

Teaching

for high potential

Global Climate Change - Motivated High School Students Gain their Voice

By Paul Bierman, Peter Gould, Jasmine Lamb, Christine Massey, Simon Norton, Jean Olson, Luke Reusser & John Ungerleider, the University of Vermont

With the snow-less winter of 2007, three years after Hurricane Katrina and now coming to the end of a winter with brutally cold weather in the Midwest and record snow in the Northeast, human-induced climate change is on everyone's mind. Release of the authoritative United Nations-sponsored Intergovernmental Panel on Climate Change report in February 2007 confirmed for policy makers what most scientists have known for years: humans are changing the world's climate by running the biggest uncontrolled global experiment in history. Burning fossil fuels and slashing tropical forests, we have increased atmospheric levels of CO₂ by more than 30% since the dawn of the industrial revolution and unless something changes quickly, CO₂ levels will have doubled or tripled by century's end. Climate models suggest the world will by then be 2 to 10 degrees F warmer on average, permanent sea ice will have vanished, and the great ice sheets of Greenland and Antarctica may be in irreversible decline.

How does an exceptional young person deal with such a dire forecast without losing hope, and how does he or she avoid becoming mired in a cycle of inaction and helplessness? To address these issues, faculty of the Governor's Institutes of Vermont, a seven-program group of summer residential institutes tailored to high-potential learners, developed a weekend climate change program. The program brought together 70 of Vermont's most motivated high school students, nearly a dozen staff, and 18 visiting specialists for a winter weekend of learning and action. The overarching theme of the weekend was to understand global climate change from a variety of perspectives while also getting a sense of the science as well as the

politics involved. After learning the basics, the students worked with faculty and outside specialists to learn about solutions—personal, local, and global. Throughout the weekend, we stressed the importance of not giving up hope, of taking action, and of finding one's own voice to speak about this compelling issue.

Our Approach

We explicitly designed the Focus on Global Climate Change Weekend to cross disciplinary boundaries and to build on previous programmatic knowledge. We had seven objectives for the weekend:

- increase student awareness of human-induced climate change,
- increase student knowledge about the science underlying changes in climate,
- catalyze student reflection on new information and ideas to which they are exposed,
- provide skills, knowledge, and support to allow students to make changes in their lives and their families' lives that minimize human impact on climate,
- catalyze action by students to provide positive societal change,
- model ways of learning outside the classroom setting, and
- support students as they accept and acknowledge the problems posed by human-induced climate change.

Over the past decade, the Governor's Institutes of Vermont residential winter weekends have always had students and faculty working in separate, topically focused groups. The integrated approach we took this year was the result of both faculty and student interest in approaching the pressing problem of climate change through an interdisciplinary lens. Crossing disciplines allowed us to attract a variety of

students and appeal to a variety of learning styles. Recruiting was done on a first come/first served basis through high school guidance counselors. The demand for the program greatly outstripped the number of available spots with registration closing weeks ahead and numerous students and teachers turned away.

The planning process for staff required several group meetings and conference calls to create cohesion among the faculty, discuss curricular goals, create a working schedule, and discuss reading materials for the students. We created a pre-weekend packet of activities for all students and staff to complete before arriving that included: 1) a short reading packet with science, newspaper, and popular book excerpts, 2) a graphic "footprint" collage of household energy use on 11x17 paper, and 3) a calculation of household carbon emissions. Staff also created a carpool list for

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NATIONAL ASSOCIATION FOR
Gifted Children

students and visiting speakers to encourage the reduction of carbon emissions. All of these materials are available at the Winter Weekend website (<http://uvm.edu/giv/givwinter2007>).

The overall structure of the weekend moved students intellectually from learning facts toward reflection and then taking action. Students arrived on Friday afternoon and were immediately immersed in the issues and

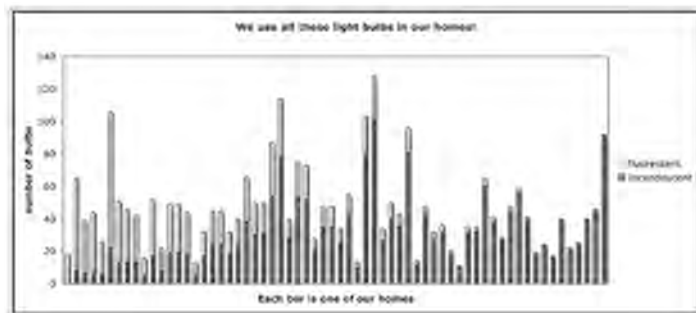
own lives, was providing them with intensive exposure to different perspectives that would allow them inroads for learning about the reality of global climate change and finding ways to appropriately take action in their own lives and communities.

On Saturday morning, students worked closely with faculty in disciplinary groups considering the *Science of Climate Change*, gaining a voice in *Performing Arts*, understanding themselves in the eco-psychology of the *BodyEarth* relationship, and learning about policies in *Current Issues and Youth Activism*. These four strands provided students with the scientific foundation to understand potential policy advocacy and social action responses at a political level. The strands also allowed them to explore the

– assuming the persona of guerrilla energy efficiency experts as they monitored soda dispensers and microwaves. These meters allowed a graphic demonstration of the efficiency of compact fluorescent lighting.

Through the strand **Body-Earth**, students connected climate change to their own lives, to who they are, and to how they interact and experience the environment around them. Through engaging all their senses, the students experienced the reality that we are living organisms in relationship to and part of the planet, that reducing our carbon footprint is not an action to fix some big problem beyond us, but to address our own health and well-being and the health and well-being of everything we hold dear. Activities included movement, discussion, and quiet reflection, being in the woods, and possibly the silliest and most fun activity, eating cake to connect and appreciate how our bodies rely continuously on what the earth provides. This strand helped bring balance and integration to the students by providing them a place to express and experience their feelings amidst a packed schedule of electives and presentations on global climate change.

In **Current Issues and Youth Activism**, students assessed how they could take effective political and social action locally to respond to this global threat. They practiced being able to speak knowledgeably and convincingly about the scientific evidence to skeptics or to the uninformed, and role-played strong verbal arguments for policy changes. In Socratic discussion, they explored the disconnect between the overwhelming scientific evidence for global warming and the apparent inaction, denial, and/or paralysis of politicians who are not addressing the threat. They deepened this understanding by analyzing the perspectives, interests, and motivations of various stakeholders in the debate by role-playing. In small groups, they researched the efforts of those who have been taking political action. Students made recommendations for action at the national and



We use 2950 lightbulbs in our homes
974 fluorescent; 1976 incandescent

the science. We opened the weekend with a local champion of climate change action, the President Pro Tempore of the Vermont State Senate. The senator was followed by a local expert, a geologist who studies regional climate change and climate history. We used the carbon footprinting exercise as an icebreaker for the students and closed the evening with *Too Hot Not to Handle*, a movie that moved beyond statistics to action and solutions. By the end of the first evening the problem was clear, the importance of taking action had been well articulated, and the students were starting down the pathway from learning facts to taking the steps necessary to make change.

The footprinting exercise provided information we used immediately. For example, from the footprints, we calculated the number of lights contained in all the student and faculty homes (see the graph above). Of the nearly 3000 installed bulbs, over 2/3 were still incandescent. A simple calculation showed the students that just by swapping out these incandescent bulbs and replacing them with energy efficient compact fluorescents, we could save approximately 40,000 kilowatt hours of electricity each year, equal to the average annual electrical use of 6 Vermont households. If we use the estimate that 2 pounds of CO₂ are released per kilowatt hour of electricity used, then changing these 2000 light bulbs could reduce our collective emissions by 80,000 pounds per year. That's the equivalent of between one and two household's average yearly carbon emissions – a big change, simply done.

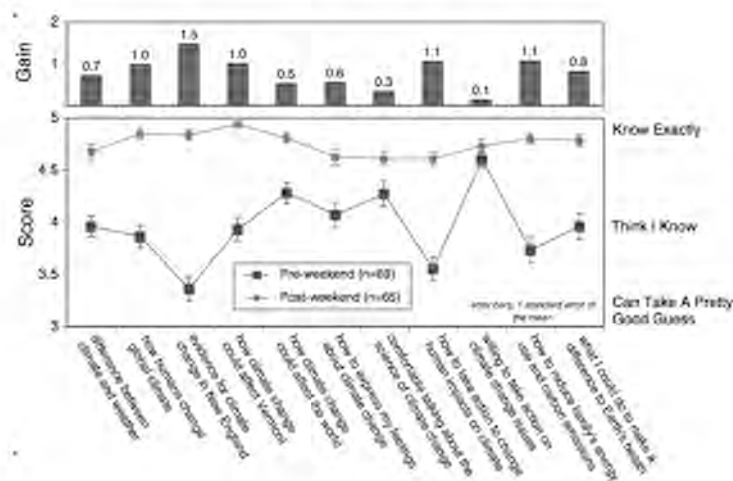
Exposure to Multiple Perspectives

A very important aspect of the interdisciplinary winter weekend, not only pedagogically, but in terms of empowering students to respond to critical global issues in their

reactions and emotions that can create denial or paralysis in the face of an overwhelming environmental threat. Students experimented with artistic expression as a holistic and inspiring medium for raising consciousness and mobilizing local action to this global threat. During the afternoon, the students rotated between disciplines so they all met and worked with faculty having different expertise.

In **Performing Arts**, theatre skills helped young people confront this daunting problem by helping them acquire a clear, persuasive voice and project a positive, open attitude even to the last row of the audience. Students learned specific techniques to access our own emotional experiences, as a way to identify and work with feelings that a global problem of such immensity brings up in us. They tapped into energy that will help them be leaders in the coming social changes that global warming requires.

In the **Science of Climate Change**, students investigated the global carbon cycle, current and future fuels (their characteristics and carbon-intensity), and the greenhouse effect. They worked in small groups and created large posters in order to do peer teaching. A subgroup of students used portable watt meters to measure the electrical power use of common household and campus appliances



state policy level and by designing peer-education programs.

Outside specialists were an important part of the curriculum and brought new and different ideas to the Institute. We recruited local specialists who could speak with the students in small groups regarding "solutions" to the problem of climate change. Students were able to choose and spend 35 minutes each in 6 of the 22 workshop offerings. These workshops touched on diverse aspects of politics, policy, science, conflict resolution, communications, outreach, media, alternative energy, conservation, transportation, sustainability, local farming, and the arts (<http://uvm.edu/giv/givwinter2007> has a complete list of speakers and their topics). The goal of these rotations was to expose students to a wide range of ideas and people while showing that many people were already taking meaningful actions to address climate change.

We ended the activities with *Five Steps Forward*, an exercise where the students developed personal action plans detailing what positive steps they would take personally and in their communities to affect change. We closed the weekend with a ceremony and celebration where students presented to their peers using a variety of means including puppetry, murals, and performance. The ceremony concluded with the students and faculty standing up to declare their commitments for change followed by a graduation where each student received their diploma, an energy-efficient compact fluorescent light. Students left with the feeling that they were on their way to developing enough self-confidence to be effective public speakers for this issue about which they feel so passionate.

Outcomes

The outcomes were overwhelmingly positive and can be evaluated two ways. We did formal assessment that blended knowledge and attitude surveys administered before and after the weekend. Students were asked to self-assess their knowledge and attitudes on a 1-5 scale that ranged from *I don't have a clue* to *I know exactly* (see graph at left). From these surveys, we learned that the weekend cohort was already motivated and knowledgeable. Their biggest gain (1.5 pts) was in their knowledge of evidence for climate change in New England, the topic of our keynote speaker. Students came into the weekend very willing to take action (4.6 pts) and made least gains there (0.1 pts). They made large gains in their understanding of how humans change climate (the science strand), how climate change could affect Vermont (the keynote speaker), how to take action (all strands and workshops), and how to reduce emissions (specialist workshops).

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Books, Books, and More Books

By Bob Seney, Mississippi University for Women
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2008 Caldecott Medal Winner: A Great Read!

The American Library Association's (ALA) announcement of their 2008 Book Awards has prompted a book review for this issue. I am sure you all are aware that the ALA Newbery Award is given for the best in children's literature; the Printz Award recognizes the best in young adult literature; and the Caldecott Award names the best in illustrations in children's literature, usually in the picture book category. This year was really a great year for books and my *What's New List: 2007 Edition* turned out to be especially rich. So many great books, but for me one book in particular really sticks out. It is Brian Selznick's *The Invention of Hugo Cabret* (2007, Scholastic Press). This book knocked my socks off. If you attended the Middle Level's *Book Sharing* Friday evening session at the NAGC Convention in Minneapolis, you will remember that both Susannah Richards (Chair-Elect, Middle Grades Division) and I were especially excited about this book. Evidently the Caldecott Committee agreed for they named it the 2008 Caldecott Medal Book.

Hugo has changed my mind about the new and growing genre (or is it format? I'm not going to argue.) of graphic novels, which are so much more than the old Classic Comics from our youth. I was somewhat swayed by the 2007 Michael Printz Award, *American Born Chinese* (2006, First Second) by Gene Luen Yang but *Hugo* has convinced me that I must keep my eye open for graphic novels. Unlike others that often use a comic strip format, complete with dialogue bubbles, Selznick moves this new genre forward. This is truly an amazing book.

Much like the third and more sophisticated use of illustrations in children's picture books in which the illustrations and not just the text tell the story, Selznick unfolds his tale by interspersing his narrative with many textless pages of illustrations. The reader may be surprised to find that there are more pages of illustrations than text! Each page must be carefully "read" in order to pick up the details of a somewhat intricate plot that are not all disclosed in the narrative.

The plot centers on Hugo Cabret, an orphan living behind the walls of the Paris Train Station in the 1930s. The story of the loss of his father and how he comes to live with his uncle, who is the keeper of the clocks in the train station, is a subplot that is ultimately important to the overall plot. Hugo is living in the station, and upon the disappearance of his uncle, he continues to keep the clocks working. All the while, he is working on his own secret project, the repair of an automaton, a mechanical "human" that his father had salvaged from the museum where he worked. These automata were popular at the turn of the 19th century and Selznick's personal interest in these mechanical devices prompted this book. Selznick also works in his interest in the history of movie making, which some film historians claim actually began in France.

Hugo's work in keeping the clocks running, his work on the automaton, a mysterious shop keeper, and his granddaughter all become ingredients in a very involved plot with a surprise ending. All in all, Selznick has created a wonderful book that is well written and beautifully illustrated. Selznick has chosen to use pencil and charcoal in his illustrations. They are somewhat reminiscent of the work of one of my favorite illustrators, Chris Van Allsburg. What strikes me the most are the details and the unusual perspectives. There are full-page illustrations of close-ups such as showing Hugo's boot as he runs away from the Grandfather or the several close-ups of the faces of the main characters. These illustrations, while striking on their own, add depth and texture to the overall story. Certainly award winning stuff!

Usually, it is almost impossible for me to name a single favorite book that I have read in the past year, but with *The Invention of Hugo Cabret*, it was not difficult. I am truly impressed with Selznick's work. His *The Dinosaurs of Waterhouse Hawkins* (2001, Scholastic), text by Barbara Kerley, was named a 2002 Caldecott Honor and it also is well worth looking up.

It would be very interesting to see what would happen when this book is placed in the hands of gifted secondary students. There are several approaches that one could take: history, relationships, perspective, literary style, magic, and an investigation of automata to mention only a few. Someone should try it out and let me know what happens. Happy Reading!

iMATHination

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In today's school environment mathematics seems to have the reputation as being a difficult subject, but one that is valuable to understand. Why do our students perceive mathematics in this way? Could it be that the emphasis in the typical mathematics classroom is often on rapidly finding a solution to a problem? Is the student who does not quickly see the method used to solve a problem, the one who has not memorized all the rules and procedures, the one who struggles with his or her math facts who nevertheless eventually arrives at a correct solution, any less talented in mathematics than the one who quickly arrives at a correct solution?

The problems we encounter in the real world are often messy and incomplete. Real problems take time to solve, involving effort and persistence. The history of mathematics is rich with examples of problems that involved the work of multiple individuals over long periods of time. Being able to find the correct answer quickly (remember those timed computational tests) is no more a measure of mathematical ability than the ability to spell is a measure of a gifted writer. Proficiency in these areas is as important as computational practice. All problems that present difficulty require a great deal of patience and organizational skill to work through. However, when problems are uninteresting and solution finding unrewarding, the students' effort and work are perceived as wasted. Real instructional value comes after the solution when we, as a class, discuss why the students view the problems as difficult. The students' reflections are illuminating and often demonstrate a narrow view of mathematics as the application of rules and algorithms, a view that demotes the discipline to an inert subject.

Too often, students view their teacher as the one who has the answer and, if asked often enough, will eventually share the secret knowledge about the methods to arrive at the correct answer. Much like the difficult problems my students offered, homework problems are viewed as an exercise in patience rather than an opportunity to develop a deeper understanding of mathematics. Textbooks often contribute to this problem by distilling the mathematics to a set of steps to follow and a series of problems that can be successfully solved by the application of these steps. We have all seen students who do well on homework problem sets consisting of routine problems that focus on a single concept but struggle on tests and quizzes where they have to choose which method to use to solve a problem. These assessments are often the first time students are asked to demonstrate their judgment, independence, and creativity in finding a solution to problem.

I have had success improving my students' mathematical thinking as well as their performance on standardized test scores by using the following strategies. The first is to carve out some time during the week for both my students and myself to work on the same problem. If you are trained as an elementary teacher, chances are one of your reading instructional strategies is to share with your students your love of reading, both through reading with your students and allowing your students to see you as an avid reader. That same strategy has worked for me with mathematics. Problems I find interesting I'll often share with the class. While the mathematics may be above their level (just as my personal reading selections are often above their reading levels) I can modify the presentation so that the students have a chance to see my thought process and see me as a mathematician. Working on problems together creates a community of problem solvers, which allows my students to view me in the role of learner rather than simply a dispenser of right answers. As the gifted coordinator in a middle school I extended this strategy beyond the mathematics classroom, having both students and teachers compete in a problem-solving competition. Teachers and students discussed the problems in the lunch room and debated answers in the hallway. Everyone was doing, discussing, and defending mathematical problems (sound a bit like *Drop Everything and Read?*).

Group problem solving and mathematical competitions sparked dialogue and provided opportunities to exchange different views but the reality of schedules and curriculum guides limited the time we could devote to those activities. So, I looked for other ways to get students involved in mathematical discussions on problems they found interesting. I found that math homework was frustrating; students often did not complete it and grading either took up instructional time or my own preparation time. A strategy that worked with many of my classes was to allow the students to self-select their homework problems. The rules were fairly simple. Pick the three problems you think are hardest

in the assigned section. Solve the problem if you can or write three questions about the problem which, once answered, will help you solve the problem. During math time students were placed in peer groups and given the opportunity to present their solutions and ask their questions. If the group needed help, then I stepped in, but otherwise the students were responsible for their homework. At the end of each week, each student choose problems he or she had worked on and turned in a portfolio that demonstrated an understanding of the math topics covered that week. At the beginning, students struggled with this approach but with the right support and encouragement I saw significant growth in their mathematical performance.

In *Acting Artist-Like in the Classroom* (1997, International Reviews on Mathematical Education) Hartmut Köhler wrote, "Modern day commerce has no use for pupils graduating from school who have been trained to mechanically solve problems in exactly one pre-given way, i.e. like a machine." Be an artist in your classroom and encourage your students to look beyond rules and algorithms, and instead, experience the imagination and creativity involved in doing mathematics.

Write for THP

Can you provide 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 NAGC Pre-K-Grade 12 Gifted Program Standards? Do you have a story to share about your participation in a Javits research study? If so, we want to hear from you!

Send manuscripts to: Jeffrey S. Danielian, Editor, THP at jdanielian@nagc.org

Technology Untangled

By Brian Housand, the University of Connecticut
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Is This the Future of Reading?

We are living in a digital age. An age that has transformed the way that we think, learn and express ourselves. In the 15th Century, the Gutenberg press revolutionized the way knowledge is presented. Books by and large have not changed their form since they were first invented. In the 21st Century, technology is, again, changing the way that information is shared and electronic books, also known as eBooks, is one new way. In many instances, versions of books are available for free to view online or to download. While eBooks have been around for a while, they are often an underappreciated resource for literacy and learning. There are many services that offer eBooks for purchase, but I would like to highlight five online libraries that offer eBooks for free and present what may well be the future of the book.

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Google offers a growing online library of books that have been digitally scanned and cataloged. The full text of books that are out of copyright are available to view, and a preview of more current titles is available. Perhaps the best feature of the site is in the "About This Book" tab. Here you will find a collection of popular passages, reviews, references from other web pages, and for select titles, an interactive Google map that identifies locations mentioned in the book.

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International Children's Digital Library

<http://www.icdlbooks.org/>

A great resource for eBooks for younger children, the International Children's Digital Library offers a collection of picture books from around the world in languages ranging from Arabic to Yiddish, and many of the titles are available in multiple languages. One of the most appealing features of this site is its graphical interface that preserves the illustrator's work and gives the reader the feeling of turning pages.

TumbleBooks at the New York Public Library

http://www.tumblebooks.com/library/asp/home_tumblebooks.asp

This site features a large collection of modern children's picture books with audio and animation. The TumblePlayer allows you to create a play list of your favorite titles. Additionally, a considerable number of books are available in Spanish. With its interactive features, this site is sure to be a favorite among younger readers.

University of Adelaide Library's Collection of Web Books

<http://etext.library.adelaide.edu.au/>

Full text editions of over 1200 titles that span the history of literature from Homer to Orwell are available. The text is formatted in an easy to read column. Rather than individual pages, the site presents entire chapters on a single web page. This allows the reader to scroll down while reading rather than flipping virtual pages. One can browse the library by author, title, genre, or time period. Books can be downloaded to read when not connected to the Internet. The site also allows you to search their entire library by key words, phrases, or quotes.

Reading eBooks

One of the reasons that eBooks have not become more popular is the fact that most people are not going to carry around a computer to read a book. Several devices have tried to remedy this, but none have succeeded. Amazon recently introduced a new solution, the Kindle. This wireless and portable device approximates the size of a book and features a high-resolution screen that looks and reads like real paper. It weighs only 10.3 ounces but

will store over 200 books at a time. The most revolutionary feature of the Kindle is that it does not require you to connect to a computer or the Internet to load new books. Its wireless technology allows you to purchase a book from anywhere at anytime in less than a minute. Currently there are over 100,000 titles available for purchase at prices that are much lower than traditional books. One of the goals of Amazon, is to not only have every book in print for purchase for the Kindle, but also every book that has ever been in print! At close to \$400, the price of the Kindle may seem steep, but this is the same price that the iPod was introduced at in October of 2001. Initially, many doubted the viability of the iPod, but with over 141 million sold worldwide, the iPod has transformed the way we listen to, watch, and purchase music and video products. Will Amazon's Kindle ignite a similar revolution? Only time will tell.

While books may change the way they look or are delivered to us, this much will remain constant: Future generations will still read works of great literature and will be transported to magical lands, embark on great adventures, or be swept away by the romance and splendor of it all. The medium of delivery may change, but the message of a great book will always remain.

For more information and links to other eBook resources, visit my Google page at: <http://brianhouand.googlepages.com>

NAGC Networks

Fourteen NAGC Networks (formerly divisions) are organized around the special interests of NAGC members. Computers and Technology, Curriculum Studies, and Creativity are just three of the 14 special interest groups. In addition to building a special community for its subset of NAGC members, each Network supports the mission, purposes, and goals of NAGC through its activities, including developing the annual NAGC convention program.

Visit your area of interest to learn how to get involved at <http://www.nagc.org/index.aspx?id=1039>

Oral Presentations: Differentiating the Curriculum for Talented Public Speakers

By Suzanna E. Henshon, Florida Gulf Coast University

How can teachers nurture the public speaking abilities of high-ability learners? What can educators do to encourage shy students to become less reticent and more comfortable about speaking in public?

Over the course of a lifetime, the ability to communicate orally is an invaluable skill. It leads to possible careers in law, education, public service, and other elite fields. As teachers, we have the opportunity to nurture students through the early process of developing public speaking skills. Whether they use PowerPoint presentations in business situations or while presenting lectures as college professors, the ability to be charismatic in front of an audience will serve your students well in future career paths.

Incorporating Oral Presentations into the Curriculum

There are several ways to include oral presentations in the curriculum. Some projects are tailor-made for student presentations – book reports, show-and-tell, and other shared moments help students develop public speaking skills while in elementary school.

At the most advanced level, oral presentations can involve components of creativity and research. Social studies and history lessons often involve the study of famous documents. When I was in high school, we reenacted the signing of the Constitution. As part of the assignment, we each researched a historical figure, a real man who had attended and signed the Constitution. Then we reenacted the signing, complete with vociferous arguments about the representation of large and small states. This three-dimensional event allowed students to develop public speaking skills and to gain experience thinking on their feet.

Oral presentations are a wonderful way for students to showcase projects they are working on. In my college classroom, oral projects are an integral part of several projects. Students can share ideas informally, and acclimate to the process of giving an oral presentation (without any stress). One project that has worked well in the past is when students develop an addition to a theme park, such as Disney World, and present their ideas as if they are developers and/or architects to the potential zoning board, funders, and community groups. Students present their ideas in small groups, with each student sharing in the research, writing, and presentation of the project.

What is an Oral Presentation?

Oral presentations involve the communication of information to an audience. An oral presentation can take different formats. At the simplest level, it can mean sharing and explaining an idea to a friend. At the other end of the spectrum, it can mean a full-scale PowerPoint presentation to classmates, running a school radio station, or even working with a local TV station. Extension activities may focus on student writing, higher-order thinking, and taking an idea from a PowerPoint presentation to a creative product. Students may also wish to present their ideas at science fairs and conferences.

Laying a Foundation

Oral presentations can create confidence, allow for the sharing of ideas, and inspire creative thinking. Students can learn how to think and organize thoughts for different mediums. Writing a research paper, for example, is completely different than writing for the school radio station. Students can be nurtured along from mini-sessions in which they share ideas to a full professional presentation. You have the ability to help your students develop an oral voice and confidence in the public speaking realm. You may also want to address the different forms of writing that support oral presentations such as screen plays, radio and T.V. ads, stand-up comedy, and political speeches.

Is it possible to assess an oral presentation? Each student in a classroom will have a different comfort level with public speaking; the focus with oral presentations should be on developing confidence and presentation skills. However, the process of creating an oral presentation is something that teachers can evaluate. The assessment can focus on several criteria: research, format, content, clarity, and effort.

Is audience response important? Ideally, teachers will encourage students to support fellow presenters, and to listen carefully to presentations. The audience is a critical part of an oral presentation, and it is never too early to teach students to respect presenters and to listen attentively during oral presentations. Student presenters will learn the importance of audience response by speaking clearly, creating a coherent presentation, and addressing questions afterwards.

Supporting Student Presentations

As a teacher, you find yourself playing multiple roles within your classroom. Oral

presentations allow you to step into a new role as the “coach” of your students. As you coach your students to high levels of performance, you will want to encourage them to prepare speeches ahead of time.

Preparation usually involves researching a topic and writing a high quality piece. Later, students will move into the rehearsal stage. Depending upon the form of their speech, the practice stage will take on different forms. Students can practice PowerPoint slides and making a planned speech feel a bit impromptu. If students are stepping into the role of Abraham Lincoln, this process might involve trying out rented period-style clothing and coming to an understanding of the importance of speaking loudly in the days before CNN and the microphone.

PowerPoint is a wonderful tool to use with presentations, but it is more an extension of the presentation and should not be the focus. Without a strong research plan and effective speaking skills, PowerPoint is ineffective.

What Makes a Good Oral Presentation?

Certainly, content and research are critical for developing a presentation. However, other elements come into play when students are delivering speeches. The pace of the speech is important; students have a tendency to speak too quickly when they are nervous and should be encouraged to slow down. Voice modulation is also important; students must learn to emphasize certain points in their speech, rather than speaking in a monotone. Staging is also important; sometimes “special effects” will increase the power of a speech. For instance, a student giving a speech about the Constitution might bring a replica to class that day as an illustration of what this famous document looks like. Audience response is critical; a good public speaker will elicit an intellectual and emotional response from the audience. Students can study some of the greatest speakers of our times by watching Martin Luther King’s “I Have a Dream” speech and John F. Kennedy’s inaugural address. Teachers can lead a discussion about what makes a great speech after students watch these addresses.

On the day of the presentation, flexibility and a few kind words will allow for the best outcome. Students can use a little creativity and flare, yet it is important to recognize that high-ability students have varying levels of confidence on the public stage.

There are many ways you can provide direction and guidance for students. One simple way is to audiotape a student giving a presentation, and then show it to him after-

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The Arts: Minds in Motion

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Focusing on the Arts in Kerala

Returning from the state of Kerala in the Southwestern coast of India after almost a month of teaching, performing, attending lectures and performances, and visiting people in their homes, I am overwhelmed with the memory of the warmth and hospitality given to teachers and students from the U.S. by our Indian friends. The other memory is of the arts and how they are integrated into the educational system, the religion(s), and the community. This three-fold connection presents a wonderful model for what could be done in our schools today. Religion is enshrined in the always present sculptures of the deities. In school, visual arts are included in many writing assignments; storytelling is used daily by teachers and parents to teach ethics; song/chant is incorporated in early morning assemblies along with world news; and sports and dance are daily activities during and after classes. Many students study classical dance and martial arts with community mentors in community settings.

The college students and auditors who came with my husband and me to study the arts and philosophy of India, saw many temples and art museums, heard lectures by professors, and saw dance performances and lecture demonstrations by professional dancers, community dancers, and children. The state of Kerala is known for its revival of the classical dance forms of Mohiniattam, Bharatanatyam, and Kathakali. We were all amazed at the dedication, skill and craft, as well as the respect the dancers gave to their art form. The students and community dancers were serious performing artists. The elementary, middle, and high school children especially amazed us with their eager smiles and conversations after their performances (gifts) to us. Organized by the classroom teachers, the children performed traditional and folk dances from all over India. The teachers provided videotapes of the dances for the children to watch and practice with at home. Some children also studied with community teachers. The children helped their families make costumes, which were extremely lavish and colorful. Learning steps and styles of dance at an early age provides the craft of the young dancers' training, but in the College of Arts and Sciences, where we stayed for almost two weeks, I saw how the dancers utilized these traditional and folk dance steps to create more unique dances.

Dancers and choreographers in one performance utilized many strategies to build the many parts of their dance. Tableau punctuated different sections as the group utilized pauses for a moment in a statuesque, sculpture-like pose. The dancers alternated between traditional and modern dance, martial arts "moves," various yoga asanas (postures) like "The Tree," and mimetic sections including dancers depicting, for example, an ox cart. I was excited to see how aptly the college students integrated these kinesthetic styles into an aesthetic whole that worked as a unified dance piece. It was truly a fusion of forms. They also transformed feeling into form. The Indians we met seemed to pride themselves for their tolerance and incorporation/appreciation of aspects of other religions, as well as other music, art, film, and dance forms. Yet the dances I saw were truly their own.

After our immersion in Kerala culture at an ashram, three colleges, a high school, and an elementary school, we came away with numerous impressions – several of which could be adapted for those planning to incorporate dance and movement into the classroom. 1) Dance and movement are valued. 2) Dance, movement, and yoga are an integral part of life and school. 3) Boys and girls both participate in dance and are encouraged when their talent surfaces. However, the children know who is the "really good dancer" and who is most involved. 4) Martial arts is similar to a dance performance; most of the moves are explosive and forceful except for the slow motion pieces. Participation seems to run in families; children study with the same teachers as the parent(s) or study with the teacher's children who are also teachers! 5) Color can be an exciting addition.

For those who want your students to know more about Indian classical dance, or for those looking to pursue a course of study or integration of this form into your curriculum, pick up *Indian Classical Dance: Tradition in Transition* (2002) by Leela Venkataraman and Avinash Pasricha. The book is a guide and contains a wealth of information about the culture with accompanying large color photographs.

Global Climate Change

from page THP-3

Anecdotal written student responses tell the story and repeatedly mention the amount they learned, how the winter weekend changed them personally, and how it primed them for action.

This weekend was the most motivating, inspiring, incredible weekend of my life. With the information I gathered, I will be prepared to create positive change. I feel enlightened.

This weekend gave me more faith in my generation. It was nice to be with people who are all working for the common good.

It was depressing and encouraging, liberating and frustrating, hard and fun.

That the adults had so much confidence that we could change the world. Enjoyed learning the ways I could help personally.

I met incredible, passionate students and collaborated with them to make change. Incorporating art and science was important. It's great to see it addressed with different subjects.

Issues for the students and some faculty included a change in approach from previous winter weekends as well as information overload, lack of sleep, a need for more hands-on activities, and requests for more time to openly discuss issues with their peers.

The broader community responded well to our program. The President of the Vermont Senate asked to speak to the program's young adults, taking time out of his very busy schedule to open the Winter Weekend. Our recruiting efforts for outside specialists generated much interest. The adults who presented workshops felt it was an important goal for them to reach a young, motivated audience. We provided a small honorarium and invited the specialists to meals, but the fact that most took time on a weekend to be with the students, speaks volumes. The media also responded to press releases, with at least one onsite newspaper reporter and one local television crew appearing over the weekend. We encourage anyone interested in running a similar program to examine the winter weekend website at <http://uvm.edu/giv/givwinter2007> and to contact the article authors. Putting this all together took many people, many months but the results were worth it. We are catalyzing change and empowering students to make change. Here's how one student summed up the weekend.

[The] weekend was excellent and changed my life... I'm inspired; I want to make people listen to me and listen to global warming. Before I came here I didn't know a lot about global warming. We hadn't spent

continued on page THP-9

Differentiating Content Using a Conceptual Lens

By Todd Jeffrey, Purdue University

Ask a group of parents what their goals are for their gifted children after going through the K-12 experience. What do parents want them to become? The answers are typically: "Thinkers," "Problem Solvers," "Self-Evaluators," "Lifelong Learners."

Ask a group of teachers the same question and you will get many of the same answers. Our hopes for our children are truly lofty goals, which provide an educational compass for me as both a public school teacher and a private school principal. With this in mind, the question becomes, "How do we assist students in becoming thinkers, problem solvers, self-evaluators, and lifelong learners?"

Strengthening the curriculum through the use of conceptual learning methodologies is one way that teachers and administrators can develop the aforementioned desirable student traits. In my former school settings, the use of both depth and complexity concepts as well as universal concepts brought a greater degree of rigor to the material being studied. These concepts allowed students to gain a deeper understanding of a topic or issue, and to tie previous learning together with current topics. Additionally, the use of conceptual learning methodologies proved beneficial to students of all grade levels. Innovative school districts have embedded these concepts in comprehensive curriculum frameworks, seeking to develop holistic learners. For example the Round Rock Independent School District uses concept and generalizations to develop students who seek knowledge and understanding, think critically and engage in problem solving (Round Rock Independent School District, n.d.). In a second-grade classroom this manifests itself with students identifying, describing, and extending addition and subtraction patterns; a ninth-grade biology class discusses how changes in matter affects everyday life.

Depth and Complexity Concepts

Depth and complexity is a form of differentiated learning that modifies curricular content. Infusing depth and complexity in the curriculum, concepts are posed as words or prompts and stimulate higher levels of knowing (Kaplan, 1996). They help a student decode meaning and gain increased knowledge in a domain. Depth and complexity concepts can be thought of as the tools that practitioners in a field or discipline use to gain knowledge. Archeologists for example, use specific language of the discipline, find patterns, and uncover big ideas in order

to gain understanding. Universal concepts, while similar to depth and complexity concepts, provide the academic glue that binds the unearthed knowledge together. They connect learning across and within disciplines.

Rules are an example of a depth and complexity concept. Using the concept of rules, students are instructed to define how a topic is structured. Rules are laws, norms, formulas, or orders to be followed. It is easy to see how working with the concept of rules is important when discussing forms of government; however the investigation of rules reveals knowledge in other disciplines as well. Literature contains several instances of rules. If students are studying fairy tales, for example, one common rule is that the story has a happy ending. Another rule might be that fairy tales contain some form of magic. Studying fairy tales through the lens of rules allows students to make connections among stories from various times and cultures.

Another often-used depth and complexity concept is big ideas. Students are instructed to determine the overarching statement that best summarizes what is being studied. A big idea can be a generalization, principle, or theory. Inductive learning is at the heart of big ideas. Students gather an assortment of information from numerous sources and then put a label on it. At its basic level, first and second grade teachers can start introducing big idea concepts by having students identify the "golden sentence" in a story. The students then provide support, textual or experiential, for why the sentence is the most important within the story.

Discussion and dialogue using a Socratic seminar method is an authentic way for students to investigate the depth of an idea (Copeland, 2005). There are certain ideas that are essential to the study of a discipline or field. Sovereignty is an example of a core idea that students in a high school history class need to understand. For example, Jefferson and Madison had very different beliefs on sovereignty in regard to secession. The former espousing that within a union of states, one party may withdraw from the agreement and remain sovereign. Lincoln had opposing views on this subject. A comparative reading and dialogue of the *Federalist Papers* and Lincoln's First Inaugural Address could generate a thorough understanding of the big idea—sovereignty.

Details, patterns, language of the discipline, changes over time, trends, unanswered questions, and points of view are all depth

and complexity concepts. These concepts are nothing new to teachers. They are tried and true ways of gaining deeper understanding. However, by using these specific terms to characterize concepts, both teachers and students share a common terminology for the connections they make. Doing so enables them to make such conceptual connections more frequently and consistently. Many schools have created posters with the concept and its associated icon or picture to help ensure that these concepts are continually being investigated and discussed. The commitment to a common conceptual vocabulary is apparent to parents, teachers, and students throughout the school building.

Universal Concepts

The second aspect of the conceptual learning model we used was universal concepts. Traditionally, education's primary focus was on memorizing and regurgitating key facts, figures, and events. However, due to the exponential increase of data and the need for students to be problem solvers and thinkers, this accumulation model is outdated. In programs where universal concepts are emphasized, students categorize facts into representative groups, rather than memorize facts. The use of universal concepts, then, is a way to teach students how to think about, then cluster information (Wiggins & McTighe, 1998). According to H. Lynn Erickson (2002), universal concepts are timeless, abstract, and typically can be represented by as few as two words. Universal concepts are interdisciplinary; they strengthen and weave learning together across subject and grade level lines.

The universal concept of change can be found throughout U.S. history, but is exemplified by the fact that America went from an agrarian to an industrial economy. In biology, change can be studied by examining the metamorphosis of a butterfly. In literature, change occurs in the character arc of a protagonist.

A simple way to infuse universal concepts into your classroom is to use them at the conclusion of a lesson to summarize the content. A science teacher could ask her students, "What have we learned about electricity and how does it relate to our new understanding of systems?" Another way to embed this kind of teaching in the culture of a school is to assign each grade level a universal concept to examine over the course of the year. Examples of common universal concepts are power, systems, conflict, order, structure, patterns and interdependence.

The conceptual learning methodologies described above allow students to examine ideas in complex ways. They also illuminate the connectedness of information. Information presented without a framework is like a random assortment of puzzle pieces. Shape and color can be defined easily.

However until placed together, they hold no meaning. Through the use of conceptual teaching methods, students learn how those puzzle pieces fit together (Taba, 1962). All students, and gifted students in particular, have the ability to make connections and see complex relationships. Conceptual learning builds on that ability and strengthens it.

Not all aspects of curricular differentiation are accomplished with equal effort. Even teachers new to differentiation can provide multiple options for differentiating the products that students produce to demonstrate their learning. The differentiation of process often involves varying instructional strategies learned in teacher preparation courses. However, differentiating content is much more elusive. Although the importance of differentiating content is widely agreed upon, the methods for differentiating content is not and often takes a great degree of skill and preparation to execute successfully. Assessing student learning of ideas is difficult using traditional multiple choice standardized tests. Using universal as well as depth and complexity concepts assists teachers in modifying curricular content. The sample lesson framework below is an example of how depth and complexity concepts modify rigor and relevance of a typical famous person report.

Applying the concepts of depth and complexity to traditional grade-level reports raises the level of academic rigor and understanding.

**Famous Person
Depth and Complexity Report**

- 1. Details:** Date of birth
Education
Profession
Death
Four other important details
- 2. Language of the Discipline:**
Any unknown vocabulary related to their profession or life.
- 3. Big Idea:** Why is this person famous? What did he/she contribute?
- 4. Patterns/Over time:** Because of his/her contributions, what can we predict will happen next in America or the world?
- 5. Ethics/Perspectives:** What dilemmas or controversies was your person involved in or did his/her contribution create?
- 6. Unanswered Question:** Based on your research compose two questions about the person.
- 7. Trends:** Did this person's contribution lead to any trends?

Dr. Sandra Kaplan mentioned in a workshop that successful people recognize connections between knowledge. Therefore the intelligent plumber and the intelligent heart surgeon can hold a conversation on valves and clamps. Conceptual learning provides teachers with a framework to teach students how to make authentic connections. They achieve the ultimate educational goal of parents and teachers to develop students who are more than just great test takers and consumers of knowledge but rather thinkers, problem solvers, and producers of knowledge.

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The information contained in this article aligns with the following NAGC Pre-K–Grade 12 Gifted Program Standards: Curriculum Instruction (2.0 – 2.3, and 3.0). For a complete copy of the Standards, visit www.nagc.org.

Global Climate Change

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a lot of time talking about it in school and I wasn't very concerned. I want to walk out of here and start to make a difference, and I want to get started NOW.

Important Links

The Governor's Institutes of Vermont (<http://giv.org>), a member of the National Conference of Governor's Schools (<http://ncogs.org>), has served more than 7,000 highly motivated students from virtually every high school in the state since the Institutes were established in 1982. Many gained the confidence and encouragement to be the first in their families to go on to college. All came away knowing themselves better, more clearly defining their capabilities and goals, and seeing the world in a new and brighter light. The Institutes open the world to talented Vermont students.

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The Curriculum Connection

By Jennifer Beasley, University of Virginia
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Knowing is a Process, Not a Product

"We teach a subject not to produce little living libraries on that subject, but rather to get a student to think mathematically for himself, to consider matters as an historian does, to take part in the process of knowledge-getting. Knowing is a process, not a product." (Bruner, 1966, p. 72)

Jerome Bruner wrote *Toward a Theory of Instruction* over four decades ago and yet his words remain as powerful today as they did then. At the time his book was written, the nation was in the midst of an educational crisis. Many countries were outperforming the U.S. in the areas of math and science. The launch of Sputnik in 1957 triggered an educational movement, one result being increased research and spending in the area of curriculum development. The government wanted to better prepare children for the future. Bruner's words were a warning to us then—of what was important in education.

Today's educational climate is not too different than what it was four decades ago. Our students are again finding themselves falling behind other developing countries in the areas of math and science. The education departments in state and local governments have responded by increasing control over curriculum. State standards are now the guide for curriculum development as well as the end goal. Bruner's words again prove to be a reminder and a warning to us today—of what is important in education.

For high-potential students, emphasis on high-stakes testing has resulted in what I can only think of as "low-stakes learning." Many students arrive in classrooms able to pass the year-end test before the year even begins and are given few opportunities to experience rigor. In this setting, how do we help all children to realize that "knowing is a process, not a product"? How do we get students to think mathematically for themselves, to consider matters as an historian does? Can we help our students to, as Dr. Sandra Kaplan says, "think like a disciplinarian"?

I was confronted with this dilemma when it came time to prepare a unit on state history. In school this unit in social studies has always been laden with facts and skills that seem to make no real connection to authentic learning. Students need to locate state resources on a map, identify famous people in our state history, and so on. I searched for a way to connect the unit with powerful learning experiences where all students would be challenged. Turning again to Jerome Bruner (1966), who believed that the major responsibility of the teacher is to help the student understand the structure and meaning of their subject, I started by asking myself "why is studying state history important?" and "who is the practicing professional that is concerned about the history of a state?"

As a teacher, I wanted to help my students find meaning in what we were learning. For my own social studies unit, I arrived at the understanding that state history is important because each of us identifies with the place that we live and through it we can make connections with our own identity. In my unit I wanted students to delve into the "famous faces and facts" of our state using the methods and practices of someone who really does work with this information—a public historian. The journey I took when planning this unit was not always the shortest path between two points. It involved asking myself questions that I did not necessarily have answers to at the time:

- How do practitioners organize their knowledge and skill in this field?
- What tools does a practitioner use in his or her work?
- What are the methods used by practitioners and contributors in the field to generate new questions, to generate new knowledge, and to solve problems? (Tomlinson, et al., 2002)

In the course of the unit on state history, I had students take on the role of a practicing public historian. They examined primary source documents and began to realize that the perspective of a historian impacts the interpretation of historical events. Students learned how to examine artifacts and spoke with experts in their state government. I saw students excited to talk, even argue, about events that helped form the identity of their state. Through this journey, I realized that my students and I were experiencing the joy of the knowledge-getting process. It is this process that helps us find meaning in what we are learning and how it connects to our own lives.

We seem to be at yet another turning point in the story of education. It is becoming harder to create curriculum that both challenges and motivates our students, but the opportunity is still there. I found that my own journey through the creation of curriculum to be as important as my students'. I hope to keep listening to the wisdom of the past to help direct the road to the future.

"A curriculum is more for teachers than it is for pupils. If it cannot change, move, perturb, inform teachers, it will have no effect on those whom they teach. It must be first and foremost a curriculum for teachers. If it has any effect on pupils, it will have it by virtue of having had an effect on teachers." (Bruner, 1960, p. XV)

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Oral Presentations

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wards. Students will develop better poise after watching themselves on the screen. Another way that you can support students is through helping them with the organization of a presentation. You can encourage students to write index cards highlighting main points, and to rehearse the speech in front of a mirror before giving the oral presentation in class. Your encouragement will help students attain new levels of confidence that they will take into careers in public service, law, business, and teaching.

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The information contained in this article aligns with the following NAGC Pre-K–Grade 12 Gifted Program Standards: Curriculum Instruction (1.0, 2.0, 2.3, 3.0, 4.0, and 5.0). For a complete copy of the Standards, visit www.nagc.org.

Happily Ever After...

By Bob Schultz, University of Toledo
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Technology has infiltrated just about all aspects of my job. This isn't necessarily a bad thing, yet, there is a certain amount of stress associated with the assumption that technology saves time and makes us more productive as teachers. Having access to what I'll call "whiz bang" effects doesn't make me teach better. In fact, I find myself lessening my focus on what I'm teaching in order to be prepared for all possible contingencies should something technological (bugs!) go amiss. No amount of training can prepare you for the inevitable downtime you'll face once your presentation freezes and you are waiting for the IT folks. Let me share a "non-wired" experience with gifted kids that happened over winter break.

Game Day: Unplugged!

A group of committed (stubborn!) individuals working for the best interests of the kids decided to reserve a room at the local public library for drop-in Game Days during winter break. Attendance was voluntary, and there were no limitations on the types of games available, but to attend you needed to bring a game.

I expected most of the kids to bring one of the myriad handheld video games. I was not disappointed. There were plenty of video games brought by the twelve attendees at the Game Day session I monitored. What was very interesting to observe, though, was a couple of the boys picking up a board game and exploring it. They decided to give it a try, since it seemed such a novel thing. As space was made for the board and pieces, other boys began to drift over. Soon, a crowd of boys were involved in a complex game of world domination—Risk®!

Boys ranging from 8-12 years old worked patiently, without arguments or heated debates, to help one another understand how the game worked. The board game didn't require players to work at the game's speed. There was time to consider moves and discuss strategy instead of having to quickly step into video game speed in order to compete. The board game provided the space and place to learn without the pressure of technology to control timing and play.

The girls in attendance were more community-engaged than boys—something I've seen time and again working with students. They were more interested in spending time with one another and they tended to play games for short durations, wanting to try several of the available games. None of the girls played with the boys, which again is fairly consistent with child development theory (e.g., 8-12 year-old boys and girls have cooties and need to keep separate from one another—just ask them, if you don't believe me!).

A common experience, though, was shared at the end of our two-hour Game Day session. All of the children wanted to know when the next Game Day was going to happen. Many also said they were glad they came, or were made to come by parents, and wanted to play more.

In Retrospect

Having time to think about strategy and how a game works as well as the social process involved with learning how to be good and respectful players enabled all kids (and especially the boys) to take control of their learning and interactions. They controlled the flow of the game. They controlled the way the game was played. They were able to reflect on actions and interactions.

In many ways, as a teacher, professor, and parent, I want my students and children to take responsibility and ownership for their learning. In a "whiz bang" classroom, individuals are controlled by the technology and are often incapable of learning. They struggle to capture information while feeling overwhelmed by the presentation of it. Interacting at the flow of technology-time is emphasized over grasping and reflecting on how and why the information presented is meaningful so there is knowledge acquisition, but, perhaps, a lack of comprehension. Board games provide ample opportunities for application of content in complex and changing conditions while promoting ownership of decisions and the time to consider options.

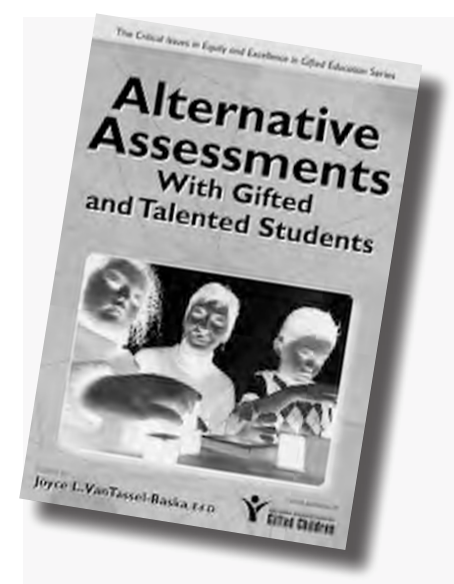
Let's set aside laptop computers, interactive DVDs, and video links and apply content knowledge in complex and meaningful ways with our GT students. Monopoly® teaches a whole lot of economics and strategy; Risk® teaches politics, government relations, and global citizenship; and Chess provides ample opportunity to apply systems thinking and

pattern analysis. What ways might you help students in your classroom apply their learning in complex and real-life ways?

I encourage you to share with me some of your experiences with board games that might fit well the curriculum taught in classrooms. Together we can compile and share a list of resources in *THP* that contributes to our students' success.

Editor's Note:

The September 2008 issue of *Parenting for High Potential* will have a list of toys and games recommended for gifted children. The list is derived from game sessions with gifted children and their families. You can see the list and what the testers thought of each game on the NAGC website in early September. Previous lists are also available at www.nagc.org.



Alternative Assessment with Gifted and Talented Students

Edited by Joyce VanTassel-Baska

Do you know the latest assessment tools to use with gifted children? This book will bring you up-to-date. This is the second in the Critical Issues in Equity and Excellence in Gifted Education Series. The first book in the series, *Serving Gifted Learners Beyond the Traditional Classroom: A Guide to Alternative Programs and Services*, is also available in the NAGC online bookstore.

Member price: \$31.45

Non-member price: \$34.95



From the Editor's Desk

"This is easy!"

I cannot tell you how many times I have heard this very phrase from my students, usually following a lesson on genetics, evolution, or cell biology. Upon hearing this from the classroom, one might conclude that the content was easy, the quiz or test unchallenging, or the level of difficulty of the lecture over-simplified. I can assure you that this is not the case.

There is perhaps nothing more gratifying than witnessing first hand the application of newly acquired knowledge, especially with regard to my students. I am often surprised to hear them mumble the phrase, "this is easy," when in reality they have worked so hard to attain the skills needed for a project, studied intensely for a test, or prepared well for an upcoming lab. I often find myself having to remind my students to give themselves much deserved credit, and that instead of saying the work is easy, to state that they are proud of all they have learned and accomplished. Finding something "easy" comes from exposure, experience, and preparation, and the moment something seems easy, they should seek out new and exciting challenges and application of knowledge. Offering these options presents one of the strongest and demanding roles an educator can face. This situation can also be applied to the way in which educators familiarize themselves with the latest research and curricular options, in an attempt to offer the finest and most challenging material for their students. Putting together this issue of *Teaching for High Potential* was quite exciting, as it provides some wonderful suggestions and options for use both within and outside the classroom.

Gail Herman's column took us on a Southeast Asian journey of the arts, presenting the application of dance and movement through the eyes of the students involved. Brian Housand urged us to explore literature through ebooks, an emerging tool. Math homework can be quite a challenge, and Eric Mann has offered some great strategies in approaching this task. I don't know about you, but I am picking up *The Invention of Hugo Cabret* and will find a way to incorporate it into my classroom. Finally, Jennifer Beasley reminded us of the work of Jerome Bruner, guiding us through the idea of process versus product.

I am most grateful for Paul Bierman and his group for offering a follow up to their celebrated article featured in last winter's *THP*. The Focus on Global Climate Change program is not only a brilliant and enriching opportunity for high achieving students, but it certainly serves as a model for what others could accomplish in their own state. Their willingness to offer assistance to anyone interested in starting their own institute is much appreciated. Todd Jeffery's discussion of big ideas and concepts related to curriculum had my mind racing with new and exciting thoughts. Sue Henshon offered some great alternatives to presenting material in the classroom with her discussion of oral presentations.

As with all material found within the pages of *THP*, there is a level of challenge, both to the educator and the recipient of the material, our students. Let us take the time to expose ourselves to these ideas, experience the power of offering options for our students, and prepare for the educational landscape ahead. I, as I trust many of you, would love to be able to walk out of school at the end of the day saying, "this is easy!"

I hope that you have enjoyed this issue. *THP* will be on summer break after this issue and will return in September. Be sure to visit the NAGC website for additional information and links related to the articles and columns, as well as new content updated regularly. As always, I welcome your comments, suggestions, opinions, and ideas.

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Smart Cookies

by Bess Wilson



Mrs. Taylor finally found the perfect
identification measure for the Southeast
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