Just as we occasionally tune up our cars or rebalance our financial portfolios, it's important to periodically take inventory of our gifted children's needs.

Spring is an optimal time to evaluate what is and isn't working for your child, providing ample opportunity to talk with your child, brainstorm options, and, if necessary, seek alternatives—all before the school year ends. During this reflection process, it's important to ask ourselves:

- What's working well for my child?
- Is my child sending me signals that indicate a need for change?
- Is there an upcoming transition, such as a move to middle school, high school, or a new building within the district?
- Is there an educational strategy, such as whole grade or subject acceleration, that should be investigated?
- What else can I do to nurture talents and social-emotional growth?

This issue of PHP helps families evaluate their current situations and make adjustments, whether large or small, to ensure their gifted children reach their potential. However, as the articles suggest, we must include our children in the process. While we can model behavior and guide decisions, our children ultimately need to understand themselves, find their voices, and learn to become effective self-advocates. This way, as they mature, they'll have mastered the lifelong skills necessary for reflecting on and rebalancing their own gifted programming portfolios.

Kathleen Nilles
Editor-in-Chief
Reigniting Your Child’s Passion for Learning: A Team Approach to Educating Your Child

By Lori Alexander

As a toddler, your high-potential child was constantly engaged in her surroundings, absorbing information and making unexpected and exciting connections. When she reached school age, she was likely excited to spend all day, every day learning.

Then, reality hit. Teachers spent the entire day teaching other students to stand safely in line, sit properly on the rug, recite the alphabet, and focus on numbers 1 through 20. Meanwhile, your child read almost everything in sight, did math problems mentally, and volunteered to be the teacher’s helper. Years later, it may be a struggle to get your child to school. What can you now do to reignite your high-potential child’s love of learning or prevent her spark of curiosity from being stifled?

First, know that you and your child are not alone. Everyone needs a support system, including your child, your child’s teacher, and you. Working as a team may bring back that love of learning.

Background on Gifted Education Today

Today’s traditional public elementary school classrooms consist primarily of heterogeneous groupings during the school day. This means most gifted elementary children do not switch classrooms to be with a high-level reading or math group for instruction. Often, the same lesson is presented to the entire class of students who perform at all levels, with a focus on students performing near or at grade level and little room to provide curricula that challenges the gifted child. In fact, educators want to help gifted children succeed, but often have had little or no training on the special needs of gifted children.2

Discover Opportunities by Talking to Your Child

If you suspect your child may be unchallenged at school, ask your child questions to get a better picture of a typical school day. Model respect for teachers by asking questions in a way that will help you get to the heart of your child’s frustration, collect objective data and useful examples, and collaboratively work with the teacher to keep your child engaged in learning during school. Try to help your child find other words besides “bored” to express her feelings toward school. A hint of disrespect for the school culture could leave your child thinking that you do not respect the teacher or school, or believe that learning at school is not important.
To better understand school from your child’s perspective and find areas where you can work with the teacher to improve your child’s learning experience, ask your child any of the following questions:

1. **What learning activities did you do in class today?** Has your child reported that a class is too easy? This question can lead to an important conversation. Explain to your child that sometimes we learn new things that are easy to do, sometimes we learn things that are challenging, and sometimes the teacher teaches the rest of the class something we already know. As a parent, be objective in assessing the ratio of how much time your child is spending on “challenging” versus “easy” or “already knows” work.

2. **Do you finish your work before the others? If so, what do you do with your time afterward?** Frequently in mixed-ability classrooms, gifted learners are expected to help others or read a book when finished with their own work. These minutes may add up to several hours a week and are opportunities for your child to learn at his ability level or complete meaningful projects instead.

3. **What would you like to be able to do when you are done with your work?** If your child has overall goals in life and/or certain subject areas, discuss these goals and how they might fit into her school day.

4. **Where do the other students who are very good at this subject sit during group work and independent work time?** In many classrooms, teachers or administrators require one top student to sit at each group to be leaders. Considering teachers often place students in groups of four, this means your child may have no one else that inspires him to challenge himself in the classroom. If this is the case, is there a peer in your child’s broader classroom that will inspire him to go above grade-level expectations and do ability-level work?

5. **Do you switch classes for reading and math? If so, is it for all reading and/or math times?** Some schools switch classes for an intervention time, often called RtI. This may mean your child is still with a mixed-ability class for the majority of reading or math and may be receiving instruction below her ability level. However, it’s important not to make assumptions: Your child could also be receiving differentiated instruction and you may not know it.

6. **Are you allowed to work online on a computer or tablet using a website that is at your level?** Most schools have online learning resources, and your child may not be aware...
child-parent-teacher teamwork

that a time other than the assigned computer times—such as when she finishes her work—may be an option.

7 Does your teacher give you a pre-test? If so, ask questions that help determine what the teacher typically does with these results. Giving students a pre-test allows teachers to know ahead of time what students know and to make meaningful lesson plans for each student. Some teachers use pre-tests only because it is what the administration requires or because it is what the rest of the grade-level team does. Teachers may use pre-tests only to determine which of the low-performing students need extra help—and not which of the high-performing students need more challenging work. Pre-tests that are used correctly can help teachers and grade-level teams form groups and teach lessons to students’ ability levels.3

Problem-Solve with Your Child’s Teacher

After gathering data in conversations with your child, consult the school and district or school system websites for information on what is offered to gifted students. As a next step, check your state policies for what requirements are in place for gifted education. Looking into these websites will help you understand ahead of time what help may be available for your child.

The best way to advocate is to approach the teacher with compassion and support. Most educators go into the field to help students learn enough to achieve their dreams and have wonderful careers. It’s important to remember that teachers can be under a lot of pressure and may be on high alert when meeting with a parent for the first time. Building a positive relationship with the school and teacher helps ensure your voice is heard and your child’s needs are addressed.4

1 Start out with a list of facts about your child’s performance. Prior to the meeting, request copies of full reports from any nationally normed tests your child has completed, but keep in mind gifted students may not be motivated to do their best on tests. Sometimes gifted students do not test well because they second-guess their answers, don’t follow directions properly, have test anxiety, or may have a cognitive processing issue that requires additional investigation. Test scores should not be the sole factor in determining whether or not your child is gifted.

2 Have a list of resources ready that you may be willing to send to school. Find engaging educational materials and ask if your child could use these resources after showing she has mastered the in-class material being taught.

3 If possible, offer to volunteer in your child’s classroom or another classroom with gifted students. Classroom volunteers usually offer help for those below grade level. Before you volunteer to work with gifted children, check with your child
to see if he would be okay with you regularly being in
the classroom. If not, offer to help prepare activities
outside of the classroom for the gifted students to
work on later.

4 Ask if there are teachers in the school who are
trained to work with the needs of gifted children.
Some schools do not automatically put gifted
students into the class of a teacher who has gifted
education training since these teachers are often great
at working with all students. Perhaps there is a way
the teachers trained in working with gifted children
can mentor your child’s teacher, or be reassigned to
work with gifted children as part of his day.

5 Ask if your child’s school allows children to work
with ability-level peers. If your child is not able to
participate in a school program for gifted students,
your child should have some opportunities to work
with other students at her ability level.

6 Help your child find motivation to do well on
standardized tests. Get to know the types of tests
offered to see if there is anything ahead of time that
could impact the outcome of the test. For example, if
the test is computerized and your child has not taken
a test on a computer before, it can be helpful to make sure the
child is comfortable with doing work on a computer and in
using a mouse. If your child spends time playing computer
games that require quick thinking, it may be helpful to have
your child practice computerized activities that require careful
thinking rather than impulsive, speedy decision-making.

One concern about testing that is often overlooked for gifted
students is the challenge of taking an adaptable test the first time.
Most students are accustomed to tests being stressful as they try
to remember what they studied. Many gifted students, however,
are accustomed to tests being easy as they spent too much
time covering the material. Adaptable tests are designed to ask
questions above grade level for high-ability students in order to
determine the child’s abilities. Let your child know most children
find tests to be difficult and that receiving difficult questions on a
computerized test is actually a good thing.

As you prepare to advocate for your gifted child, visit
www.nagc.org and www.hoagiesgifted.org for more infor-
mation on how to work with your child’s educational team. Your
child will feel well-supported—and her desire to learn reignited—
when teachers and parents work together.

Resources

Advocating for Your Child
www.nagc.org/get-involved/advocate-high-ability-learners/
advocate-your-child

Learning Needs
www.specialneeds.com/children-and-parents/
general-special-needs/special-needs-gifted-children

Teacher Tips
www.weareteachers.com/teaching-gifted-students

Author’s Note
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Language and Literacy Experiences to Engage and Challenge All Children with Talent Potential

By Christine Carr

Compared to the other children in her class, 6-year-old Jasmine’s self-portrait was sophisticated. Her portrait was multi-dimensional, even expressive, with details including eyelashes, earrings, and nail polish. Previously, Jasmine’s talent potential had not been on anyone’s radar. Academically, her teacher described her as “middle of the pack,” and her scores on language and literacy assessments were in the lower part of the average range. But this self-portrait was, literally and figuratively, painting a different picture and revealing both an artistic and a cognitive aptitude.

Jasmine’s classmate Jamie, on the other hand, had scored among the top test-takers on his literacy assessments. Jamie showed a deep commitment to and a love of reading, always having a new book in his hand. His teacher marveled at his reading fluency but was even more impressed by his ability to understand authors’ messages, anticipate a story’s events, and make connections between stories he had read. Yet, Jamie’s self-portrait was typical of his classmates—abstract with no dimension and few details.

Although brief, these vignettes demonstrate how talent potential can (and does) manifest differently in different children. While some children display talent in one or more academic fields, other children demonstrate creative, intellectual, or artistic aptitudes. Regardless of their field or domain of talent, all children can benefit from high-quality and engaging language and literacy experiences: Supporting language and literacy development for children like Jasmine will foster their growth across academic fields, as well as in their particular domains of aptitude.

After all, if domains of aptitude serve as the content to be accessed (the “what”), language and literacy are the means by which that content is accessed (the “how”). Even advanced readers like Jamie need rich language and literacy experiences to maximize their talents and to stave off boredom and frustration.

The Challenge

Under the auspices of the Jacob K. Javits Gifted and Talented Students Education Program (See sidebar on page 8), I worked on a team that developed informational sessions for parents of early-elementary children with talent potential. For these sessions, we focused on simple and affordable ways parents could provide their children with language and literacy experiences outside of school that were supportive of in-school educational experiences. Because talent manifests differently in different children,
parents’ needs in terms of supporting the development of their children’s language and literacy skills likewise vary. Our challenge was to offer experiences that would be beneficial to all parents. In other words, we aimed to provide experiences that parents could use to engage and challenge their children, regardless of whether their children were more like Jasmine (with talents outside of literacy) or Jamie (highly talented linguists and readers).

**Experience 1: Wordless Picture Books, “Word-full” Discussions**

A book with no words? How does that support language and literacy development? Wordless picture books are, as the name implies, books with pictures but little or no text. Rather than reading words, readers draw upon their background knowledge and personal experiences to create a story from the pictures in the book. In this way, the stories in wordless picture books are what readers make of them.

Wordless picture books appeal to a range of readers. Because the books’ stories are subject to the reader’s interpretation, reluctant or less-ready readers can capably and confidently read. Moreover, because there are no “wrong” answers, these books support all readers—including advanced readers—unabashed creative expression. Best of all, readers can enjoy wordless picture books many times over: Unlike “traditional” books, readers are not bound by authors’ words, allowing them to reinvent the storyline entirely or simply take a deeper dive into individual illustrations.

**Do It Yourself:**

- Start by introducing the idea of a wordless picture book. Do all books have words? How can a book tell a story if it doesn’t have words?
- Take turns reading the pictures with your child.
- Use open-ended questions to encourage discussion and push your child’s divergent thinking. Plan questions to ask before, during, and after reading.

**Before**

- Why did you choose this book?
- What does the cover tell us about this book? How about the title?
- What do you think this book will be about?

**During**

- What do you think about the characters so far?
- What do you think is going to happen next? Why? What makes you think that?
- If you had this problem, how would you solve it? How do you think the character is going to solve it?

**After**

- If you could change one thing about this book, what would it be and why?
- How did your feelings about the character change?
- What if the main character was a [substitute a different type of character] instead? How would that change your/the story?

**Resources**

Interested in literature that promotes divergent thinking and problem-solving? Here are some additional books you and your children can explore and discuss together.

**Perfect Square**

*by Michael Hall*

See how a simple square can be altered to be many other things. Children can describe and even reinvent their own squares.

**Not a Box**

*by Antoinette Portis*

A rabbit demonstrates how a box is not just a box. Consider pairing your discussion of this book with a viewing of Caine’s Arcade (https://www.youtube.com/watch?v=falFNkdq96U), a short documentary about a child who creates an entire arcade out of old boxes.

**A Beautiful Oops!**

*by Barney Saltzberg*

Sometimes mistakes aren’t mistakes at all. What will your child see and describe when looking at a torn sheet of paper or spilled paint?

Ready to start interpreting wordless picture books with your child? Here are a few suggestions:

*Chalk* by Bill Thomson

*Inside Outside* by Lizi Boyd

*Journey* by Aaron Becker

*The Lion and the Mouse* by Jerry Pinkney

*The Red Book* by Barbara Lehman

*Sector 7* by David Wiesner

*The Snowman* by Raymond Briggs

*Tuesday* by David Wiesner

*The Umbrella* by Jan Brett

*Wave* by Suzy Lee

*What If?* by Laura Vaccaro Seeger

*Zoom* by Istvan Banyai
What is a Javits Grant?

The Jacob Javits Gifted and Talented Students Education Act (Javits) was first passed by Congress in 1988 as part of the Elementary and Secondary Education Act and reauthorized in 2015 through the Every Student Succeeds Act to support the development of talent in U.S. schools. The Javits Act is the only federal program dedicated specifically to gifted and talented students. It does not fund local gifted education programs.

Pursuant to the Javits Act, the U.S. Department of Education established the Jacob K. Javits Gifted and Talented Students Education Program (Javits Program). The purpose of the Javits Program is to carry out a coordinated program of evidence-based research, demonstration projects, innovative strategies, and similar activities designed to build and enhance the ability of elementary schools and secondary schools nationwide to identify gifted and talented students and meet their special educational needs. This program emphasizes identification of and service to students traditionally underrepresented in gifted and talented programs, particularly economically disadvantaged, limited English proficient (LEP), and disabled students and prioritizes funding for research efforts that are supportive of this objective.

Research supported by Javits funding and demonstration programs has created new valid and reliable ways to identify gifted students from underserved populations; produced fair and equitable observation tools for identifying gifted and talented English Language Learners; and helped teachers implement materials that result in improved performance for high-potential Black students.

Perhaps most importantly, the Javits Program has dispelled myths about what learners from diverse backgrounds can, and should be expected, to achieve. Thanks to the program’s research-based interventions, numerous gifted minority and economically disadvantaged students are thriving.

Funding for the Javits Program is discretionary, so each year Congress votes to continue funding. Congress voted to provide the Javits Program $12 million for FY19, the same amount of funding received in 2018; however, funding is never guaranteed. That’s why every March, NAGC brings state affiliate leaders, educators, and parents together at the annual NAGC Leadership & Advocacy Conference to discuss goals for influencing policy and to learn best effective advocacy practices. In addition to raising awareness and advocating for legislation that serves gifted and talented children, advocates visit Capitol Hill to ask federal lawmakers to ensure the Javits Program remains funded for the upcoming fiscal year.

NAGC has also established the Legislative Action Network (LAN), a platform to share best advocacy practices, exchange ideas, and support a national (federal, state, local) framework to support all gifted and talented children. NAGC’s goal is to grow the list of active advocates who will directly call for improved policy and programs to support gifted children as they reach for their personal best.

If you are interested in joining the LAN, please visit www.nagc.org/get-involved/advocate-high-ability-learners/legislative-action-network.

Sources


Experience 2: Simple Scenarios, Complex Conversations

I have a challenge for you: **Name as many things as you can that have numbers on them.** What did you come up with? Phones, computers, street signs, mailboxes, food labels...any others? We call these questions or prompts *Ponderings and Wonderings* and encourage parents to use them with their children.

Such prompts engage children in conversation while aiding in their vocabulary development and complex oral language skills. In addition, many of them require children to draw upon their divergent-thinking and problem-solving skills, as well as allowing them to connect ideas from different contexts. And the best part about this experience is that it can be done anywhere or anytime—without materials or supplies. A drive down the road may inspire a simple scenario leading to a complex conversation.

**Do It Yourself:**
Create a prompt or scenario to jumpstart a conversation with your child:
- **What would you do if you found a cell phone on the playground?**
- **What would you do if you found a [five dollar bill, a pair of glasses, a notebook] at [the grocery store, in the library, in your front yard]?**
- **What would you do if everything outside turned purple? What would you do if everything outside turned [spotted, striped]?**
- **Name as many things as you can that are green. Name as many things as you can that are [blue, smaller than a toaster, bigger than a car].**
- **Name as many things as you can that can be found in a school. Name as many things as you can that can be found in a [toy store, suitcase, kitchen cabinet].**

Experience 3: Ordinary Objects, Extraordinary Storytelling

How could a stick of gum, a brick, and a teddy bear all be part of the same story? Or what about a pair of scissors, a sock, and an action figure? For this experience, we brought with us an assortment of items that we collected from our office and homes, including tennis balls, rubber bands, Q-tips, cotton balls, paper cups, paper clips, stuffed animals, plastic toy figures, baskets, balloons, and more. We asked children to tell their parents stories using three items they selected from the group.

This experience supports literacy development by allowing children to practice both the verbal and structural elements of storytelling.

**Do It Yourself:**
- Have your child select three objects to tell a story about.
- Ask questions that help your child develop a narrative.
  - **Setting:** Where and when did the story take place? You didn't say where this happened. Can you tell me about that?
  - **Conflict:** What was the problem or issue that was presented in the story and how was it resolved? It sounds like there was a problem between [Character A] and [Character B]. How did they solve it?
  - **Plot:** Was there a beginning, middle, and end? Tell me a little more about what just happened.
  - Add more complexity to the activity to challenge your child.
    - Have your child tell another story with the same items.
    - Substitute one item and have your child tell another story.
    - Change the items (or characteristics of them), asking children how the story would be different under the changed circumstances. You told me a story about an angry tiger. How would the story be different if it had been a sleepy tiger?
    - Switch genres, and move from fiction to mystery, non-fiction, science fiction, or even poetry.

Developing children’s language and literacy skills is vital for success in school. Children like Jamie, a talented linguist and reader, need opportunities to fully develop these talents, while children like Jasmine, with her artistic eye, need support to help them grow academically and to foster their creative talents. By facilitating language- and literacy-rich experiences, parents can play a meaningful role in supporting their children’s success with language and literacy—and beyond.

**Author's Note**
Christine Carr is a former middle school English teacher from Atlanta, Georgia, who recently earned her doctorate in education from the University of Virginia’s Curry School of Education. While pursuing her degree, she worked as a graduate research assistant on a Javits-funded research grant, which afforded her opportunities to learn about supporting children with talent potential. Christine now teaches high school English.

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Help Your Children SOAR To Academic Success

By Kenneth A. Kiewra

Students often are ineffective in their note taking and studying strategies. They record sketchy notes, organize ideas using lists and outlines, and review information in piecemeal—one idea at a time.

For gifted children, it’s no different. For some, their brains are firing at such a rapid speed they are flooded with information and have difficulty focusing. Others view schoolwork as mundane; they prefer to spend their time on things that excite them. For others, learning comes easy—or they have excellent memories—and they aren’t forced to develop study skills. Other gifted students exhibit executive function challenges, where the part of their brain that sets goals, plans, organizes, and accomplishes tasks is underdeveloped.

No matter the reason, the one thing that most students have in common is that they are not taught note taking and study strategies in school or home. However, it’s essential that parents and educators spend time teaching gifted children how to organize their lessons, how to analyze the material, and how to study. Children who are not taught these skills early on in their academic careers may experience difficulties later when the material becomes more complex in high school and college.

What can parents and teachers do to help? Research demonstrates that learning is enhanced when students incorporate graphic organizers and other tools into their note taking and studying to reveal relationships among concepts. I call this method SOAR—Select, Organize, Associate, and Regulate—a framework and methodology I created that enables students to...
make critical connections, apply critical thinking skills, and, ultimately, understand concepts versus rote memorization.²

Five studies I’ve conducted over the past 10 years confirm that students who use SOAR strategies learn more facts and relationships than students who use their own self-taught strategies or those in the SQ3R method (survey, question, read, recite, review). Also, students trained in SOAR have been found to write higher quality, more integrative essays than students not trained in SOAR.³

About SOAR

For learning to best occur, each SOAR component plays a vital role. Using SOAR, students:

- **Select** and note the critical lesson information.
- **Organize** it using graphic organizers such as hierarchies, sequences, matrices, and illustrations.
- **Associate** it with other information, both inside and outside the lesson.
- **Regulate** learning through self-testing.

Select

Learning begins with attention. When students surf the internet in class or daydream while reading, learning doesn’t occur. Students need to focus their attention and select important information for further study. A proven strategy to aid attention and information selection is note taking. Research confirms that note takers achieve more than non-note takers, and that recording more notes is linked with higher achievement.⁴ Note taking helps in two ways: First, the process of recording notes relieves boredom and aids attention. Second, the written product produced from note taking is later available for study.

However, students are often not taught how to take notes. They often miss key concepts because they can’t write and/or process information as fast as the instructor speaks. Research also shows that it’s best for students to record notes by hand rather than on their laptops.⁵ Why? When students record notes on laptops, they tend to do so mindlessly without thinking about lesson ideas: Digital notes are typically of lesser quality, and students may cyber-slack by using their computers for non-course purposes like sending email and checking Facebook during class.

Organize

Rather than tossing information haphazardly into memory, experts within their domains instead often organize information in graphic patterns.⁶ A graphic organizer is effective because it reveals important relationships at a glance—hierarchical, sequential, comparative, and positional relationships often hidden in paragraphs or outlines. When students organize information graphically, it stores information efficiently in memory and helps them readily see relationships among ideas. Research on graphic organizers confirms that studying a matrix is superior to studying a text or outline.⁷

Associate

Piecemeal learning is ineffective. Think about a jigsaw puzzle. To determine what the completed puzzle looks like, you do not examine each piece individually (“This one is a blue color with splotches of red…”). For puzzles and for learning, assembly is required. And, just as experts organize information graphically in memory, they also associate information and see meaningful patterns and relationships within that organized information. For example, in looking at the sample matrix below, several associations are apparent. The greater a cat’s weight, the louder its call. Jungle cats have smaller ranges than plains cats. Jungle cats are solitary; plains cats live in groups.

A matrix is a useful way to graphically organize information to aid students in learning, as they can easily see relationships among facts or ideas.

### Sample Matrix: All About Wildcats

<table>
<thead>
<tr>
<th></th>
<th>Tiger</th>
<th>Lion</th>
<th>Jaguar</th>
<th>Cheetah</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Call</strong></td>
<td>Roar</td>
<td>Roar</td>
<td>Growl</td>
<td>Purr</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>450</td>
<td>400</td>
<td>200</td>
<td>125</td>
</tr>
<tr>
<td><strong>Habitat</strong></td>
<td>Jungle</td>
<td>Plains</td>
<td>Jungle</td>
<td>Plains</td>
</tr>
<tr>
<td><strong>Range (Miles)</strong></td>
<td>30</td>
<td>150</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td><strong>Social Behavior</strong></td>
<td>Solitary</td>
<td>Group</td>
<td>Solitary</td>
<td>Group</td>
</tr>
</tbody>
</table>

(Continues on p. 14)
Teach Your Child How to Learn Using SOAR Strategies

The following example shows parents and teachers how to put the SOAR study strategies into practice for a text about the eight planets, starting with Mercury.

**SAMPLE STUDY TEXT**

**Planets**

Mercury is an inner planet and the planet closest to the sun, just 36 million miles away. It takes Mercury just three months to completely orbit around the sun, which it does at a fast pace. Mercury’s orbit speed is 30 miles per second. Think about that, Mercury could move across the United States in about a minute and a half. Mercury is kind of like a golf ball—small and hard. Its diameter is just 3,000 miles across—the width of the United States. Its surface is rocky. Mercury has no moons to view in the night sky and takes 59 days to rotate and complete one day.

**SAMPLE GRAPHIC ORGANIZER: A MATRIX**

There are many types of graphic organizers, but a matrix is a way for students to organize complex information to easily see patterns and relationships.
Learning occurs when students can associate information and see meaningful patterns and relationships within that organized information. Recognizing important patterns is more meaningful than learning individual details.

For example, using facts from the matrix on page 12:

- The more distant a planet is from the sun, the revolution time is longer and the orbit speed is slower.
- Inner planets have rocky surfaces; outer planets have slushy surfaces.
- Inner planets, relative to outer planets, have smaller diameters, fewer moons, and longer rotation times.

The best strategy for monitoring one’s learning is self-testing. Students should test themselves by using their matrices or graphic organizers to create questions before the real test.

For example:

- Which planet is farthest from the sun?
- Which planet has the largest diameter?
- What is the relationship between diameter and surface?
- Which four planets have rocky surfaces?
- On which planet would you be half your age?
Recognizing these important patterns is more meaningful than learning individual details. The whole is worth more than the sum of its parts.

**Regulate**

Experts also self-regulate. They monitor their learning and understanding. The best strategy for doing so is self-testing. Students should self-test before the real test, not letting instructors be the first to test them. Returning to the wildcat example, an effective student might generate and answer questions such as these:

- Which cat is the heaviest?
- What is the jaguar’s range?
- What is the relationship between habitat, range, and social behavior?

**How to Help Your Child SOAR**

Despite the evidence that SOAR strategies work, two problems prevent their widespread use. First, students are rarely taught how to learn. Schools teach math, science, English, and history, but rarely how to learn those subjects. Often, schools focus on the products of learning, such as knowing the First Amendment to the Constitution and how to add mixed fractions, but not the processes behind learning these things. Some teachers simply toss out information and leave students to struggle on their own. As a result, students left to their own devices tend to use the ineffective strategies described earlier.

However, both teachers and parents can provide students with SOAR tools—such as a note-taking framework that helps them take complete notes and a matrix framework that helps them organize notes and make associations. Parents can also help children learn and teach them how to learn by working through assignments together at home. (See detailed example on pages 12–13.)

However, parents and educators can do even more. They can also teach children how to learn—how to SOAR—by embedding strategy instruction as they help their children learn material. This means not only providing the tools for note taking and studying, but teaching children how to create matrices and graphic organizers on their own.

Consider this familiar adage: If you give a man a fish, he eats for a day, but if you teach a man how to fish, he eats for a lifetime. When adults help children learn, children learn for a day, which is good, and at first necessary; but when adults teach children how to learn, children learn for a lifetime.

**Author’s Note**

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Altered Carbon: How Parents Can Encourage and Support Gifted Children’s Interest in STEM with Readily Available Tools and Apps

By Stephen T. Schroth, Janese Daniels, and Kimberly McCormick

As parents, we recognize that most children today are keenly interested in technology, and often prefer working in ways that use a variety of media and other forms of communication that are different than the way many children learned even a decade before. Many young learners look for ways to include technology in all aspects of their learning, ranging from embryonic thinking about a project, to information gathering, communicating ideas with others, giving form to ideas, refining and polishing initial efforts, and sharing a final product with others. When working with gifted children, listening to what they say—and seeing how they express themselves—often provides clues to which children will benefit through increased exposure to technology.

When gifted children demonstrate an attraction to or a love of technology, parents may wish to investigate a series of such tools, apps, or programs that can be used to enhance their child’s education, both inside and outside of school settings. In either case, parents want to look for evidence that their child embraces and enjoys coding or other technology enhancements:

• The evidence might be simple, such as the gifted child stating that he or she is really excited by technology and how it works (which is different than enjoying technology for entertainment, games, or social media).
• Teachers, grandparents, babysitters, friends, or, even, friends’ parents might be the ones who notice the gifted child’s love of technology and help to enlighten the child’s parents or caregivers.
• Parents may simply notice their gifted child is engaged for much longer periods of time when a project or activity includes technology.

Regardless of how parents discover this love or passion on the part of their child, recognizing what is happening is an important first step to enhancing the child’s learning experiences.

Coding

Coding involves identifying and analyzing a problem, applying problem-solving skills, and using knowledge of programming language to devise solutions that are innovative, effective, and efficient. Gifted children and their parents are often fascinated by coding, as it permits young learners to engage in higher-order thinking skills while simultaneously participating in an activity believed by many to be one path to a lucrative and exciting career. A variety of resources have sprung up that permit parents and teachers to assist gifted children in exploring coding in authentic and meaningful ways.

A popular resource related to coding is the website Hour of Code (www.hourofcode.com) which provides authentic coding experiences to gifted children of all ages, from pre-readers through high school students. The site provides a one-hour tutorial, available in over 45 languages, to help gifted children get started and engages learners with an attractive, intuitive, and safe environment in which to work. Hour of Code allows users to identify their experience level with coding as being either at the beginner or comfortable level, and also allows them to identify themselves as being a pre-reader or enrolled in Grades 2–5, 6–8, or 9+. This permits gifted children—or their parents and teachers—to tailor the experience so that only certain options are available, a feature that is especially useful with younger learners who may be easily distracted. Once the choices are made, a variety of resources are available, such as encryption, code devoted to climatology, MATLAB, and many games.

Parents or teachers who are not personally familiar with the coding process will be happy to discover a series of how-to guides, each tailored to a specific audience, including parents, teachers, after-school educators, public officials, or volunteers. Using videos and interactive text, these how-to guides each explain how to run an Hour of Code program, select tutorials, promote the experience, plan for technology needs, start the Hour of Code process off with an inspiring speaker, code, and celebrate children’s success.

Scratch (www.scratch.mit.edu) provides similar resources, but is aimed at a slightly younger audience. Like Hour of Code, Scratch encourages gifted learners to engage in coding to create stories, games, and animations they can then share with users around the globe. Attractive, free, and available in more than 40 languages, Scratch encourages children to learn to code and to code to learn. Scratch provides ideas on how it can be used as part of a free-standing investigation or integrated into the teaching of other subjects.

Many school leaders, teachers, homeschooling parents, and others who work with gifted children are interested in providing various learning options to those learners, including online and blended offerings. Versal (www.versal.com) provides a suite of tools that can be used to augment the educational program or even provide coding instruction. Versal permits educators and parents to create an online environment for gifted children that allows them to work at their own pace, using either a completely online or a blended learning environment. Versal also provides the ability to maintain student portfolios, provide professional development opportunities to teachers, and conduct student orientation sessions and career services. Versal also empowers gifted children interested in coding through its Versal Code option, an open cloud-based integrated development environment (IDE), which allows administrators to instantly create programming courses and inspire students to learn more about coding.

Books to Support Children’s Interest in Coding

Coding for Beginners Using SCRATCH
(Usborne)
Explores the basics of SCRATCH programming, and permits children to use code to create animations and games.

HTML for Babies
(Sterling Children’s Books)
One of a series of concept books that introduces the youngest children to the shapes and colors that comprise web-based programming.

Grace Hopper: Queen of Computer Code
(Sterling Children’s Books)
Biography of Grace Hopper, one of the pioneers of coding and computer science.

Mission Python: Code a Space Adventure Game!
(No Starch Press)
A hands-on introduction to coding using the Python language that encourages children to create games and puzzles.

A Computer Called Katherine: How Katherine Johnson Helped Put America on the Moon
(Little, Brown Books for Young Readers)
Made famous by the film Hidden Figures, this book tells how Katherine Johnson overcame racism and sexism to help put a man on the moon.
Other Apps and Resources

Coding is not the only way that technology may be used with gifted children. Children and their parents often welcome apps that can be used with tablets, phones, or other electronic devices that permit gifted learners to engage with rigorous content in a variety of settings and places. Three apps that are especially popular with gifted children and their parents include Busy Water, Zoombinis, and Inventioneers Full Version.

Each of these provides fun and innovative ways for gifted children to interact with science, technology, and engineering content while sharpening their creative and critical thinking skills through tasks that require problem-solving and other higher-order thinking. Find them all in your favorite App Store.

Busy Water uses an attractive, child-friendly interface to introduce problems related to water physics, such as a fish that has been released from its tank by a mischievous cat and finds itself in a system of pipes seeking an escape using gravity. With over 100 puzzles offered at various levels, Busy Water permits even very young children to explore endless possible solutions using their creativity and problem-solving skills.

Zoombinis, founded in 1996, provides entertaining activities for elementary and middle school children by emphasizing and encouraging analytical, logical, and mathematical thinking. The game encourages problem-solving by stating the goal of the problem at hand, and then permitting the player to deduce his or her own strategies or to use gameplay strategies for success.

Inventioneers Full Version encourages children to use physics engineering skills to design inventions, test them, and revise their creations until they are successful. Certain tools and helpers assist the participants to help a special character meet particular challenges as they arise. In one task, for example, participants are given a piece of cheese shaped like a ramp and an Inventioneer with the ability to blow objects. Children must arrange these pieces in a way that will assist a cat trapped in a tree safely get to a basket located below on the ground. Inventioneers Full Version permits children to fail, analyze why their first attempt was unsuccessful, regroup, and try again. This helps to build persistence and resiliency in gifted learners, two qualities of character that will serve them well in future endeavors.

Parents seeking to support their gifted child’s development and to build problem-solving, creative, and critical-thinking skills have a variety of tools at their disposal that will assist with these goals. Readily available technology, which can be obtained at little or no cost, will assist parents in providing these experiences to their gifted children in attractive, accessible, and appropriate ways. The ubiquity of technology, and its appeal to gifted learners, makes these tools something that can be used anywhere, at any time, and in an almost infinite variety of ways.

Resources


Authors’ Note

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Supportive Conversations for Transitioning Your Child to a Magnet or Self-Contained Gifted School

By Corinne Green

Perhaps your child will be eligible to attend one of the nation’s 4,340 public magnet schools next year. Or, maybe you’re investigating new school options in search of greater academic challenge for your child. If so, you and your child may have questions about moving to a new school and venturing into unknown territory. While you are meeting with administrators and evaluating new opportunities in your child’s academic future, your child may be mulling over more complex questions such as: What will happen when I leave my current school friends? Will I make new friends? How will others in my family feel if I attend the ‘smart’ school? How will I perform at this new school?

When considering a school switch, it is imperative your child be involved in the decision-making process. One study has shown that students who feel forced by their parents to attend a middle school magnet program instead of their assigned middle school showed greater dissatisfaction with school life than those who chose to attend the magnet program on their own. Such dissatisfaction may also lead to lower grades and underachievement later in school.

No matter how enthusiastic or apprehensive your child might be at the possibility of attending a new school, as a parent, it is important to support your child’s autonomy when helping her make academic decisions. Autonomy refers to the ability to think, feel, and make decisions without outside interference, and showing autonomy support means that you are providing resources to your child to bolster their own motivations for making a choice. If your child does not feel like she made the choice to attend herself, it may affect her school experience.

To help you decipher what your child may be feeling and provide you conversational tools, the following questions are some of the most common children may ask before committing to a school switch. During conversations with your child, it is important to listen, express empathy, and then ask how your child suggests resolving that concern. By uncovering your child’s feelings regarding moving to a new school, you have more opportunities to empathize with and support her autonomy in the decision. (See sidebar on page 20 for sample conversation starters.)

“What happens when I leave my old friends?”

A self-contained gifted or magnet school may be perfect for a child who has had difficulty making intellectual and social peer connections in the general elementary classroom. The opportunity to make new
relationships with like-minded peers may serve as a pull factor in favor of the magnet school. However, students who have flourished socially in elementary school may find themselves pressured to leave their friends for new opportunities, knowing that these relationships may fade. Your child may fear his friends will forget him or scorn him for leaving. Because many students with gifts and talents experience heightened empathy, the feeling of letting a friend down could be especially salient.

In these sensitive cases of friendship, it is important to remain autonomy supportive so that your child feels empowered to do what is right for his future. Remind him that there are other ways to see his elementary friends outside of school, such as sports teams, extracurricular activities, religious services, or local events. Help him identify ways he can stay in touch with his current school friends, and let him guide the way on next steps. Make concrete plans to show that action will be taken to continue those friendships.

**“Will I make new friends?”**

Your child’s perceptions of how she will be treated by peers at a new school will influence her opinions on whether to attend. If she imagines other high-ability students as antisocial or competitive, she will not be convinced to try the new school for fear of not being able to make friends. When you sit down with your child to discuss this, begin by listening to her and empathizing with her. Let your child know you understand her concerns. It can be hard to make new friends when friendship came naturally before. You may point out that the students in her new school likely have similar academic interests and want similar things out of school. It may even be easier to make friends. Ask her what kinds of things she could do to connect with new people. You may find the new school offers student socials, meetings, or days new students can shadow current students prior to the start of school. Ask program administrators about this when exploring the opportunity, and encourage your child to accept the challenge.

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**What is “Autonomy Support”?**

To give autonomy support means to provide resources to your children for making their own informed decisions. Educational psychologists have recommended using autonomy support to increase student motivation and interest in learning.

This does not mean giving children complete independence, nor does it mean speaking to them in a controlling manner. Rather, it includes showing them the interesting parts and value of the challenge they face so they make positive decisions to overcome that challenge. For example, in one research study, a parent encouraged her child to become curious in George Washington Carver by asking him about peanuts. Because of this conversation, the child chose a book on George Washington Carver along with an entertaining fantasy when a book sales pamphlet came home from school.

Practicing autonomy supportive parenting can increase student enjoyment of learning and provide ways for parents to connect with their children about educational content and extracurricular topics.

**Source**

“What will the rest of my family think of me if I go to the ‘smart’ school?”

Social standing not only affects children within friend groups, it can occur in the family environment. Some parents of gifted children have expressed frustration about the lack of support, or even hurtful advice, they receive from family members when discussing their child’s giftedness. Sometimes it can be difficult for relatives to understand why your child needs high-ability programming or why he needs to attend a different school. This may be exacerbated if your child is the first to be identified as gifted within your family.

Consider mentioning the new school to family members in private to gauge their feelings before discussing at a large gathering. Does the topic receive resounding support or doubts and questioning? How do family members the same age as your child see this opportunity? Does there seem to be jealousy? You may choose to share information with those relatives about the necessity of academic challenge for students who already understand grade-level material. If your child has siblings who are not eligible for the new school, remember to praise them for their own talents and help them find unique avenues of developing those talents so they also feel valued. Your child picks up on these dynamics, and it can be difficult for him to embrace his gifts and belongingness to the new environment if he does not have family support.

### Supportive Conversations for New School Transitions

<table>
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<tr>
<th>Concern</th>
<th>Autonomy-Supportive Response</th>
<th>Possible Solutions</th>
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| “What will happen when I leave my friends?” | “If you are worried about leaving your friends, I understand. You may not get to see them as much, but I can talk to their parents so you could see them after school or on weekends. Would you like that?” | • Coordinate shared extracurricular activities  
• Provide communication methods, like phone calls or texting |
| “Will I be able to make new friends?” | “It can be difficult to make new friends at first, but everyone at the school will be looking for new friends. You could look for someone who likes (talent interest) as much as you do. What other things could you try?” | • Look for start-of-school socials  
• Let them choose clubs, electives, or extracurricular activities |
| “How will my relatives feel about me going to the ‘smart’ school?” | “I know it can sometimes be hard for our family members to understand that you need more challenge, but I think some are excited to see all the cool things you are learning. Who do you want to tell first?” | • Talk to family members ahead of time to gauge reactions  
• Identify supportive family members and encourage your child to talk to them |
| “Will I do well at this school?” | “This school will challenge you, but that is a good thing. You have the chance to learn so much. You do not have to be perfect at it. What things can we do that will help you feel prepared?” | • Ensure the school is a good talent match  
• Look into school transition programs  
• Work on study habits  
• Encourage learning for the sake of learning |
| “What happens next?” | “It may be scary to think so far ahead when you don’t know what’s coming. When we get to that point, we can look at different school opportunities together. What do you think?” | • Talk to older students and their parents  
• Learn the high school options for those with gifts and talents in your district |

### Sources


Children with gifts and talents may create dual identities to find belongingness at home and in a special school. Dual identities are traditionally used by first-generation families and people of color to switch between participating in their ethnic culture and the majority culture. It can include switching between ways of speaking, forms of dress, and expression of interests. In this case, your child may be navigating dual identities—a school community that encourages showing intelligence and family members who discourage showing intelligence. This can be a positive strategy for him to find belonging in both environments. Again, you can use autonomy supportive conversations to guide your child toward more supportive situations if family dynamics become uncomfortable.

“What if I cannot perform as well as I’ve done before?”

Fear of failure or a slump in academic performance may be another reason that keeps your high-ability child from embracing a new school opportunity. Your child has likely been a top achiever in a mixed-ability classroom, but may picture a middle school where academic competition is multiplied by the number of students in the program. Your child may fear looking dumb in front of new classmates or disappointing you with an average grade.

Studies have shown that many high-ability students do not experience failure until they enter programs with peers of similar ability. If your child is fleeing from the opportunity due to fear of failure, it’s important to foster a growth mindset and encourage her to enjoy the challenge for the sake of new learning. Which topic is she most interested in pursuing at her new school? Focusing on what she will enjoy about the opportunity will increase her intrinsic motivation for those subjects and guide her toward success. The more you help your child through failure with autonomy supportive dialogue, the more she will be able to handle challenges in the future with ease and finesse.

Another real concern may be talent-to-program mismatch. This may happen...
when a gifted program, while challenging, does not align with your child’s talents. Gifted children often have a better understanding of themselves and their abilities than their age mates.\(^7\) They may be aware of their weaknesses and strengths in academics, hobbies, attention span, and social life. If your child knows she is weaker in one area, say math, and the school program you are considering emphasizes heavy mathematics, she has a right to be wary about whether that program is a good fit. A student gifted in STEM may not find a fine arts magnet school a practical use of her time. Listen to your child about these concerns. Never choose the most advanced route simply for challenge sake. Many gifted children have niche talents (art, drama, music, STEM); they need to be in environments that will serve their talents best.

“\textit{What happens next?}”

Let’s say your child goes through three years of wonderful middle school magnet curricula and completes the program successfully. What if the school district does not have any programming beyond that specifically for gifted students? Many high schools rely on advanced placement courses and extracurriculars without designating classes specifically for those with gifts and talents. Those options may or may not be enough for your child.

There is plenty of research on positive matriculation outcomes for those who graduate from magnet programs,\(^8\) but if your student is profoundly gifted or twice-exceptional, you may wish to investigate alternative high school options, such as a Governor’s School or the Early College High School Initiative. Many states offer Governor’s Schools, which are public residential schools often geared toward certain subjects, such as math, science, or the fine arts. Early college high schools allow high school students to earn both a high school degree and a two-year associate’s degree (or up to two years’ credit toward a bachelor’s degree) in the time it takes to attend high school. These are great next steps for students who would like to continue self-contained programming for their specific talent areas.

Have an open conversation with your child, whatever the next step may be. Remember to provide autonomy in her decision to attend the new school, and she will experience greater life satisfaction and responsibility for her choice. If your child has made you aware of her concerns, make sure her potential magnet school will offer support and resources to address those concerns. Finally, do not expect your child to be perfect in her advanced school. Give her time to adjust. For the first time, your child may experience true learning.

**Resources**


**Author’s Note**

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**Endnotes**


Make a Ruckus When You Need To

By Deborah Reber

Forget thriving. Many differently wired kids are simply trying to exist in school environments that spark in them anxiety, stress, and unhappiness. This can be especially true for gifted children.

From the outside, everything may look fine, as they tend to exceed academic expectations, often with very little effort. But on the inside, gifted kids are often bored, disengaged, and feeling like an outsider among peers who most likely aren’t experiencing the same sensitivities, emotional depth, and levels of awareness as they are.

While part of our job is teaching our kids how to advocate for themselves, when they’re younger, we need to be their voice, literally and figuratively, to ensure not only their emotional well-being, but an ongoing sense of curiosity and love of learning.

Be aware that there’s a difference between advocating and being a helicopter parent. Advocating for our children isn’t about pressing for grade changes or doing their homework so their grades don’t suffer—it’s about searching for meaningful resolutions with educators while supporting our children in more fully being themselves.

Although not everyone is born a natural advocate, I believe everyone has it within them to become one. What is your relationship with advocacy? Here are some questions to consider:

Have there been times in my child’s life when I didn’t advocate as powerfully as I could have? What, if any, personal concerns or uncomfortable feelings do I have around the idea of making a ruckus? How might my child benefit from my playing more of an advocacy role in his or her life, in school, activities, and among friends and family?

To become a more effective advocate for your child, try these strategies:

Be Kind and Clear, Not Pushy. A friend once compared her school advocacy efforts to running for political office—implementing change requires a delicate approach of pushing forward in an informed, compassionate, and respectful way.

Build Collaborative Relationships with Educators. Though it can sometimes seem as if educators are working against us, the vast majority want our children to thrive. To successfully team up with our kids’ teachers, commit to keeping the lines of communication open, find a common ground, and design an alliance rooted in honesty.

Don’t Assume “No” Means “No.” When we ask for things such as accommodations or extra assignments for our child, we may initially be brushed off. I like to think of a “no” as a “not yet”—a challenge to get informed and creative and see what kind of alternative solutions could be implemented.

Start Now. Identify at least one area of least satisfaction with regard to something happening with your child at school or in another institution/sport/group/organization. Put on your advocacy hat, and respectfully and intentionally speak up for the change or action you’d like to see.


Author’s Note
Deborah Reber is a parenting activist, bestselling author, and speaker who has spent the past 15 years writing inspiring books for women and teens. She launched *TiLT Parenting*—a website, podcast, and social media community—in 2016, where she is building a community of supportive parents of neurodiverse children.
Center for Talent Development helps gifted students, age 3 – grade 12, reach full potential. Our pathways approach leads students on a journey of intellectual, emotional, and social growth.

- Assessment to identify strengths
- Rigorous, individualized online courses
- Weekend programs
- Residential and commuter summer programs
- Leadership and civic engagement programs