Patterns	Patterns can be found in all content areas, and the recognition of patterns allows students to make connections and draw inferences about cause and effect. Advanced content intentionally illuminates patterns.
Rules	Rules are the organizing structure of topics, phenomena, and disciplines. Advanced content emphasizes the structure of a discipline or a topic to allow for deeper understanding.
Ethical Issues	Each discipline contains dilemmas and controversial issues. Intentionally focusing on the ethical issues of an area of study can transform typical content into advanced content that is both rigorous and engaging.
Trends Over Time	Trends in an area of study are those changes that might be observed over time. For instance, the study of a short story might reveal changes over time in narrative structure and point of view. Advanced content includes trend analyses to better illuminate the present and predict the future.
Big Ideas	Advanced content goes beyond the facts, details, and concepts of the curriculum and also focuses on theories, principles, and generalizations that exist within as well as across disciplines.
Unanswered Questions	Ambiguity within an area of study is the germination of creativity. Advanced content may be built around unanswered questions requiring students to imagine, project, and generate possible explanations.

Adapted from Kaplan (2009)

What is Advanced Content in Curriculum Design?

Continued from page 2

Baska, 2014) that literature selections be at least two reading levels above the students' grade. Thus, if in a typical language arts literature curriculum, texts like *To Kill a Mockingbird* and *Romeo and Juliet* are scheduled for grade 9 students, those texts may be implemented in the grade 7 literature curriculum for the gifted and talented program. Advanced reading skills are developed through guided experiences using complex texts with advanced vocabulary and sophisticated themes and conflicts (Hughes, et al., 2014). Gifted high school students should

be reading complex literary and philosophical texts such as Plato's *Apology* or Descartes' *Meditations on First Philosophy* as part of their curriculum.

When developing a social studies curriculum for gifted students, advanced texts may be primary documents, philosophical works, and jurisprudence documents such as Supreme Court majority and dissent opinions. For instance, a gifted curriculum for grade 8 United States history might include reading Thomas Paine's *Common Sense* and *The Rights of Man* as well as excerpts from *The Federalist Papers* by Alexander Hamilton and James Madison. These complex texts are capable of developing sophisticated reading skills, and

they are also invaluable for developing deep conceptual understandings of the constitutional era in United States history. High school government curriculum for gifted students might include reading classic Supreme Court decisions and philosophical works that were influential in the development of democracy such as John Locke's *Two Treatises of Government* and A Letter Concerning Toleration or John Stuart Mill's *On Liberty*. High school economics curriculum for gifted students may include regularly reading contemporary economics scholarship from *The Economist*. Complex and sophisticated texts are essential elements of the advanced content feature of gifted education curriculum.

Table 2. Create Advanced Content by Adding Complexity

Element of Complexity	Description
Multiple Perspectives	Many topics of study can be examined from multiple perspectives, and typical content can be transformed into advanced content when multiple perspectives are incorporated to create complexity.
Disciplinary Expansion	Content can be advanced when the topics of study expand beyond the typical discipline. A language arts curriculum can be expanded to a humanities curriculum and include studies related to religion, philosophy, and history. A mathematics curriculum can become more advanced when expanded to include coding, logic, and design.
Biography and Expertise	An area of study can be extended to include studies of those individuals whose expertise extended the field. An advanced mathematics curriculum may include an articulated focus on the contributions of great mathematics innovators over time. A curriculum may also be expanded to include studying contemporary experts and innovators in a field of study.

Adapted from Kaplan (2009)

The typical curriculum can be differentiated for gifted and talented students through modifications for depth and complexity. When adding depth to the curriculum, learning is designed with increasing difficulty, more divergence, and more abstraction. While adding depth takes content deeper, adding complexity makes content broader—considering changes over time or multiple perspectives.

Eight elements of depth can transform typical content into advanced content (California Department of Education and California Association for the Gifted, 1994; Kaplan, 2009; see Table 1). Similarly, three elements of complexity can increase the breadth of study toward advanced content (Table 2). In some cases, the typical curriculum may include one or more of the elements of depth and complexity. Such inclusion does not mean the typical curriculum of the typical course of study. These elements of depth and complexity should be thought of as a set of curriculum instruments to be orchestrated against the backdrop of the typical or core curriculum to transform what is typical into an advanced learning experience.

Advanced content is a foundational component of curriculum for gifted students. Curriculum managers and teachers should be able to point to accelerated standards, above-level texts, and/or elements of depth and complexity that clearly distinguish the gifted and talented curriculum from what is ordinarily provided by schools.■

References

- California Department of Education, & California Association for the Gifted. (1994). *Differentiating the core curriculum and instruction to provide advanced learning opportunities*. Sacramento, CA: California Department of Education.
- Hughes, C. E., Kettler, T., Shaunessy-Dedrick, E., & VanTassel-Baska, J. (2014). *A teacher's guide to using the common core state standards with gifted and advanced learners in the English language arts*. Waco, TX: Prufrock Press.
- Kaplan, S. N. (2009). Layering differentiated curricula for the gifted and talented. In F. A. Karnes & S. M. Bean (Eds.), *Methods and materials for teaching the gifted* (3rd ed., pp. 107-136). Waco, TX: Prufrock Press.
- Kettler, T., & Curliss, M. (2003). Mathematical acceleration in a mixed-ability classroom. *Gifted Child Today*, 26(1), 52-56.
- Little, C. A. (2011). Adapting language arts curricula for high-ability learners. In J. VanTassel-Baska & C. A. Little, (Eds.), *Content-based curriculum for high ability learners* (2nd ed., pp. 151-186). Waco, TX: Prufrock Press.
- Mofield, E., & Stambaugh, T. (2016). *Perspectives of power: ELA lessons for gifted and advanced learners in grades 6-8*. Waco, TX: Prufrock Press.
- Texas Education Agency. (2009). *Texas state plan for the education of gifted/talented students*. Austin, TX: Author.
- VanTassel-Baska, J. (2011). An introduction to the integrated curriculum model. In J. VanTassel-Baska & C. A. Little, (Eds.), *Content-based curriculum for high ability learners* (2nd ed., pp. 9-32). Waco, TX: Prufrock Press.
- VanTassel-Baska, J. & Stambaugh, T. (2006). *Comprehensive curriculum for gifted learners* (3rd ed.). Needham Heights, MA: Allyn & Bacon.



Recommended Reading for Gifted Students

by April Walker

Have you met that student - the one who has read everything in your classroom library and the library from the teacher next door? You think you have done it; you have found the perfect book, one you are sure she hasn't read yet. You approach her, prepared to rock her world with your book of wonders. But nope, she's read it; in fact, she read the whole series this past weekend. If only you suggested the book before she found it...

Gifted students are often voracious

readers, spending large portions of their day identifying with characters and escaping to other worlds. They appreciate humor and adventure like other children, but they also appreciate witty dialogue, satire, complex worlds, great description, and characters with real problems and depth. They also appreciate reading biographies of interesting people and learning about new topics through well-written nonfiction.

Parents and teachers of gifted

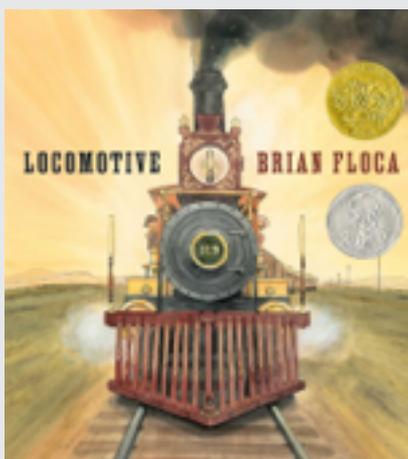
readers may find themselves faced with the challenge of matching students with the right book...and then having to repeat that effort over and over again. In this installment of *Book Finds*, I will recommend nonfiction, biographies, and a few fiction selections for gifted readers. The books are arranged loosely by age level, but a good book is always a good book. Feel free to break out of constraints of age categories to pick up a new read or to recommend one.

Early Elementary

Locomotive by Brian Floca

64 pages

Atheneum/Richard Jackson Books



Locomotive is a Caldecott Medal winner, written by Brian Floca. This book creates a wonderful, sensory experience about the story of ad-

vent of the Transcontinental Railroad in 1869. The illustrations and description will carry children away on a journey across the country. This story could easily open up discussions about the evolution of transportation or American History.

The next two books are companions and should be read by every child and adult everywhere.

The One and Only Ivan written by Katherine Applegate and illustrated by Patricia Castelao

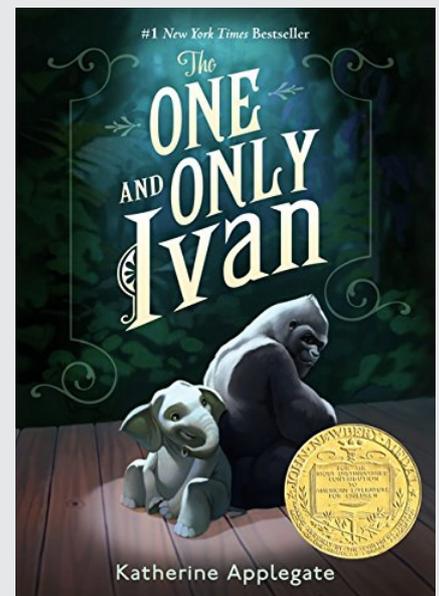
336 pages

HarperCollins

Ivan: The Remarkable True Story of the Shopping Mall Gorilla written by Katherine Applegate and illustrated by G. Brian Karas

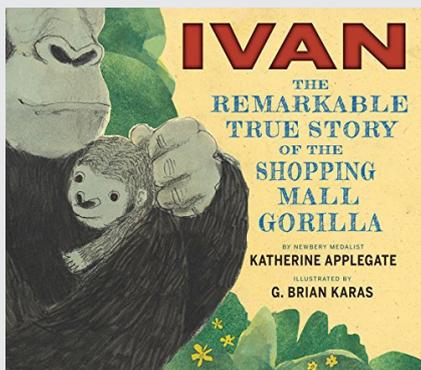
40 pages

Clarion Books



The One and Only Ivan by Katherine Applegate is a beautiful story about a gorilla who has spent his life in a cage at a shopping mall.

But Ivan is special; he brings beauty to his life through painting. Along the way he befriends a little girl and saves a baby elephant. Many students will probably be exposed to this book in 3rd or 4th grade. However, for gifted early readers, this novel may still be very readable. Or read it to your child together before bedtime; you won't regret it.

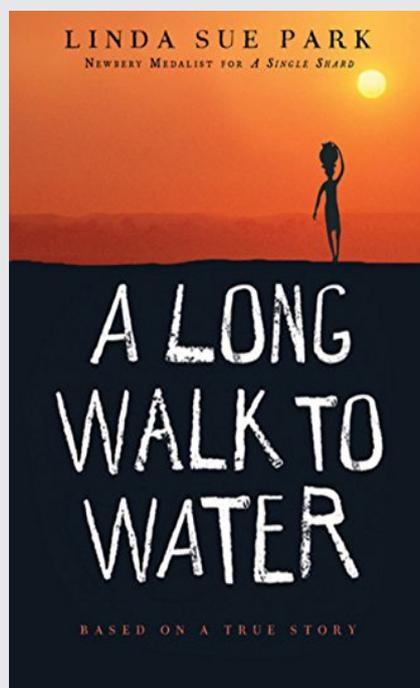


While *The One and Only Ivan* is the fictionalized version of Ivan's story to give you some perspective on how Ivan might have felt, Ivan really existed. *Ivan: The Remarkable True Story of the Shopping Mall Gorilla* by Katherine Applegate is the nonfiction picture book that tells the true story of Ivan. This book would make a wonderful companion to reading *The One and Only Ivan*. You could compare and contrast the two books, have rich discussions around whether animals should be in captivity, or just enjoy the two stories.

Late Elementary

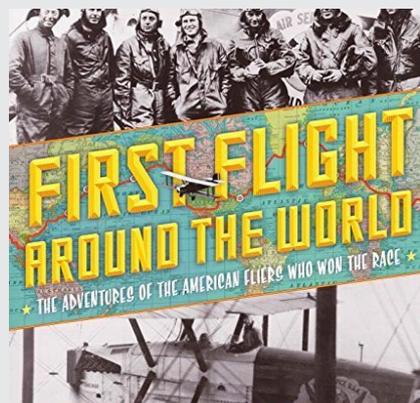
A Long Walk to Water by Linda Sue Park
128 pages
HMH Books for Young Readers

This beautiful story alternates between two story lines. It tells the story of Nya in 2008 and Salva in



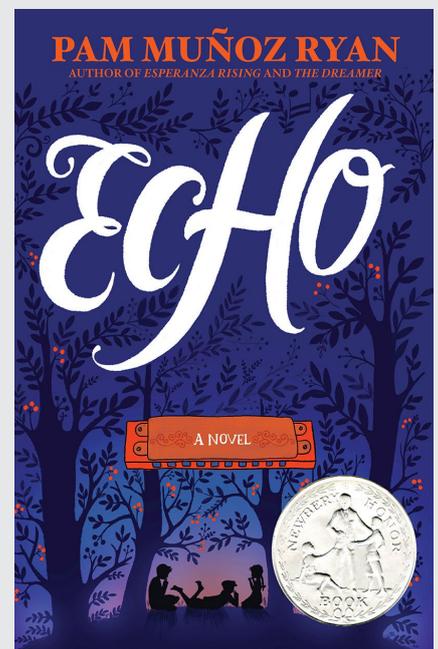
1985. You read the story of two children whose lives in Sudan are shaped by hardship and the need for water. This is a relatively quick read, but you won't want to put it down. Salva was one of the "lost boys" of Sudan, forced through hardship to look for family and a safe place to exist. Nya spends her entire day walking hours to get water for her family. Their stories interweave to tell a larger story.

First Flight Around the World: The Adventures of the American Fliers Who Won the Race by Tim Grove
96 pages
Abrams Books for Young Readers



This book is a 2016 YALSA Award for Excellence in Nonfiction for Young Adults Finalist. *First Flight Around the World: The Adventures of the American Fliers Who Won the Race* tells the story of a group of American aviators who started a race around the world in 1924. Tim Grove details their hardships and achievements with personal stories and a focus on their perseverance.

Echo by Pam Muñoz Ryan
592 pages
Scholastic Press

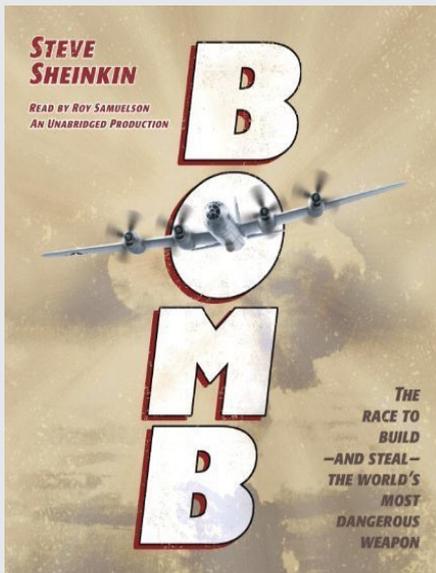


This was my favorite read of 2015. Pam Muñoz Ryan tells the story of three children: one is in Germany as the Nazi's begin to take over, one is the child of an immigrant family working the farm of a Japanese family imprisoned in an internment camp in California during WWII, and the other is an orphan in Pennsylvania who would do anything to protect his brother. All three stories are interwoven with a bit of fairy tale and a greater story about the power and beauty of music. This book would make for an amaz-

ing independent read or a fabulous read aloud. The audio version of the book is even better.

Middle School

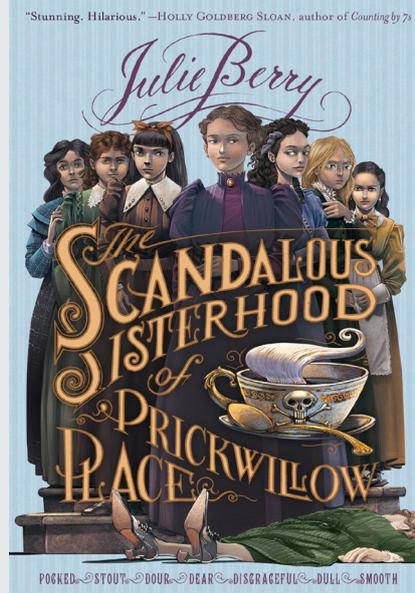
Bomb: The Race to Build-and Steal- the World's Most Dangerous Weapon by Steve Sheinkin
272 pages
Flash Point



Bomb: The Race to Build-and Steal- the World's Most Dangerous Weapon is a Newbery Honor Book. As Amazon describes, “This is the story of the plotting, the risk-taking, the deceit, and genius that created the world’s most formidable weapon. This is the story of the atomic bomb.” You don’t always find non-fiction that is engrossing, but Steve Sheinkin is a masterful storyteller as he describes the story behind the atom bomb.

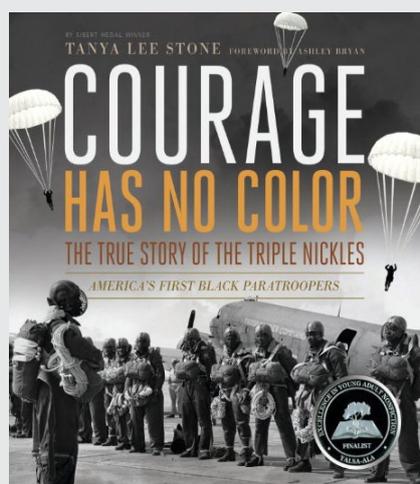
The Scandalous Sisterhood of Prickwillow Place by Julie Berry
368 pages
Square Fish

Haven’t you ever wondered what happens when a group of young ladies at finishing school find them-



selves with the conundrum of a headmistress who has been inconveniently poisoned? Now they must carry on as if all is normal or risk being sent back home. *The Scandalous Sisterhood of Prickwillow Place* is filled with satire, rich dialogue, and a murder mystery. What more could you want in a story?

Courage Has No Color, The True Story of the Triple Nickles: America's First Black Paratroopers by Tanya Lee Stone
160 pages
Candlewick

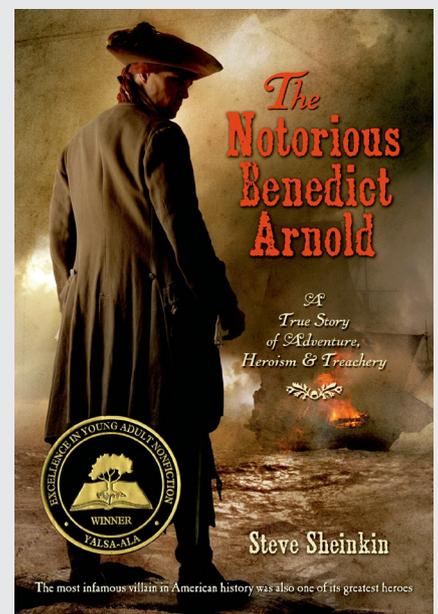


This book is a 2014 YALSA Excellence in Nonfiction Finalist. This book tells the story of the Triple Nickles, who were the first black

paratroopers in World War II. It details the discrimination they faced and what they had to overcome. This story will get students to think about another aspect of injustice and bravery from WWII they most likely have never heard.

High School

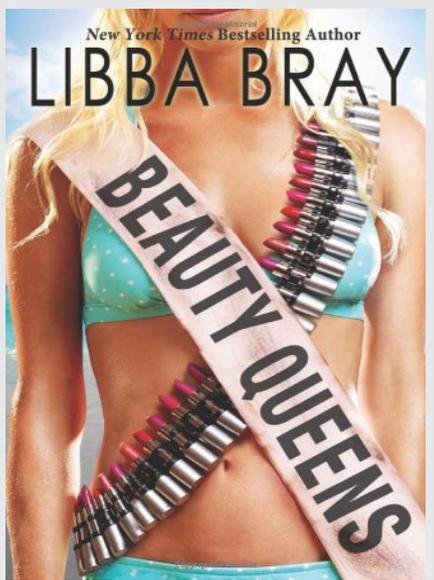
The Notorious Benedict Arnold: A True Story of Adventure, Heroism & Treachery by Steve Sheinkin
368 pages
Square Fish



Steve Sheinkin has written the biography of Benedict Arnold. Everyone knows Benedict Arnold was a traitor; what they don’t know is the rest of his story. Sheinkin leads you through an adventure, twists, and rich history about the Revolutionary War.

Beauty Queens by Libba Bray
400 pages
Scholastic Paperbacks

Libba Bray is a young adult author that all should become familiar with. *Beauty Queens* was one of the first



books in years to make me laugh out loud repeatedly. Imagine a parody of *Lord of the Flies* and contemporary society, where a group of beauty pageant contestants discover their plane has crashed, leaving them stranded on a deserted island. You can imagine the hilarity that ensues. ■

The Gifted Education specialization offers a Graduate Academic Certificate in Gifted and Talented Education (GAC-GATE).

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Ten Ideas for Teaching Writing with Gifted Kids

by J. Helen MacGregor

Writing with gifted students is a frustrating joy. Teachers must be willing to dive into the murky depths of the “model, guide, release” writing cycle with miniature windshield wipers attached to their masks and an extra air supply strapped to their backs. Exploring and producing the written word tends to highlight a gifted, paradoxical nature in which these avant-garde students are simultaneously relaxed and attentive, detached but involved, convergent yet divergent, and mindlessly perceptive.

These traits couple beautifully with their thirst for novel experiences to drive their creative output. However,

they must be taught to harness both their dichotomy and uniqueness within task-appropriate boundaries. If writing teachers keep this contradictory essence in mind and teach students to engage with it, the result will be a beautiful mess of barely-within-the-lines written expression that will empower these students for many years to come.

You are probably asking yourself how one might ever hope to accomplish such a monumental task. Fear not, dear friend, for you are about to embark upon a “Top Ten” list that will calm your frazzled mind and soothe your panicked soul.

Model the Writing Process

The initial piece to all writing puzzles ought to begin with a teacher model of the process. Teachers must show the progression of prewriting, organization, drafting, and revising in action. When working with gifted students, the modeling process must include interactive pieces in order to increase ownership. Allow them to give their input. Listen and learn from them.

“Wisdom is oftentimes nearer when we stoop than when we soar.”

William Wordsworth

Whirling Minds

Gifted students often struggle with matching their output speed to the pace of their mental processing abilities. Resentment toward writing builds as they frantically try to stream the ideas flowing from their brains through their pencils in some type of reasonably linear thought. Teach organizational prewriting, such as brainstorming through mind maps, to calm their racing minds and capture powerful thoughts on paper.

“Whether you’re a newspaper journalist, a lawyer, a doctor. You have to organize your thoughts.”

Fred Wiseman

Bad Handwriting

Another result of the whirling mind is the horrid handwriting that accompanies many learners graced with a high IQ. Frustration fills writing teachers when neither they, nor anyone really, can read the possible genius that rests in a heap on the page. Take a deep breath, and get ready for this next one: allow poor handwriting (and the lack of dictionary and thesaurus use while you’re at it) on the first draft. If that makes your eye twitch, accommodate with other options such as typing.

“It is better to write a bad first draft than no first draft at all.”

Will Shetterly

Conscientiousness and Perfectionism

Although not exclusively a gifted trait nor a trait that is evident in all students who are gifted, learning to walk the line between conscientiousness and perfectionism is essential for many before they can even begin the writing

process. This group might freeze with writer’s block. They might refuse to prewrite, draft, or write anything at all. Have a conversation in which they are not required to write. Once the ideas start flowing, encourage them to record what they just said. Alternately, provide opportunities to draw ideas or answer a character questionnaire to initiate the process.

“Writing isn’t a skill that some people are born with and others aren’t. Writing is talking to someone else on paper.”

William Zinsser

Hold High Expectations

Once you have harnessed ideas, battled handwriting, and addressed perfectionistic tendencies, you are ready to expect greatness. Encourage high vocabulary, cross-curricular connections, and tenacity. Avoid praise until students have put forth their best effort. A gifted student may compose the best paper you have read all week, but is it his or her best? For some advanced students, writing will be the most difficult challenge they ever face, because there isn’t a “right” answer or a clear finish line. Hold students to the standard of constant improvement, even when that means they must try again.

“Vitality shows in not only the ability to persist, but the ability to start over.”

F. Scott Fitzgerald

Be Kind

Remember, encouragement must accompany constructive criticism. Writing is a personal and delicate process that requires an enormous level of bravery. Create a safe classroom

environment by modeling vulnerability. Be transparent with them. Share your life. Write about real events and people when you model. Establish an atmosphere for acceptance of feedback and revision by allowing students to help you improve your prewriting and first draft. Make mistakes on purpose, and be gracious when they discover real mistakes. They will.

“The first attempts are absolutely unbearable.”

Vincent van Gogh

Give Time

Picture a box full of puppies or a bicycle basket with a kitten in it before you tackle this one. Are you in a good frame of mind? Proceed. The standardized testing classroom leaves little time for anything but drill-and-kill, but teachers must find time for writing. Once appropriately high expectations are in place, gifted students will require just as much time as their average ability peers to complete the writing cycle. Additionally, allow time for excessive questioning. Students with a high IQ tend to ask “what if” until you want to explode. Don’t. Answer their questions. Encourage them to participate in class discussion and to share prewriting, drafts, and final pieces. This all takes time. It is all worth it.

“Writing is a creatively rewarding occupation but, for me, very time consuming.”

Holly Johnson

Creativity and Structure

Gifted students who struggle with finding the tension between originality and task appropriateness may require explicit teaching in this area. Provide open-ended opportunities for free writ-

ing and poetry as well as more structured assignments such as expository writing, research papers, or book reports. Use Venn diagrams to compare/contrast the goal of different types of writing. Question constantly: Are you writing for an audience? Are you trying to convey a message? Have you addressed the prompt?

“In art and dream may you
proceed with abandon.
In life may you proceed with
balance and stealth.”

Patti Smith

Productive Struggle

With high ability learners, comes the opportunity to engage in productive struggle and problem finding. They might stubbornly grapple with the prompt for a while in order to approach the task from an unconventional angle.

Step back. Let them try. Teaching students to love the cycle of effort, embracing mistakes as intriguing rather than embarrassing, and then repeating the process will surely increase engagement and perseverance. The cycle is especially important for gifted learners who often breeze through school without much challenge.

“Without struggle,
there can be no progress.”

Frederick Douglass

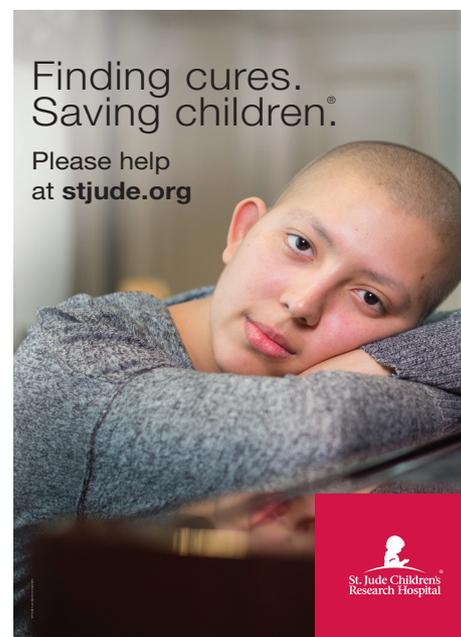
Opportunities to Push the Limits

Once task-appropriateness and the structure of productive struggle are well within students' grasps, they need to be free to push against the expectations. Don't push back; accept “what if” and continue to ask and answer questions. Say yes more often than no. Ok, so you had a plan, but maybe their plan

is better. Don't miss the moments. ■

“If you would be a real seeker after truth, it is necessary that at least once in your life you doubt, as far as possible, all things.”

Rene Descartes



Critical Thinking: What Works in the Classroom

by Kendal N. Smith

The intent of this section of Gifted Education Review is to take recent research in the field of gifted education and articulate the implications for practitioners and administrators in the field. This installment of our research section focuses on an article analyzing the subject of developing critical thinking skills for students.

Abrami, P. C., Bernard, R. M., Borokhovski, E., Waddington, D. I., Wade, C. A., & Persson, T. (2015). Strategies for teaching students to think critically: A meta-analysis. *Review of Educational Research, 85*(2), 275-314.

In the past two decades, “critical thinking” has become a favorite buzzword in education, commonly invoked by politicians, educators, parents, and researchers alike. Everyone seems sure of its importance and confident that we need more of it in our classrooms. Unfortunately, there is considerably less consensus about what it is and how it can and should be taught. Is it a skill? A mindset? Both? What place should it have in the curriculum? Is critical thinking instruction more effective for certain age groups than others? Which instructional strategies are best for facilitating it? Does it transfer across subjects? How should we as-

sess it?

In search of answers to these questions, Abrami et al. (2015) conducted a comprehensive analysis of empirical research on critical thinking. They adopted a broad definition to guide their investigation, which included cognitive skills such as interpretation, analysis, evaluation, inference, explanation, and self-regulation, as well as several attitudes or dispositions, such as open-mindedness, inquisitiveness, and carefulness in making and revising judgments. They then searched through numerous research databases for studies that tested whether a particular instructional strategy produced



changes in these skills and/or dispositions. After reviewing 2,332 articles, they identified 341 high-quality studies for further analysis. Combining and averaging the results of each study, they found an overall positive increase in critical thinking ability. However, because of the large amount of variation between the studies, they also grouped them in a number of different ways to see if there was still an increase in critical thinking within each group. These subgroup analyses allowed them to explore more specific questions about what works and for whom.

Critical thinking can be taught across subjects and to all age groups. The researchers first separated the studies into different subject matter classifications, including STEM, health/medical education, and non-STEM subjects. They found positive effects in all three subject areas, with no significant differences among them. They found similar results after grouping them by education level. Increases in critical thinking remained equally significant for elementary, middle, sec-

ondary, and undergraduate students. This appears to undermine the assertion that children under a certain age are not capable of critical thought, a common objection to the acceleration practices that are favored in gifted education.

Even a small amount of critical thinking instruction makes a difference. The authors also divided the studies according to their duration, including those in which instruction lasted less than two days, more than two days but less than a semester, one semester, and more than one semester. They found significant results in each category, indicating that explicit instruction on critical thinking is important, regardless of its duration.

Targeted instruction can improve both critical thinking skills and dispositions. The majority of the studies the authors identified focused on critical thinking skills, either general or content-specific. However, analysis of the smaller group targeting critical thinking dispositions also had a significantly positive impact. This should be particu-

larly encouraging to gifted educators, as the ease with which high-ability students often acquire critical thinking skills does not always extend to the dispositions necessary for its application. These students would likely benefit most from instruction that fosters an open and honest mind along with skill development.

Students can learn both general and content-specific critical thinking skills. While researchers agree that critical thinking cannot occur without some prior knowledge (i.e., something to think critically about), there are varying views about the degree to which critical thinking skills are context dependent. Is it more effective to teach a course or unit focused exclusively on critical thinking, or should instruction be tied to problems or procedures encountered in a specific context? Again, Abrami et al. (2015) found evidence to support both approaches, reporting positive results in studies measuring generic skills and in those that assessed students' ability to think critically about specific content.

Some instructional strategies are better than others at facilitating critical thinking. One area where the authors did find significant group differences concerned the instructional strategies used in each study. The identified strategies were analyzed within a three-category framework: "Dialogue" encompassed all strategies focused on discussion, either teacher or student led; "Authentic Instruction" included applied problem solving, simulations, case studies, games, and role-playing; and "Mentoring" referred to one-on-one interactions, peer-led dyads, and internships. While significant increases in critical thinking ability were seen in all three categories, studies that used Dialogue or Authentic Instruction produced greater results than those that relied solely on Mentoring. Specifically, teacher posed class questions, teacher-led whole-class discussions, teacher-led group discussions, applied problem solving, and role-playing were

the most effective strategies. However, studies that combined strategies from all three categories evidenced a much greater result than any single category alone. Thus, the authors suggest that Mentoring acts as a facilitator for other types of critical thinking instruction, magnifying their impact. This catalytic effect may be even greater for gifted students, who are prone to developing very specific interests and would likely find one-on-one interaction with an expert quite valuable.

Teacher training on critical thinking makes a big difference. Prior to publishing the result of their full investigation in 2015, the authors released an intermediate report (2008) of their initial findings, based on 117 studies. The earlier report included one additional finding about the methods used to ensure that critical thinking was actually implemented in the classroom. The authors called this "pedagogical grounding" and found that studies which in-

cluded specific teacher training on critical thinking produced a significantly greater increase in critical thinking skills than those that only referenced critical thinking in curriculum descriptions or course objectives.

Abrami et al. (2015) have provided several insights about how critical thinking ability can be enhanced in the classroom. Their synthesis of prior research reveals that even a small amount of targeted instruction can help students of all ages and in all subjects develop critical thinking skills and dispositions. Teacher-led class or group discussions, real world problem solving, and role-playing are the most effective strategies for improving critical thinking (supplemented with mentoring opportunities). Moreover, just as explicit instruction is crucial for students to improve critical thinking, professional development focused on how to deliver critical thinking instruction is essential for teachers. ■

The Authors

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