For the past two years, gifted eighth-grade students at Arcola Intermediate School have organized a prescription drug Take-Back Day for our local community as a method for providing the public with an effective, convenient method for drug disposal. This valuable service-learning project has forged a working relationship with our township police department while also helping students develop a deeper understanding of the relationships between prescription medications and health and environmental issues.

The Importance of Service Learning

The National Service Learning Clearinghouse defines service learning as a teaching method that combines learning with meaningful community service to teach civic responsibility. Service learning projects help students make interdisciplinary connections while developing community partnerships. Skills involved in service learning include gathering and synthesizing information, making decisions, clarifying values, and solving a problem by taking action for a cause, all of which are critical for the social-emotional development of middle school students (Bohnenberger & Terry, 2002). Terry (2008) describes the hierarchy of service learning as consisting of three levels that include community service, community exploration, and community action. Of these, community action projects, such as the one described here, are the most appropriate level for gifted students because of their ability to create change within the community while promoting student learning.

Prescription Drug Disposal: An Opportunity for Service Learning

Student involvement in organizing a prescription drug Take-Back event occurred as a result of learning about the issues surrounding prescription drugs during a classroom discussion about environmental and societal issues. Although well-versed in the health issues related to street drugs, many students were unaware that abuse of prescription drugs is a growing problem and none were aware that improper disposal of drugs is a source of water pollution. Subsequent research uncovered the National Prescription Drug Take-Back Day program, designed to provide communities with a safe method of drug disposal. Once the students determined from the Drug Enforcement Administration’s Office of Diversion Control website that our community did not have a Take-Back collection planned, they quickly and excitedly suggested that they act to organize and promote such an event.

Organizing and Planning for the Service Event

The first step in planning for a Take-Back event involved discussing the idea with the School Resource Officer as continued on page 16

**FEATURE ARTICLES**

**Cover: Service Learning: A Win-Win for Your Students and the Local Community**

Incorporating a service learning component into an existing curriculum

**The Enrichment Seminar: A Middle/Secondary Course for Gifted Learners**

Create courses, programs, and activities that may positively influence the identity formation of students

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**INSIDE THIS ISSUE**

- Patty McGinnis
  Arcola Intermediate School, Eagleville, PA

Patty McGinnis is a gifted-seminar instructor and science specialist at Arcola Intermediate School in Eagleville, Pennsylvania. She is also a doctoral candidate in Boise State University’s Educational Technology program.
There are many things that educators do during the course of the day that are never evaluated, rarely assessed, or even consciously acknowledged. The terms “A,” “95,” “Proficient,” and “Excellent” are useless when evaluating for evidence of creativity, leadership, honesty, and a host of other habits of mind or process skills. Upon consideration of this point, two questions linger: why focus on affective needs and thinking skills, and how can they be covered during the course of the school day? I can answer the former, and I’ll leave the contents of the issue to address the latter.

The development of higher order thinking skills, problem-solving techniques, creativity, and autonomous learning should be the foundation for many of the lessons we develop, as they are the foundation of the characteristics that will allow high-ability students to thrive in the 21st century. Exposing students to the international community requires discussions about global economics, conflicts, resources, technological advancements, and other cultural markers. Even if they never travel abroad, the situations and issues that arise during class discussions lend themselves to debate, conversation, and reflection upon possible compromises and solutions. While it may take time to instill affective characteristics and thinking skills in students, the instruction and observed development is one of the joys of the profession.

Let us now look at the contents of this issue of Teaching for High Potential for meaningful ideas and lessons that can be incorporated into existing curriculum. In Service Learning: A Win-Win for Your Students and the Local Community, Patty McGinnis highlights the value of educating students about real-world issues and discusses the skills associated with promoting and planning an event that goes beyond the walls of the traditional classroom. Joanna Simpson stresses the importance of addressing social-emotional issues in middle and secondary students and a way to do so in The Enrichment Seminar: A Middle/Secondary Course for Gifted Learners.

THP’s columnists write from the same vein. A Secondary Look delves into the concept of empathy and looks at how it may be addressed within the curriculum. The essential role of critical-thinking skills is explored in Scientifically Speaking. Jennifer Beasley, in her final installment of Curriculum Connection, speaks about how Bloom’s Taxonomy and Webb’s Depth of Knowledge are helpful tools when examining curriculum for appropriate levels of rigor. Art Matters asks us to consider play and free time as settings for recognizing individual expression, and A Primary Place seeks to further the infusion of the arts into primary STEM lessons. Technology Untangled presents a virtual online hiking adventure and discusses implications for a variety of school subject connections. School Spotlight rounds out the issue, introducing us to a school that is high in population of underserved students, but also high in achievement.

Even though the teachings and lessons covered in this issue might not carry the same weight when it comes to measuring proficiency according to a standardized measurement or grading curve, they carry more weight in the development of life-long learning skills and social and emotional development.

As always, I welcome your comments, suggestions, opinions, and ideas.
Can a public school with a high percentage of low-income students produce high standardized test scores? The answer is yes. Students at Renzulli Academy, in Hartford, CT, have the highest standardized test scores in the school district—98.6% of them scoring at goal or mastery on the Connecticut Mastery Test in 2013. It is important to note at the onset that test scores are not the driving force at Renzulli Academy.

Renzulli Academy was established in 2009 as a school within a school for students in grades 4-6. Since that time the Academy has moved into its own building, added grades 7–10, and is projected to grow to incorporate grades 11 and 12 by 2016. There are currently 126 students attending the Academy, of which 72% are eligible for the free or reduced priced lunch program. Demographically, 61% of students are Black/African-American, 28% Hispanic/Latino, 6% Asian, and 6% White.

Hartford Public School students are invited to apply for entrance into the Academy via the Talent Pool Model. Information submitted includes test data demonstrating above-average ability in reading, a completed Scale for Rating the Behavioral Characteristics of Superior Students, nominations by parents, teachers, and one school counselor, and a student-written essay.

Once identified and admitted, students become part of a larger family of learners, challenged as they never have been before. Principal Ruth Lyons feels that over time students begin to learn that school becomes a place of challenge and inquiry, with curriculum delivered by teachers who aim to make learning fun. The Academy has three fundamental goals.

1. Develop talents in all students.
2. Provide a broad range of advanced level enrichment experiences for all students.
3. Deliver follow-up advanced learning for students based on interests.

Given that the test scores are the highest in the district, some may be surprised that students are presented with a unique curriculum. The core curriculum used for language arts is the Schoolwide Enrichment Model in Reading (SEM-R) program. Through exposure to the classics and high-interest literature across multiple genres, students read independently and self-select challenging assessments and discussion groups. Mentoring Mathematical Minds, or M³ is the program used for Math instruction. Using a project-based approach, Project M³ offers depth and complexity of math concepts taught across grade levels. Another component is a computer-based interest exploration and independent project organizer known as Renzulli Learning. Students are grouped in a variety of ways. In Math students are grouped by ability, in Science and Social Studies by grade level, and because SEM-R is completely individualized, it is flexibly grouped. Grouping students with their intellectual peers provides them with access to rigorous and individualized curricular options that greatly exceed the standards. One teacher feels that the school is unique because students are able to research topics of interest in depth, letting their own questions and inquiries guide the way rather than always having the teacher create the path for them.

In addition to the curriculum, students at the Academy are involved in enrichment clusters, field trips, and service-learning projects, all of which contribute to the goals of teaching them to be problem solvers, self-regulated learners, critical thinkers, and scholarly students with high standards of excellence.

When asked about the Academy, one parent commented, "Renzulli Academy is special to my family because my son is finally happy with school. He likes going to class, and is genuinely excited every day with what he does there." Students also chimed in, "I learn something new literally every single day I go to school," says Luis, an eighth-grader. Kimberly, also in eighth grade, states, "Renzulli Academy is special to me because the teachers and students at school are very supportive of things that other people are passionate about."

The method of teaching and learning at Renzulli Academy is designed for students who are original thinkers, open to discovering their gifts in a creative educational setting. The school’s model and approach to learning provides a solid example of a learning environment that goes against the popular belief that underserved students have a difficult time achieving at high levels. The halls of the Renzulli Academy are truly alive with learning.
Nurturing Student Thinking Isn’t a Frill: It’s Critical!

Content has long been the focus of schooling. In the past, memorizing facts was of primary importance because access to information was limited to accessible written text. Today, even young children can look up facts in seconds on websites like Wikipedia with reasonably good accuracy (Giles, 2005). Being accurate is still important, but memorizing content should no longer be a focus of schooling. Almost all of the information in the world is available at our fingertips. Teaching students to analyze, evaluate, synthesize, and apply this content becomes our challenge. Processes should be our focus.

Processes are all of the things students do with content. The scientific method, research, revising writing, digital storytelling, and problem solving are all examples of processes. All rely on the quality of student thinking. I argue that critical thinking is the most important process, a “super” or macro-process needed for the success of other processes.

Critical thinking is listed as a facet of most schools’ mission statements and is often listed as a focus of gifted programs. It is fundamental to quality scientific thinking. Teachers and administrators are often hard pressed, though, to point to specific areas in which critical thinking is included in their programs. Done purposefully, critical thinking can be embedded effectively in every area of the curriculum.

In fact, critical thinking is best taught with specific content. As an example, I co-taught a summer class for gifted high school students with a NASA educator a few years ago (for details, see Lewis & Coxon, 2010). The class content was air pollution and involved using mathematical modeling to determine the movement of emissions from existing and proposed power plants. I incorporated critical thinking with Paul’s Reasoning Web (Paul, 1992), Devra Davis’ (2002) haunting book, When Smoke Ran Like Water: Tales of Environmental Deception and the Battle Against Pollution, and news articles about a controversial proposed power plant.

Using the Reasoning Web, students broke apart the various arguments for and against the proposed plant. After examining numerous articles on the same topic, they discovered big differences between the evidence offered, whether or not sources were cited, and the depth of explanation. In the discussions that followed, students needed to be pressed to elaborate on their critiques. It’s at this point that intellectual standards should be incorporated, such as those offered by Elder and Paul (2008).

Elder and Paul offer nine foundational intellectual standards: clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness. Start by presenting multiple articles from various viewpoints on topics pertaining to the class content, and then push students to evaluate articles in each category. Is the evidence relevant to the argument or is it meant to distract? Is the article fair in considering all aspects of the problem? Is the evidence offered accurately, with citations? Applying intellectual standards after breaking apart an argument is the second big step in critical thinking.

A final product—whether a written report, a video, website, or other choice—is the third big step. Students should take what they have learned during evaluation and, using other critically evaluated resources as evidence such as experts (like a NASA educator) and data they have collected, draw their own conclusions and defend them.

The intellectual standards can be applied again as part of the revision process. Is the evidence precise? Does the argument flow logically? Are multiple viewpoints considered? Strong answers to these questions are not likely to develop by happenstance. Ideally, these products are shared with a real audience, and one that provides constructive, critical feedback. It is at this point that students demonstrate their own thinking, which can be assessed on a rubric incorporating the intellectual standards.

The world has changed. Information is abundant, but putting it together in meaningful ways requires well-honed processes. Embedding critical thinking into the curriculum from early elementary school throughout the students’ education, with repeated exposures to the same models and processes, is crucial if we want to develop the next generation of student thinkers. Nurturing this type of thinking isn’t a frill: It’s critical! THP

References
Increasing Rigor: A Tool to Consider

You may have heard the following in a recent school conversation or training: “We are striving to increase rigor in our classroom.” What do we mean when we say “rigor”? What resources are helpful in attaining rigor when meeting the needs of academically advanced students?

There are many definitions for rigor circulating in education right now. The Common Core State Standards (CCSS) ask students to demonstrate deeper conceptual understanding through the application of content knowledge and skills to new situations. This idea of transferring knowledge to a new situation is by no means new in education. Some may say that it is simply evidence of understanding. How is that different from rigor?

Recently I had the chance to ask classroom teachers this question in a large conference. The overwhelming response defined rigor as the quality of instruction that requires students to construct meaning for themselves. When using this definition of rigor, we can see that it requires teachers to look carefully at their quality of instruction.

Webb’s Depth of Knowledge is another tool for considering rigor in the classroom. Whereas Bloom’s Taxonomy describes the thought processes used to demonstrate learning, Norman Webb (1997) describes depth of knowledge (DOK) in his work on cognitive complexity. Webb asserts that his depth-of-knowledge levels identify four ways that students interact with content. Recently, educators have used this tool to design tasks and assessments aligned with the CCSS. This depth-of-knowledge framework defines four levels that may be accessed through tasks we give our students:

LEVEL 1 draws on basic knowledge and rote learning. An example of this might be asking students to conduct basic calculations or describe the story elements in a recent reading.

LEVEL 2 requires some aspect of application. Students might be asked to sort objects by characteristics they have recently learned, or predict a logical outcome.

LEVEL 3 asks that students research, synthesize, reason with evidence, and communicate effectively. Teachers might ask students to solve non-routine problems, develop a scientific model for a complex situation, or even develop a logical argument.

LEVEL 4 is all about extended planning, research, and problem solving. This type of task requires investigation and time to think and process multiple conditions of the problem. Students might be asked to design and conduct an experiment and report on those results, connecting common themes across texts.

DOK as a Tool for Rigor in the Classroom

If we define rigor as the quality of instruction that requires students to construct meaning for themselves and apply what they learn in another context, then we need to examine the learning experiences that we give our students. Using the DOK levels can be a useful tool for evaluating our assignments as well as designing tasks in the classroom. In order to explore the use of this tool and how to design...
increasingly rigorous instruction, we need quality resources and to know the traps we need to avoid along the way.

**Webb’s Depth-of-Knowledge Levels**

DOK-1: Recall and Reproduction: Recall of a fact, term, principle, concept, or perform a routine procedure.

DOK-2: Basic Application of Skills/Concepts: Use of information, conceptual knowledge, routine problems, organize/display data.

DOK-3: Strategic Thinking and Reasoning: Requires reasoning, developing a play or sequence of steps, often more than one possible answer.

DOK-4: Extended Thinking: An investigation or application to the real world; requires time to research, across the disciplines/content areas/multiple sources.

1. **Resources for learning about DOK levels:**

   - [www.vimeo.com/42788913](http://www.vimeo.com/42788913) This is an informative video created by the New York City Schools about using Depth of Knowledge as a tool in the classroom.

   - [Pathways to the Common Core: Accelerating Achievement](http://www.heinemann.com/books/9781596674539) by Lucy Calkins, Mary Ehrenworth, and Christopher Lehman (2012). This book is a foundational text that helps unpack CCSS and demonstrates how to increase rigor in the classroom.

   - [www.bbbsd.net/sites/dev.bbbsd.net/files/DOK%20Question%20Stems.pdf](http://www.bbbsd.net/sites/dev.bbbsd.net/files/DOK%20Question%20Stems.pdf) This site gives you a direct link to DOK question stems that can be helpful in creating learning experiences at each level.

2. **Traps to avoid:**

   As we begin to use DOK levels in designing our instructional tasks, we want to avoid misconceptions.

   - Difficulty is not synonymous with rigor. We could ask our students to memorize a simple fact or memorize the [Gettysburg Address](http://www.gettysburgaddress.com). One obviously would be more difficult to memorize, but they are both not asking for much depth of understanding.

   - DOK is all about the context, not the verbs we use. In many DOK charts we can see many verbs associated with the levels, such as the word “describe” associated with a DOK 1. We could ask our students to describe a character in a story (DOK 1) or describe how word choice, point of view, or bias may affect the readers’ interpretation of a text (DOK 3).

   - The levels are not about grouping. Depth of knowledge requires all students to engage in challenging tasks and demanding goals. It would be inappropriate to designate some levels for only some students. The goal is depth of understanding, and we want all students to experience rigor in the classroom.

**Rigor for All**

Rigor is part of quality instruction. It is part of a quality schooling experience. As we consider the questions we ask and the learning experiences we create, rigor should be a natural part of the planning process. With tools like Webb’s DOK levels, we can begin to reflect on the types of learning experiences we are creating so that all of our students can experience rigor in the classroom.

**References**


Fun, Friends, and Freedom: A Time for Play and Artistic Expression

Summer vacation, that long stretch of warm, sunny days, can be a special gift during childhood. All too often, much of what we are trying to do in gifted education requires carving out space for students to grow inside traditional educational structures, many unable to accommodate them. Summer offers the perfect time for students, especially those yearning to be artistically creative and express themselves, to grow at their own pace. How can parents and educators consider what is best for the child, particularly if the student doesn’t want to “do” anything?

In the Arts, we encourage students to be creative and take risks in our studios and rehearsal spaces. We ask students to find their own voice and develop it. How can we help all gifted students cultivate their voices and passions?

Renzulli (2012) touches on the importance of choice and learning outside of school in each of the four “sub-theories” of talent development he explores. We will touch on three of the four in this column, Inductive Learning, Operation Houndstooth, and Executive Function, all of which can be nurtured during the summer, where free play should rule.

Inductive Learning describes a type of learning in which a student pursues a topic of their own interest and begins to grapple with real-world challenges. This type of learning might occur when students attend an art class or summer workshop in an area of art they enjoy. Many of these daily, weekly, and summer-long programs incorporate skills training from a professional perspective along with the opportunity to express a personal belief or comment on a societal viewpoint.

Operation Houndstooth relates to the importance of developing social capital. Students are encouraged to seek diversity, balance, harmony, and proportion in all the choices and decisions they make during the process of maturing. Suggesting that your students propose their own balanced schedule during the summer months will help them and their parents navigate together those ten weeks of relative freedom. It is important for a student to try to figure out that balance on their own, for it can aid in their social maturity.

Executive Function refers to leadership and decision making. The development of these functions is defined as the ability of students to engage in situations that require planning, troubleshooting, and decision making as well as compassionate and ethical leadership. The key is that executive function is not dependent on schedules, routine, or well-rehearsed responses. Many students of art have great executive functions, but are often unable to conform to prescribed or pre-determined schedules. Free play, or in their case, free time for art, is vital to their development.

A Note on Free Play

A recent study of 5th and 6th grade gifted students and their perceptions of play underscores the importance of free play to gifted youth. Researchers (Beisser, Gillespie & Thacker, 2012) sent a survey—designed by a sample group of gifted 5th and 6th graders—to Midwestern urban, suburban, and rural gifted students. According to their findings, gifted students defined good play experiences as having three key variables: fun, friends, and freedom. Students defined interesting play as having a large degree of freedom in how the play proceeds.

This is in sharp contrast with play that is directed by adults, like organized sports or games played in a camp setting. Free play, with all of the negotiation and inevitable decision-making it requires, is an excellent way to develop executive function skills.

Your gifted classroom might be a place to begin the discussion about student expectations and plans prior to the summer. Perhaps this guidance will help students explain what they really want to learn and participate in during the few months spent with little or no schedule.

Even with all of this to say, some of your gifted students, artists or not, might not need enrichment classes, a summer reading list, or accelerated activities. They might need a little encouragement to do something different this summer. In the Arts, freedom is the secret ingredient in finding your unique voice. Freedom is essential for cultivating the creative gifts of all our talented students. Fun, friends, and freedom are renewing and exhilarating for everyone, and they may actually help develop some of the skills necessary for gifted students to succeed in the coming year. Enjoy the summer break!

References


The Enrichment Seminar: A Middle/Secondary Course for Gifted Learners

As gifted learners move from elementary to middle school and secondary school, traditional gifted pullout program opportunities typically diminish. Programs and services typical at the middle/secondary level can include independent study courses, honors/advanced courses, and competition courses such as Future Problem Solving, Academic Decathlon, and Speech and Debate. Many of these programs and services target the intellectual needs of gifted learners. This article discusses how an enrichment seminar course offered at the middle/secondary level can be used to meet the social and emotional needs of gifted learners.

Rationale for an Enrichment Seminar
Adolescence is a time when identity development and relationship building are critical. This is just as true for gifted adolescents as it is for their non-gifted peers. Gifted learners can find themselves under added stress, however, because of expectations from parents, teachers, administrators, and fellow students that they achieve at high levels in all areas at all times.

Gifted persons may also exhibit certain social-emotional characteristics such as perfectionism, lack of self-confidence, difficulty forming relationships, disorganization, isolation, and narcissism (Pratt, 2009). This becomes problematic because a gifted adolescent may underachieve intentionally or experience stress from trying to overachieve while dealing with social-emotional issues. Many gifted adolescents cope with these issues by allowing members of their various social groups to help form their identity. Personal identity formation is influenced when students are asked to live up to the expectations of those around them, and so it is easier to deal with the social-emotional issues from which they might be suffering when they are around like-minded peers.

Various social situations trigger different social identities, that is, ways of thinking, feeling, and acting, based on the most prominent perceived group membership(s) at the time. Socializing with gifted learners who are like them or who may share the same social-emotional issues could help these adolescents to reconcile the societal expectations and form an identity that is their own.

Gifted adolescents go through a period in which their cognitive development is dynamic, allowing them to understand the world in a more sophisticated manner (Keating, 2004). This rapid cognitive development also allows them to understand that their intellectual ability distinguishes them from their peers. Some gifted learners find that this difference in intellectual ability can be problematic and can be associated with a negative social stigma. Gifted learners who find that negative social consequences are attached to being gifted may deny their giftedness, hide it, or mask it in order to conform (Vialle et al., 2007). Providing these learners with additional coping strategies, in the form of a special course such as an enrichment seminar, may be one way to keep these learners from intentionally or unintentionally underachieving.

Designing a Course that Supports Social-Emotional Needs
An enrichment seminar is a course that is typically offered as an honors elective credit and is facilitated by a teacher who holds a gifted endorsement, if not a degree in gifted education. The teacher constructs a curriculum based on the particular needs of the gifted adolescents in his or her classroom and typically offers projects and special activities that are geared towards gifted and talented youth. Students pursue a topic of their choice and facilitate their own learning. The teacher, acting as guide, provides opportunities for guest speakers and field trips related to the students’ individual interests.

The curriculum for the enrichment seminar course, in alignment with the name of the course, also provides curricular enrichment, an instructional strategy intended for students to explore topics of interest in greater detail than is normally feasible with the standard curriculum. For example, rather than learning facts about the author before reading a story, students in the enrichment seminar would research the author, the story, the time period, and create a story of his or her own. A guest speaker might be brought in who is a published author to talk about the writing process, and a trip to a publishing company might be a part of that curriculum. Student learning is enhanced by in-depth instruction in each topic that is offered, and a focus on the personality characteristics and challenges that one can face in a professional field. Failure, success, and the strategies to deal with those and other social and emotional traits, could be covered during this time.

These seminars can also provide the
perfect opportunity for specific curriculum intended for gifted learners who are either dealing with social, behavioral, or emotional issues or require an awareness of them. In addition, the teacher may give lessons on peer leadership and coping skills to help deal with the repercussions of receiving the gifted label.

Attending to the affective needs of gifted and talented students is as important as content and skill knowledge.

**Integrating Social/Emotional Coping Strategies**

Another unique aspect of the enrichment seminar is that it teaches gifted learners coping strategies to help address the social-emotional issues with which they may be dealing. Rudasill, Foust, and Callahan (2007) conducted a study to assess the social coping strategies of 600 middle and secondary school students. The sample was derived from gifted students who were participating in a two-week summer enrichment program. The study found that there were six coping strategies that the gifted students had in common: helping others, denial of giftedness, minimizing one’s focus on popularity, denying negative impact of giftedness on peer acceptance, conformity to mask giftedness, and hiding giftedness. In the enrichment seminar, a teacher could model coping strategies and share his or her own failures and success experiences that derived from those failures. Sample coping strategies include building confidence to ask questions, breathing exercises, counting, journaling, reflection, learning perseverance, and problem solving.

A curricular aspect of this facet of the course is learning about different types of giftedness. Using books such as *5 Levels of Gifted: School Issues and Educational Options* (Ruf, 2009), the enrichment seminar teacher discusses types of giftedness. Students then categorize their own behaviors and the behaviors of those in their social groups, to help them understand that they are not alone in their actions. An adolescent female who participated in this curricular unit in high school stated,

> I needed the reaffirmation and research-based scientific findings about myself and others gifted like me to realize that it was others’ problems with me; there wasn’t anything wrong with me. I was no different than anyone else, at least not in a bad way. I grew up always being called crybaby in elementary school. At least now I understand why I was so emotional (Simpson, 2013).

Other areas for social-emotional development in the enrichment seminar include college and career counseling, culturally responsive relationships, relationship building, and organization skills. Participants in each of these units have found value in them, and have even attributed this curriculum and their gifted teacher to a positive identity formation and increased academic achievement.

It is important to note that the enrichment seminar curriculum is written for gifted learners; however, high achieving students who have not received the gifted label may suffer the same social stigma as gifted learners and are typically able to take the course with counselor, teacher, or parent recommendation. Through discussions and activities, adolescents are encouraged to explore
their own ways of thinking and those of their peers, and are given strategies to both strengthen their relationships and manage their emotions. In addition, they are provided support with organizing their academics so that they can focus their interests on what would assist them in pursuit of their career or higher education choice. Ultimately, the participation in the enrichment seminar may guide who these gifted adolescents become as adults.

Concluding Thoughts
Secondary schools would be wise to employ a gifted course, such as Enrichment Seminar, that is constructed specifically for gifted adolescents. We have the research and the ability to serve BOTH the academic and socio-emotional needs of our gifted adolescents. We know what happens when we choose to ignore these needs in favor of the intellectual development. As parents, educators, and advocates of gifted adolescents, we know exactly what it looks like when these students begin suffering from negative behaviors.

There is considerable literature supporting the fact that gifted programming is necessary to reverse or prevent social-emotional problems in gifted adolescents. It is important for educators to write curriculum and create courses, programs, and activities that positively influence the identity formation of these teens.

It is not a question of whether or not we need to meet the needs of the whole child, including their intellectual and social-emotional needs—we know we need to do that. Understanding why we need to do it, and helping others understand why, may help us to advocate for high school gifted programming tailored to more than just the intellectual needs of these students. Having a model that has proven successful, like Enrichment Seminar, may help meet the complete needs of the gifted students we teach.

References
Leonardo da Vinci...engineer, prolific inventor, mathematician, painter, and sculptor. Da Vinci is what is known as a *polymath*, someone whose expertise spans multiple areas. He provides an example of someone with multipotentialities whose needs could only have been met by a school program that included a focus on all of the areas comprising the modern-day idea of STEAM: science, technology, engineering, arts, and mathematics.

What is the place of the arts in STEAM in the primary grades? Educators at this level have always sought to include simple art projects in their daily plans. Adding the arts and/or design to a science or math lesson may not be as common, but should not be intimidating! The natural curiosity of these students regarding scientific phenomena, coupled with a love of the tools of the arts, provide a high level of motivation for such activities. Teachers must simply supply the opportunity, materials, and direction.

**A Classroom Example**

The first step requires considering the instructional objective. The Next Generation Science Standard K-2-ETS1-3 (2013) states: “Students who demonstrate a basic understanding can develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.” This standard lends itself to arts integration and a literacy connection. Class can begin with a reading of Candace Fleming’s *Muncha! Muncha! Muncha!*, a story in which a farmer has difficulty keeping three hungry rabbits out of his vegetable garden. Students, considering the “problem” of keeping the rabbits out of the garden could use engineering principles to design a device to solve the issue. The arts component would focus on how to sketch, draw, or make a physical model; techniques for any one of these methods could be taught by a knowledgeable classroom or experienced art teacher. Teachers can add another dimension to the level of understanding by suggesting that students devise a way to restrict the animals in a way that is both effective and humane. This lesson presents many opportunities for teachers to incorporate brainstorming, higher level questioning, problem-solving activities, and metacognitive components. (See full lesson plan at www.ciese.org/curriculum/engineering/garden.html.)

One of the best resources to assist in the STEAM endeavor is *Object Lessons: Teaching Math Through the Visual Arts, K-5*, by Holtzman and Susholtz. Their book is full of activities using a highly visual approach, perfect for gifted learners. Each chapter uses everyday objects to create rigorous, hands-on activities for mathematics.

Here are just a few web-based resources that can be helpful when integrating a STEAM approach in the primary classroom:

- **Center for Innovation in Engineering and Science Education**: www.ciese.org/
resources for developing innovative, research-based instructional strategies in STEM education.
- **Edutopia Arts Integration Lesson Plans**: www.edutopia.org/stw-arts-integration-resources-lesson-plans
lesson plans in which the arts are integrated in all subject areas.
- **Kennedy Center ArtsEdge**: www.artsedge.kennedy-center.org/educators/lessons.aspx
lesson plan ideas for arts integration.
- **National Gallery of Arts Kids Zone**: www.nga.gov/content/ngaweb/education/kids.html
interactive art tools that can be used for math, science, and engineering lessons.
exceptional podcasts integrating science and art.
John Maeda’s words ring true. Both artists and scientists ask the big questions, and seek to provide innovative solutions. Arts and science are more powerful when merged together. STEAM as a concept allows the primary teacher to use the power of the integration of the arts with STEM to develop rigorous, engaging activities that will address the giftedness and multipotentialities of his/her students.

**Resources**
Empathy’s Importance in the Curriculum

“Is it possible that a curriculum could outline critical raw capabilities—grit, empathy, integrity, and team spirit for example—and find a way to map and develop them...?” — Deards & Coulianos, 2014

One of my all-time favorite books is To Kill a Mockingbird, by Harper Lee. I have heard arguments for when this book should be taught to gifted students, but regardless of when, most agree that it should be. My preference is grade seven because I think students can empathize with a variety of the characters. Most relevant to this column is a quotation from the character of Atticus Finch—one of my favorite characters—who states, “You never really understand a person until you consider things from his point of view—until you climb into his skin and walk around in it.” To me, that quotation captures the nature of empathy.

Empathy combines the cognitive ability to take the perspective of another person and the emotional ability to respond to the circumstances of another. Perspective taking is essential in building empathy in our students. Therefore, incorporating lessons that focus on this skill and modeling different perspectives as we teach and discuss issues with students are ways to encourage them to “consider things” from other points of view. Robert Selman (2003) explains social perspective taking as the ability to view events from the perspective of others. He states that as children grow older they are better able to step back from their own point of view and see that others may view an event from a different, but equally valid, perspective. Later, as adolescents, they experience a reciprocal understanding in that they are capable of discerning another person’s perspective on some issue or event, but importantly, they are also better able to understand the other person’s perspective on their own point of view.

Selman asserts that although an individual’s ability to look at things from another’s perspective increases during adolescence, this does not mean that adolescents necessarily become more tolerant of the beliefs of those with whom they disagree. Indeed, tolerance for diversity in viewpoint depends on the particular issue rather than the age of the person.

Selman suggests a five-step approach for integrating academic and social goals into the curriculum. The method consists of five strategies that can be embedded into most of the curriculum we teach:

1. **Connect**
   Emotionally explore the moral theme through the sharing of relevant personal experiences by both teachers and students. For students, journaling presents a good activity. They may write about an incident that shows their personal feelings, their connection with the moral theme, or their feelings of empathy for a character. From the teacher’s perspective, stating a personal connection to the theme or showing empathy for a character may model the freedom a student needs to take a moral stand that expresses an emotional connection.

2. **Discuss**
   Ask students to reflect on the moral issues raised through open-ended exchanges between the teacher and students or among classmates. In addition, this step builds critical-thinking skills through written responses to questions that promote a deeper understanding of the characters and ethical themes of the story.

3. **Practice**
   Practice and model moral reasoning skills by exploring attitudes about values in activities with peers, including role-playing, class debates, and art projects. While role-play can be a very meaningful way to instill the consideration of multiple points of view and empathy, some guidance may be necessary so the role-play is taken seriously. Scripting the role-play at first can help.

4. **Express**
   Give students the chance to express their own beliefs through individual writing exercises, dramatic arts, and other forms of creative expression. This step offers students the chance to demonstrate empathy well through a variety of creative expressions. Some pre-thinking may be good for the student to explore his/her beliefs and how they exemplify empathy for others.
Participate
Encourage student participation in service learning activities in school, at home, and through community activism. This step can truly integrate the opportunity to show empathy by offering the chance for students to research agencies and causes that stand for what the student believes.

It is time for educators in all disciplines to add lessons that focus on empathy and perspective taking. Infusing these elements into the curriculum can occur by restructuring a lesson that we already do to focus on these important life-long capabilities. To answer the quote from Deards and Coulianos, I say, “I definitely think we can, and the time is right to do so.”

THP

References

SMART cookies
Idea: Bess Wilson
Artist: Jim Wilson

Dynamic Pathways for Gifted Learners
PreK–Grade 12

Gifted LearningLinks
Online courses allow access to advanced subject matter, individualized pace and one-on-one engagement with instructors. Discounts available for school groups.

Northwestern University’s Midwest Academic Talent Search (NUMATS)
Research-based assessment identifies exceptional academic ability and connects students to tailored learning opportunities.
Take a Virtual Hike…

In the spring of 1996 a geological hiking expedition left a lasting impact on me, both as a student of science and a human on the planet. Even though I have yet to return to such a humbling place, rock samples, trail maps, photographs, and memories have stood in as reminders of the lessons learned during that ten-day adventure…until now!

The folks responsible for Nature Valley brand granola products have created one of the most incredible and interactive computer experiences I have ever encountered: virtual hikes on over 400 miles of trails from Yellowstone, the Great Smoky Mountains, the Grand Canyon, and Sequoia National Park.

Trail View

The program, Trail View, www.naturevalleytrailview.com/ works much like Google Street View and offers users a first-person, real-time hiking adventure. For the first time, students with little or no access to natural outdoor environments can virtually experience the immensity and beauty of such places.

First-time visitors to the site are ready to begin their adventure after a 4-minute tutorial that is easy to understand and follow. While travelling up and down hillsides, around corners of exposed bedrock, or traversing the forest, users can stop at any point and enjoy a 360 degree perspective of everything in view, take a “photo” of a particular area, and track progress along a selected trail. Navigation can be accomplished manually with the cursor keys or by simply clicking the auto play button, which can be increased to 2, 5, and 8 times average hiking speed. Special areas are designated as panorama experiences where sounds accompany a slow moving 360 degree view. It is a virtual adventure second only to the real thing.

In addition to outstanding video resolution and clarity, there are real-time elevation maps and progress meters, pdf versions of the trails in topographic form, “pinned” park and trail information, and text about preservation. There is even a compass and coordinate data.

Classroom Connections

The exploration alone is incredible, but there are also many learning connections to be made. Earth, Environmental, and Ecological science lessons can come alive for students. Geological structures and rock units are clearly visible in the Grand Canyon and Yellowstone. Forest canopies and associated plant species can be observed and identified in both the Smoky Mountain and Sequoia parks. The sounds of a variety of bird species accompany each panorama stop. Math students could benefit from the elevation and coordinate information, as map reading and distance calculations could accompany any venture into this virtual environment. Extensions could involve historical research on the areas visited, exposure to writers and artists who have discovered inspiration in these locales, and even in-depth species cataloging by cross-referencing information found using the Encyclopedia of Life, www.eol.org, an online data base of all species on the planet.

Enrichment opportunities abound. Teachers could add more “pinned” sound and video links, perhaps from naturalists and professionals in the various fields of science or insert links to historical images, information about common species, and conservation efforts, among others.

Many students never have the opportunity to travel to our national parks. They will never stand at the edge of the Grand Canyon or look up at the towering heights of the giant sequoias. Introducing your students to Trail View will bring them one step closer to the experience, a step which just might inspire and enlighten them.

Write for THP

Do you have practical classroom applications of current research, theory, and best practices in the field of gifted education? Are you proud of the innovative way you address the needs of gifted students in your school or classroom? Have you created a successful lesson or unit plan that aligns with the revised NAGC Pre-K-Grade 12 Gifted Programming Standards? If so, we want to hear from you! Send manuscripts to: Jeff S. Danielian, Editor, THP at jdanielian@nagc.org.
signed to our building. The SRO submitted our idea to the local police chief who was in full support of hosting the event at the township building. The students then drafted a proposal to the building principal outlining the plan for the event and the extent to which students would be involved. After gaining approval from the school administration, the SRO filed the appropriate paperwork with the Drug Enforcement Administration and worked with his police chief to ensure that a uniformed officer would be present during the event.

Once the event was approved and the details regarding the time and date were confirmed, the students brainstormed to determine how to advertise the event to the local community. They decided to create an informative brochure and a flyer advertising the event. Students worked during their gifted seminar class (about 40 minutes once a week for four weeks) and stayed after school to research issues related to prescription drugs and to work on their portion of the written materials. Approximately two weeks prior to the event, students distributed their team-created brochure to the township public library and local pharmacies. They also took brochures to local senior centers and adult housing communities based on the rationale that “older people take lots of drugs.” The Take-Back event was also advertised on the township marquee, the school district website, and via a student-written press release to the local newspaper. Students also made a presentation to a Home and School Association meeting during which they explained the purpose of the Take-Back Day event and asked the parent organization to send out an email to their distribution list.

We did not, however, advertise at our school out of concern that eager students might raid their parent’s drug cabinet and bring expired medications to school. Throughout this time, we continued to build our partnership with the SRO. He met with the students over lunch to discuss the concerns related to drugs and also fielded many law enforcement career-related questions. In addition, the students worked with a guidance counselor whose specialty is working with high-risk students. She was invaluable in providing feedback on the brochures and also volunteered to distribute brochures at a local mental health facility.

**Interacting with Community Members**

The time and date of our event corresponded with one of the two official Take-Back Days that are determined annually by the DEA. During the four-hour event, all medications were handled by the police officers who inventoried them and took them to be incinerated immediately following the event. Since students were not allowed to physically collect the medications, they remained involved by surveying the community members who dropped off medication. The student-developed anonymous survey, which was designed to obtain feedback regarding the Take-Back event, consisted of the following questions:

- How many total medications did you turn in today?
- How did you hear about the event?
- Do you have any suggestions for our advertising?
- Do you think the event is worth repeating?

The survey yielded valuable information that was used for making improvements to the event and provided a real-life experience for students in learning how to interact appropriately with community members. Although many student leaders are good organizers, some are uncomfortable when communicating with adults that they do not know. After noticing that some students were merely shoving the clipboard and survey at the adults dropping off medication, we had a quick impromptu lesson on how to make a proper introduction, which included the basics of hand-shaking and making eye contact. The survey provided the students with the opportunity to practice introducing themselves and to promote their cause to community members. It was extremely gratifying to see shy student leaders become more confident in their role as the day progressed.

**Measuring the Impact of Service Learning**

The joint venture between the school and the local police department net-
ted 591 medications over a four-hour period, which resulted in 62 pounds of expired prescriptions and over-the-counter medications. Our efforts were acknowledged in writing by both the Chief of Police, who sent a congratulatory email, and by the U.S. Department of Justice, who sent us a thank you letter.

This project was so successful that it was repeated the following school year. Students were able to use information from the previous year’s survey to increase our advertising to include contacting local news stations, radio stations, and the township Facebook page. In our second year, nearly twice the number of students were involved in a collection that yielded an amazing 153 pounds of medications that otherwise may have been improperly disposed of or abused.

Take-Back Day epitomized the benefits of service learning by involving students in collaborating with the community and addressing a community need. The amount of time students devoted outside of class towards researching and compiling advertising materials for Take-Back Day was significant. None of the students involved received a grade for their work, yet spent many lunch periods and time after school to ensure the project’s success. It is hoped that the research and communication skills they honed through this project will transfer to other settings and situations. Take-Back Day also provided the gifted students with leadership experience, a vital yet often overlooked component of gifted education (Chan, 2000). Here’s what a couple of the students had to say about what they learned through participation in Take-Back Day:

“The research and communication skills the students honed through this project can transfer to other settings and situations.”

“Take-Back Day was a very interesting and unique project. Not only was I learning, but I also had a great time helping out in the community. I learned from this experience that doing your share to help out in the community does make a huge difference.” (Harleen, 13)

“Take-Back Day was far more involving than most other school projects. It gave me opportunities I would otherwise not have, like working with the police force, getting our PSA on the radio, interviewing real community citizens about their opinions, and being able to participate in...”

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a national event like Prescription Take-Back Day. I also got an opportunity to interact with the local community, something we usually do not get to do in school.” (Amanda, 14)

The Take-Back project is one of the strongest projects my students have conducted in the last several years because it has helped to forge a partnership between the school and the local township police. Although the school is fortunate to have an SRO assigned to our building, the opportunity to work together off-campus was one that both the students and the police officers enjoyed. Through conversations, my students learned about the job responsibilities of police in our township. In turn, the police officers enjoyed being able to connect with the students as both parties worked together for the benefit of our township. As a result, I find myself both inspired and strengthened in my determination to continue to provide my gifted students with experiences that will develop their leadership skills and benefit the local community.

Replicating a Take Back Event in Your Community

Organizing a Take-Back event is easily replicable by teachers who are seeking a meaningful service learning opportunity for their students. Involve your students in creating a timeline that includes the time needed to complete major tasks such as researching, creating and distributing brochures, and writing and submitting press releases to local newspapers, radio, and news stations. Additional outreach that your students may want to explore could include making a presentation to a parent association or school board for the purpose of asking them to promote the event. There are other details to attend to that may include parent permissions, administration approval, and pre-event preparation for the students such as developing surveys, public speaking, and interacting with the public. These skills, when introduced and refined, aid in the development of leadership qualities often sought and required by students with high ability.

The Classroom Connection

Providing leadership opportunities and making real-world connections for gifted students in a community setting helps students develop social competence and other related skills as well as increase their abilities in their areas of interest (NAGC P-K Programming Standards 3 and 4). As teachers look for differentiated instruction and leadership opportunities for their students, service-learning projects, such as hosting a Take-Back Day, may be the answer. In addition to collaborating with other students and the community to address a specific need, students walk away from the experience with a higher sense of self-confidence and accomplishment.

Other places to gather ideas for service learning projects include examining the local newspaper for timely topics, searching the National Service Clearinghouse database, and exploring the National Youth Leadership Council website. The value of educating students about real-world issues coupled with introducing the skills associated with promoting and planning an event such as the one described here go above and beyond the walls of the traditional classroom learning. By incorporating a service learning component into an existing curriculum or presented as an enrichment activity ensures a real-world experience for students to prepare them to be the leaders of tomorrow.

References


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NAGC provides teachers and administrators a blueprint for differentiating the Common Core State Standards for gifted and advanced students through the use of acceleration, depth, complexity, and creativity within and across grade levels.

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*NAGC is extremely pleased to provide resources to school leaders and advocates that improve services for our high-ability students.*

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