When the planets aligned and different articles focusing on gifted girls or boys started appearing in my editorial mailbox earlier this year, the timing seemed right to devote an entire issue of Parenting for High Potential to explore new perspectives on gender differences among gifted males and females.

While it's impossible to cover every subtopic related to gender differences, Dr. Sylvia Rimm's overview article offers a crisp launching point for bringing readers up to speed on some of the most recent thinking on gifted boys versus girls. New voices offer new perspectives on topics such as, for females, perfectionism and STEM, and, for males, the "aha" moments gifted fathers experience when their son is identified as gifted.

This issue of PHP also encourages families to take time out for play with NAGC's annual guide to some of the newest toys most exciting for young gifted minds. And, we welcome creativity champions Dr. Rick Shade and Patti Garrett Shade, who will author a regular column in upcoming issues to ignite imaginations and spark innovation.

With this issue, the print edition of Parenting for High Potential is returning to a quarterly, seasonal moniker—Fall, Winter, Spring, Summer—and will arrive in subscribers' mailboxes in November, February, May, and August. This schedule better aligns with school calendars, staggered with delivery of sister publications Gifted Child Quarterly and Teaching for High Potential, and provides an easy-to-remember schedule readers can gleefully anticipate.

Kathleen Nilles
Editor-in-Chief
Gender Issues in Gifted Achievement: Are Girls Making Inroads While Boys Fall Behind?

By Dr. Sylvia B. Rimm

School and life achievement patterns for girls and women differ from those of boys and men. While girls have made dramatic progress in school, they need to be inspired to connect to lifelong achievement.¹ Both research and clinical work at the Ohio-based Family Achievement Clinic find that more boys than girls underachieve in school.² There is much that parents and teachers can do to help both genders achieve their full potential.

Boys’ Issues

Several approaches that encourage achievement for both boys and girls have been used effectively in the Family Achievement Clinic, and Menlo Park Academy, a tuition-free Cleveland-based community school for K–8 gifted learners.
Common Issues Affecting Males & Females

Males

- Boys receive lower grades than girls and are more likely to drop out of high school.
- Boys with high energy (a characteristic typical of many gifted children) are more likely to be diagnosed with Attention Deficit Hyperactivity Disorder (ADHD).
- Boys are more likely to have reading and writing disabilities.
- Fewer boys graduate college or earn graduate degrees.

Females

- Many girls are perfectionistic and deal with math anxiety.
- Girls struggle more in coping with competition, and experience peer pressure to underachieve in middle school.
- Bias against girls and women continues to take place in school and the workplace.
- There continues to be much greater conflict between career and parenting roles for women than for men.

Endnotes

Issues for Girls

The role of women has changed dramatically. There has been great improvement in girls’ school performance and involvement in successful careers. There is now equity in many areas including math scores, grades in school, and earning of university and graduate degrees. The genders are equal in medical and law schools and participation in the biological sciences. However, there continues to be major inequities in some areas (see Figure 1). Parents and teachers can inspire girls to be strong and resilient both in childhood and adulthood.

Perfectionism. The continued success that gifted girls find in school easily traps them into assuming that they can perform perfectly in life and are expected to do just that. They often believe they must continue to get all A’s and they struggle with criticism. Extreme praise promotes perfectionism and can be habit-forming. Encouraging risk-taking in school work will inspire girls to take reasonable risks in life. Challenging girls with creative thinking can teach them to accept criticism at home and in school and will assist them in developing better resilience. Parents who are role models for positively dealing with pressures help girls to understand that failure is also a typical and necessary part of success.

Math Anxiety. Girls continue to avoid complex math and science classes. Math is often an area where girls become frightened by complexity. Helping them to understand the value of math as a threshold subject to many important careers is crucial. Girls who want to help make the world a better place should learn to recognize that math is a tool that will allow them to do just that. Brief extra tutoring can sometimes be the step that allows girls to recognize that they, too, can be “math” people.

Coping with Competition. A variety of sports have opened to girls and have widened opportunities for them to learn to cope with competition. In our

Figure 1. The Leaky Pipeline

Women are underrepresented among tenured and full professors, deans, and presidents in almost all fields, and overrepresented among part-time and non-tenured faculty. Women comprise:

- 3% of CEOs of Fortune 500 companies
- 13% of chairs of departments at medical schools
- 13% of college faculties in physics
- 17% of Congress
- 19% of law firm partners
- 27% of school superintendents
- 35% of symphony orchestras (10% in 1970’s until blind auditions)

Women earn 20% less than men in salaries upon graduating from college and the gap grows to 30% after 10 years.

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The Perfect Girl Syndrome: Perfectionism and Self-Esteem in Gifted Girls

By Cassie Worley

In Harper Lee’s coming of age story, To Kill a Mockingbird, narrator Jean Louise Finch struggles with society’s perceptions of femininity and gender expectations. She, like many gifted females, has the combined burden of dealing with traditional gender expectations and suppressing the intellectual, inquisitive nature associated with her giftedness.

Since To Kill a Mockingbird made its debut in 1960, considerable research has been published on society’s expectations and attitudes toward females. Men think the most important qualities in the ideal woman are attractiveness, sexiness, and kindness. The media suggests females should value physical beauty and marriageability. Girls should be obedient, caring, pretty, and polite.

These unreasonable expectations and attitudes can create serious internal strife and negative self-perceptions for gifted girls. When females are told from a very young age that looks and sex appeal are what count in this world, they begin to hide their talents and abilities. They begin judging themselves through the eyes of those around them, craving approval, while losing a sense of who they are and what they want to accomplish. Gifted girls’ increased levels of awareness, sensitivity, and potential can also magnify their conflicts and losses.

Parents and teachers need to be aware that their attitudes and beliefs have a great impact on female self-perception. When gifted girls are inundated with stereotypes of the “perfect girl” or “ideal woman,” they can begin to lose self-confidence and start underestimating their abilities. As their self-confidence progressively declines, their perfectionist tendencies increase. Helping gifted girls acknowledge barriers to success and manage their desire to achieve perfection is essential in reversing female underachievement and increasing self-confidence.

Parents and teachers can also help gifted girls explore their gifts and talents by encouraging them to take risks, explore their passions, and discuss their emotions. Gifted females want to discuss their issues and need help in presenting their feelings in an appropriate manner. However, when gifted girls were asked how adults respond to them when they are depressed, 52% report that usually adults ignore them. Adults need to be receptive, active listeners, and watch for signs of maladaptive perfectionism, such as emotional turmoil, anger, anxiety, guilt, and depression.

“Do one thing every day that scares you.”

-Eleanor Roosevelt
Parental Influences

Research illustrates that gender stereotyping in toys may contribute to girl’s lower math and science scores on achievement tests. Parents should be aware of the subliminal gender stereotypes they present to their young daughters and encourage the exploration of their daughter’s talent or interest, no matter what it may be. From the time a gifted girl’s parents put the first doll in her hand or lay her in a pink bed, gender stereotypes are embedded in her memory. Parents need to model that chemistry sets, construction sets, and maps are not considered male-only toys.

Mothers also have a significant impact on the lives of gifted females. Talented girls with career-oriented mothers tend to develop their talents early in life and grow up to be independent and autonomous. Mothers should act as role models for their gifted daughters, encouraging healthy competition, monitoring media exposure, and discussing healthy body image.

School Influence

Teacher bias, classroom expectations, and curriculum content can also negatively affect self-esteem and achievement. Studies have shown that classroom teachers perceive gifted girls as working harder than males, but tend to give gifted girls the least amount of attention. In addition, males are more likely to be referred for gifted programs than identically described females. What teachers value in boys may be viewed as negative characteristics in girls. Females are often rewarded for their ability to get along with others and cooperate; however, these same traits and behaviors may be viewed as detrimental later in the highly competitive professional world.

A lack of prominent female leaders, scientists, and authors in textbooks and novels also contribute to gifted females underestimating their abilities and conforming to gender stereotypes. Teachers should give gifted girls a voice in the classroom, include more eminent women and their contributions in the curriculum, provide gifted girls with the opportunity to journal for exploring their fears and anxieties, and encourage gifted girls to take academic risks.

What is Perfectionism?

Perfectionism involves the tendency to set standards that are so high that they either cannot be reached, or are only met at a high price. Setting high standards and being a high achiever is an inevitable part of the experience of being gifted. While perfectionism can be channeled in positive directions to enable students to explore their passions and work toward their goals, it can also become maladaptive. In the case of maladaptive perfectionism, students begin to judge themselves based on their products. They begin to feel inadequate, anxious, and competitive.

Gifted girls are particularly at-risk for developing the characteristics of negative perfectionism. Research indicates that gifted girls feel more frustrated, worried, and are generally more anxious than gifted boys. These emotions occur when their perception of reality differs from the life experiences they encounter. Many talented females are affected by the pressure to be attractive. External barriers, such as the media’s bombardment of superficial images of beauty, and society’s expectations for females to develop social skills and maintain healthy relationships, negatively affect achievement and success. Female students are often rewarded for their ability to cooperate and conform. So, in order to maintain status as the “perfect child,” they become submissive and begin to internalize their confusion, anger, and despair.

As these perfectionist tendencies increase, which usually occurs during adolescence, the more susceptible gifted girls become to developing mental health issues, including depression, eating disorders, and substance abuse.

Endnotes

Patrilineal Ability: Nurturing Giftedness in Grandfathers, Fathers, and Sons

By Fiona Smith

The identification of his son’s high ability can cause a father to confront his own experiences as a gifted child and adult and change his emotional life, family dynamics, and career. Over the past decade, I’ve worked closely with numerous multi-generations of grandfathers, fathers, and sons in Australia to analyze their backgrounds, thinking styles, and preferences for acknowledging and managing their giftedness. I’ve found that the formal discovery of high ability and giftedness in their own sons or grandsons is a catalyst for fathers to:

• Evaluate their own life paths.
• Better understand personal experiences in childhood, both positive and negative.
• Explore stereotypical gender roles prevalent during their childhood.
• Accept their own giftedness, and reflect on whether it was appreciated or nurtured by their fathers.
• Understand their relationships with their fathers and grandfathers.
• Think carefully about their own parenting styles.

Common Characteristics

There are some common features in the profiles of gifted adult males I’ve interviewed. These characteristics often include:

• Intense need for mental activity
• Intense curiosity coupled with a passion to learn
• Love of music
• Deep love of fiction
• High level of inventiveness
• Vivid imagination
• Skill in creative activities
• Interest in games of strategy
• Strong sense of justice
• High levels of tolerance and compassion
• Feelings of anxiety and difference
• Tendency to daydream

So, what’s the secret for creating positive family relationships and nurturing giftedness in males across generations?

Fathers can nurture their son’s giftedness by being active and present, being open to changing past family dynamics, and by participating in self-reflection, individual counseling, and family therapy, if needed.

Helping Dads Understand their Giftedness

Self-reflection—either privately or with the help of a counselor—can help fathers of gifted boys understand their own giftedness and life experiences. This self-reflection often triggers an “aha” moment, and provides new insight on ways to relate to their gifted sons.

Questions during the self-reflection process include:

• What were your thoughts, feelings, and actions after you learned that your son was identified as gifted?
• Are there some strengths, quirks, and memories you have that lead you to believe that your father or grandfather is/may have been gifted?
• What is your own pattern of ability, intensity, and sensitivity? (Patterns of
ability may be explored through psychometric and achievement tests or checklists.) 2

• How are your own and your son’s patterns of ability, intensity, and sensitivity similar? Different?
• Did you experience any bullying or negative experiences at school due to your ability, sensitivity, or intensity?
• What are your personal passions and calming flow experiences? (“Flow” is best described as being completely absorbed in an activity or experience. This total engagement results in a feeling of intense focus, as well as enjoyment or delight in the process of the activity.) 3
• How can you use this knowledge and experience to better understand your own needs as well as those of your son?
• How do you feel about using the term “gifted” to describe yourself and your son?

Changing Family Dynamics

When reflecting on their own childhoods, many gifted adult males often wish their own fathers had parented them differently. In applying their own past feelings and experiences to parenting a new generation of gifted boys, the men I interviewed offer the following advice to fathers of gifted sons:

- Don’t force conformity to stereotypes.
- Avoid crippingly high expectations.
- Listen to your son—don’t do all the talking.
- Avoid unnecessary power struggles.
- Laugh with your son at silly mistakes.

Participating in Counseling

Counseling techniques can also help fathers develop an understanding of their own abilities, patterns of intensity, and sensitivities, and how these traits have affected and may continue to affect their life, work, and family dynamics. 4

Self-reflection through individual counseling is a positive way for men and adolescent boys to explore grandfather-father-son patterns of giftedness, profiles of intensities, and education and career paths. Counseling helps fathers see how ability has been perceived, understood, nurtured, or ignored within their extended family, and what this personally means for them.

While individual counseling helps adult men accept their own giftedness, joint counseling sessions with fathers and sons may be beneficial for ironing out relationship and parenting issues. Specific techniques for counseling gifted individuals and their families often result

“Being a Good Dad” to Your Gifted Son

Fathers of gifted boys should, first and foremost, explore and come to terms with their own experiences of being gifted. This validates their sons’ experiences and helps their boys feel less different or strange.

To nurture their gifted sons and build a positive father-son relationship, dads should:

• Be an active and present role model.
• Take an interest in all their son’s activities—even the ones that don’t personally interest them.
• Find at least one special activity or hobby to share.
• Share personal histories—stories about academic experiences, career events, and accomplishments, including ups and downs.

While it’s important to find common ground and be supportive of their gifted sons, it’s also important for fathers to keep their own desires separate from those of their children. Parenting behaviors are like a deposit in the bank: the more you put in, the more the investment grows. 1

Endnotes

Parenting a gifted son can seem like a huge responsibility. It’s understandable that fathers feel overwhelmed after their son has been formally identified as gifted. However, the best advice at this stage is to forget the number. A high IQ is simply an estimate of potential. Giftedness needs to be embraced, supported, and nurtured.

It’s important to realize that gifted boys are often more than happy to spend time with their fathers and grandfathers—listening to their stories, playing games, being read to, enjoying mutually-loved sports and hobbies, play-wrestling, and just hanging out. The men I’ve interviewed over the years feel these types of multi-generational interactions are far more important than spending money on expensive schools, coaching, or extra-curricular activities.

Resources
Books

Articles

Author’s Note
Fiona Smith is the principal psychologist and director of the Gifted Minds practice in Sydney, Australia. Throughout her career, Fiona has assessed more than 2,500 gifted individuals, provided counseling, and presented at schools, parent groups, and conferences. She has a special interest in working with gifted adults, especially in helping them navigate their intensities and sensitivities and concerns regarding parenting.

Endnotes
It’s All FUN and GAMES!

By Bethany Mullins

For the past 19 years, the National Association for Gifted Children (NAGC) has recruited tween and tiny toy testers to select which just-released toys and games most appeal to high-ability children. This year, Science & Arts Academy (SAA), an independent gifted PreK–8 school in Des Plaines, IL, was selected for the 2nd consecutive year to test 35 games and toys from 15 different manufacturers. More than 230 gifted and talented students, plus parents and teachers, provided valuable feedback and enjoyed partaking in the fun.

As the toys and games arrived, many students took note of the growing pile of toys and games and eagerly awaited the launch of game trials. The front office staff catalogued the toys, readied the rubrics, and alerted teachers when the games would be available for testing. May was deemed “NAGC Game Month.”

The students used three level-specific rubrics: Young Learners (Pre–K); Grades 1–3; Grades 4–8. After the completion of classroom trials, families signed out games for in-home testing, using a family rubric.

Throughout the 4 weeks of testing, more than 450 rubrics were completed by students and families across various grade levels. These rubrics collected data on packaging, length of game play, overall feelings of the game itself, and other metrics. Most students played 5 to 6 different games during the testing period. Games with the highest overall average scores based on multiple criteria were selected as “Top Picks” and “Honorable Mentions.”

Toy testers took their job very seriously. Students found that testing the games and toys was not only loads of fun, but also hard work when providing genuine, honest feedback for the manufacturers. After the trials concluded, students eagerly requested information about the games so that they could add them to their own collections.

Students were enthusiastic and thankful for the opportunity to once again be game testers; one student said, “I wish they’d let us test games every year!”

Top Picks

Crowded Waters

Manufacturer: Educational Insights
Mfr. Recommended Age: Age 8+
Testers’ Recommended Age: Ages 8–12
www.educationalinsights.com
MSRP: $19.99

Crowded Waters is a fast-paced game where players place their sharks to block opponents; the last shark with room to move wins the game. One student declared this game “epic,” “fun,” “stupendous,” and “the best game ever played.” Students noted the game was most fun with multiple players. It was popular with first and second graders who were determined not to become fish food!
**IQ-Blox**

Manufacturer: Smart Toys and Games, Inc.
Mfr. Recommended Age: Ages 6–10
Testers’ Recommended Age: Ages 6+
www.smartgamesusa.com
MSRP: $9.99

The latest in the IQ Series of travel pocket games, IQ-Blox offers 120 challenges to fit on a rectangular game board, with ring-and-ball shapes and four white walls. Students found IQ-Blox to be “mathematical,” “wonderful,” and “exciting.” IQ-Blox provides an instant break for those who like puzzles or need quiet downtime. Teachers, parents, and students all agreed that this one is a winner!

**Ozobot**

Manufacturer: Ozobot
Mfr. Recommended Age: Ages 7+
Testers’ Recommended Age: Ages 7–13
www.ozobot.com
MSRP: $49.99

The hands-on, programmable, robotic Ozobot intrigued students from 3rd–8th grade. Students found the intelligent game piece easy to operate right out of the box and enjoyed designing and controlling different paths using the provided map, player-designed maps, or their own iPads. Several older students thought the Ozobot was “epic” and “addictive.” Ozobot is a great way for kids to enhance their technology, creativity, and gaming skills.

**The Reel Script**

Manufacturer: SimplyFun
Mfr. Recommended Age: Ages 8+
Testers’ Recommended Age: Ages 7+
www.simplyfun.com
MSRP: $36.00

The Reel Script is a game that exercises a student’s love for creative writing and movies. Players bid on script lines in order to build a script and pitch it to the group. Players vote on the best script, with one player winning the round to collect points. One parent enjoyed how this game works to “develop language, writing, and sequencing skills.” Some students found the instructions confusing, but a helpful online video is available to explain the rules.

**Riddle Cube**

Manufacturer: Educational Insights
Mfr. Recommended Age: Ages 8+
Testers’ Recommended Age: Ages 7+
www.educationalinsights.com
MSRP: $19.99

The challenge of Riddle Cube was enjoyed from the youngest to the oldest testers. Students open the game, and begin play immediately because it’s simple to understand, yet challenging. Players must move quickly in order to match their shape to a challenge card; the first person to match the challenge wins the card. Students thought Riddle Cube was “competitive,” “exciting,” and “creative.” Various levels of difficulty make this game a shoo-in favorite for all students.

**Rush Hour Shift**

Manufacturer: ThinkFun Inc.
Mfr. Recommended Age: Ages 8+
Testers’ Recommended Age: Ages 6+
www.thinkfun.com
MSRP: $24.99

Many of our families requested this game because they were excited to see a two-player version of the classic Rush Hour… and they were not disappointed by Rush Hour Shift! Students as young as first grade enjoyed battling older siblings or parents to see who would reach the other side of the playing grid first. Parents enjoyed the ease of set up and called Rush Hour Shift a “great spatial planning game,” and “a great addition to any family’s game night.”
**SmartMax Tripod**
Manufacturer: Smart Toys and Games, Inc.
Mfr. Recommended Age: Ages 3+
Testers’ Recommended Age: Ages 3–9
www.smartmax.eu
MSRP: $59.99

SmartMax Tripod offers fun, creative, hands-on building time for students using special Y-shaped, sonic-welded bars and large 1.8-inch diameter metal balls that simply click together. Testers, who liked building both simple structures and complex geometric shapes, called it “cool” and “awesome.” The shapes’ larger size is suitable for smaller hands.

**Stinky Pig**
Manufacturer: Patch Products, LLC
Mfr. Recommended Age: Ages 6–8
Testers’ Recommended Age: Ages 6–8
www.patchproducts.com
MSRP: $11.99

Stinky Pig is a fast, exciting, “hot potato” style game with a twist. Students particularly enjoyed this game during their scheduled 10-minute breaks, making it ideal when time is limited. The game is easy to open, operate, and understand. Children roll the dice to see which way to pass the singing pig, but you don’t want to be the one holding him when he “toots!” Student laughter could be heard throughout the building when Stinky Pig was out to play.

**Worry Eaters**
Manufacturer: Haywire Group
Mfr. Recommended Age: All Ages
Testers’ Recommended Age: Ages 6–13
www.haywiregroup.com
MSRP: $15.99-$22.99

Worry Eaters are cuddly creatures that come in a variety of shapes, sizes, and colors to stash and manage your child’s worries! Students wrote or drew their worries, “fed” them to the Worry Eater, and were then better able to discuss and manage their feelings. One teacher said, “Every child should have one of these because who doesn’t worry about something?” One student in particular found the Worry Eater to be “uplifting” as it relieved some of her stress. Worry Eaters are a great tool for children in grades 2–8.

**Yowza!**
Manufacturer: Patch Products, LLC
Mfr. Recommended Age: Ages 7+
Testers’ Recommended Age: Ages 6–10
www.patchproducts.com
MSRP: $7.99

Yowza! is an exciting way to spend an afternoon. First through fourth graders found this game to be a ton of fun because who doesn’t love yelling words like “zap,” “boom,” and “bam?” In this fast-paced game, students shout onomatopoeia words while discarding their cards; but if their discard matches the word just shouted, they pick up the pile. Students found this game to be “exciting,” “fun,” and “full of Yowza!”
it’s all fun and games!

Honorable Mention

Do You Know Shakespeare?
Manufacturer: SimplyFun
Mfr. Recommended Age: Age 12+
Testers’ Recommended Age: Ages 12+
www.simplyfun.com
MSRP: $38.00

Testers recommend incorporating Do You Know Shakespeare? into classroom learning or a family’s home game collection. This trivia game helps develop knowledge of Shakespeare, his literary works, and combines risk-reward analysis with exciting fun.

Kanoodle Extreme
Manufacturer: Educational Insights
Mfr. Recommended Age: Age 8+
Testers’ Recommended Age: Ages 6–13
www.educationalinsights.com
MSRP: $14.99

Kanoodle Extreme offers more than 300 different 2D and 3D puzzles to challenge your brain. Kanoodle Extreme is an advanced version of single-player Kanoodle Genius. Older students loved its versatility, with virtually endless possibilities.

Star Realms
Manufacturer: Star Realms
Mfr. Recommended Age: Ages 12+
Testers’ Recommended Age: Ages 10+
www.starrealms.com
MSRP: $15.00

If you’re looking for a new challenging, engaging deck-building game, then this is it! Star Realms is a space-themed combat card game, with the goal of dominating the galaxy. Students particularly enjoyed that there are two options for play: physical cards and board, or a downloadable online version.

Stratego
Manufacturer: Patch Products, LLC
Mfr. Recommended Age: Ages 8+
Testers’ Recommended Age: Ages 8+
www.patchproducts.com
MSRP: $29.99

Kids agreed this updated version of Stratego is still enticing, exciting, and loads of fun for players of all ages looking for a challenge. For single- and multi-player online versions and apps, go to www.stratego.com or www.youdagames.com.

Three Little Piggies
Manufacturer: Smart Toys and Games, Inc.
Mfr. Recommended Age: Ages 3+
Testers’ Recommended Age: Ages 3–5
www.smartgamesusa.com
MSRP: $24.99

Three Little Piggies is a 3D brain-teaser that helps small hands build spatial awareness through a well-known story. Children solve 48 challenges to help the pigs build houses, play outside, and stay safe from the wolf. A teacher reported, “Every preschool-aged classroom should have this game.”

Tumble Trax Magnetic Marble Run
Manufacturer: Learning Resources
Mfr. Recommended Age: Ages 5+
Testers’ Recommended Age: Ages 3–10
www.learningresources.com
MSRP: $24.99

Tumble Trax Magnetic Marble Run provides fun in the classroom or at home with magnetic foam pieces, four marbles, activity cards, and a variety of challenges to create an exciting marble trail. Children develop engineering and problem-solving skills by rearranging the pieces to make the marble stop, slow down, speed up, or change directions.

Student photos are courtesy of Corina Vaccarello, Lower School teacher, Science & Arts Academy. Toy and game photos come from the manufacturers.
Counseling
Specialized counseling services should be available for gifted females. Through counseling, gifted girls can embark on the journey to self by shedding the mask they have created to maintain the image of the “perfect girl.” Feminist therapy offers an effective approach to issues like perfectionism and depression that stems from gender stereotypes. This type of therapy is often directed at “increasing a gifted girl’s self-esteem and self-concept through the examination of personal value systems and personal beliefs.” By becoming comfortable with who they are, gifted girls can turn problems into strengths.

Teaching gifted girls to be independent and confident is the first step toward helping them overcome perfectionism and become satisfied and successful adults.

Resources
Websites

Author’s Note
Cassie Worley has been an English teacher for 9 years and is currently working in Hamilton County, Tennessee, as a teacher of the gifted. She completed her bachelor’s and master’s degrees in English education from the University of Georgia and Piedmont College, respectively, and is currently working toward her doctorate in gifted and talented education from the University of Georgia. Cassie has a 5-year old daughter, Emerson, who is not only the light of her world, but the driving force for her research on gifted girls.

Parent & Teacher Interventions

The following strategies are recommended to help gifted girls overcome perfectionism and develop a positive self-image.

Parents
• Encourage independent thinking.
• Promote risk taking.
• Create an environment that fosters open communication.
• Become assertive advocates in their daughter’s schooling.
• Address and challenge media gender stereotypes.
• Applaud effort, but allow failure.
• Avoid gender stereotyping with toys.
• Consider specialized counseling to deal with perfectionism.

Teachers
• Use textbooks, novels, and curriculum that depict girls and women in positive, non-traditional roles and female leaders.
• Give gifted girls the opportunity to share their concerns and fears.
• Provide gifted girls with a safe environment to speak their opinions.
• Encourage risk-taking and creativity.
• Spotlight achievements of talented girls.
• Encourage girls to explore their passions and take advanced courses.
• Help gifted females understand healthy competition.
• Reduce sexism and bias in the classroom.
• Help gifted girls connect with strong female role models and mentors.

Endnotes
4 Ryan, 1999.
5 Kline & Short, 1991.
7 Reis, 2001.
10 Ryan, 1999.
Helping our daughters recognize science, technology, engineering, and math (STEM) in their daily lives, even in tasks like feeding the dog, baking a cake, or packing a suitcase, supports and encourages their STEM interests and abilities. Often young girls, even those who are very bright, aren’t accustomed to thinking of themselves as being good at science or math. They might not know what engineering means, or might think that technology subjects, like computer programming, are just for boys. Understanding the misconceptions and obstacles girls may face as they learn about STEM can help parents become better advocates for their young, gifted daughters.

**Girls Are Outnumbered**

Females are still significantly underrepresented in STEM fields. According to the U.S. Department of Education, high school boys are much more likely than girls to enroll in challenging STEM courses such as Advanced Placement (AP) calculus, statistics, and physics.¹ At the college level, young women are still a minority in STEM majors. Recent studies show only 17% of bachelors’ degrees in engineering were earned by women.² And, while women represent 48% of the total workforce after college, more than 75% of all STEM jobs are still held by men.³

We see similar trends in enrollment patterns at the Northwestern University’s Center for Talent Development, even among our youngest students. For example, in the summer Leapfrog program for academically gifted and talented PreK–Grade 3 students, we consistently see more boys than girls enrolled in math and technology courses. In robotics courses for second and third graders, only a handful of girls typically enroll in a class of 18 students. The same is true in our enrichment and credit-bearing STEM courses at the middle and high school levels: Girls are consistently outnumbered by boys. It’s possible that a girl with advanced STEM abilities may feel isolated, want peers who share the same passions, and seek female role models who don’t conform to stereotypical gender roles.

**Fear of Making Mistakes**

Some girls might be less willing than boys to take risks and make mistakes in an academic environment. For example, Stanford University researcher Carol Dweck has observed that girls are more likely than boys to perceive their...
intellectual gifts as static and fixed, and that this perception can become an obstacle to girls’ growth and achievement in STEM classrooms. Dweck maintains that many girls are vulnerable when faced with confusion or challenge because they believe that being smart is a gift they are born with rather than an ability that can be developed over time.

As parents, we can help our daughters become more resilient and flexible learners by reassuring them that learning is a process and by modeling how we respond to our own mistakes:

- When you are talking or working together on homework or chores, let your daughter know you value the problem-solving process and reassure her that we learn much more from our mistakes than our successes.
- When your daughter comes home from school ask her, “What exciting mistakes did you make today?”
- The next time you wreck a home improvement project, instead of berating yourself, take the opportunity to show your daughter how to rethink and recover gracefully.

**Start Young: Early Signs of Exceptional STEM Abilities**

If we want to encourage bright girls to pursue STEM studies and careers, we need to start early in their academic careers—as early as preschool—before they encounter obstacles, bias, and stereotypes. Parents are in a good position to recognize an early ability in STEM learning by observing their daughters at home, watching how they play and tinker, and noticing topics that draw their attention.

**Science.** Does your child enjoy spending time outdoors, watching ants crawl, or chasing butterflies? Does she like to dig in a sandbox or garden? Your child may have an aptitude in science if she:
- Enjoys observing the natural world and notices details and characteristics of plants, earth, and insects.
- Loves to help in the kitchen. There’s a great deal of chemistry involved in cooking and baking.
- Watches shows like *Wild Kratts, Cosmos* (both PBS), or *Mythbusters* (Discovery Network). Engage your daughter in conversations about the science concepts explored, and identify related resources, such as library books or enrichment classes.

**Engineering.** An interest and ability in engineering may be demonstrated by a child’s block and construction play or in her drawings and doodles. Things to look for include a fascination with maps, arrows, and graphic design elements in picture books or on street signs; attention to symmetry, balance, and strength in what she creates or draws; and whether she asks questions about how things work and what they are made of.

**Math.** Our understanding of math, as traditionally taught in American schools, begins with addition and subtraction. But meaningful and exciting math in the life of a child often begins with geometry, the shapes of things, and the relationships between those shapes. Her interest in blocks, LEGO® bricks, puzzles, board games, and measurement may indicate an advanced ability or special interest in mathematics.

**Role of Play in STEM Learning**

In 2013, mechanical engineer Debbie Sterling made a big splash in STEM education with the development of educational technology products that interact with children’s toys, such as the natural language interface on an iPhone. If your daughter enjoys asking Siri questions and has fun trying to come up with questions that will “stump” Siri, she is demonstrating that she can troubleshoot and test the limits of computer code. Encourage her to try introductory coding activities at code.org or, better yet, complete a coding tutorial together.

**Girl-Centric Programs**

To minimize your daughter’s isolation in STEM activities, look for “girl-centric learning environments” such as the girls-only animation and technology courses offered at Northwestern University’s Center for Talent Development (CTD). Northwestern has found that girl-friendly courses have successfully increased the participation of second to sixth grade girls in animation and web design. Public libraries and other out-of-school programs may offer technology classes focused on engaging girls. If no courses are offered in your area, investigate online classes and social media groups that focus on encouraging girls and young women to study STEM subjects.
education and social media when she introduced GoldieBlox, a line of toys designed to teach engineering concepts to young girls. Sterling, who studied engineering at Stanford, was inspired to develop a girl-friendly line of construction toys because she observed that she and other female engineering students seemed to have much less hands-on experience than male students with tinkering, building, and creating 3D constructions.

At home, parents can provide opportunities for STEM play experiences by:

- **Playing with blocks, LEGO® bricks, and other construction toys.** Wooden unit blocks, with standardized sizes and ratios, provide a kinesthetic introduction to geometry and engineering.
- **Playing board games.** Most board games have some element of math, such as counting and estimation (traditional games like Parcheesi or Sorry); spatial reasoning (Battleship); and coding (Robot Turtles and Code Monkey Island). Some girls may prefer Euro-style games that require trading, negotiation, and collaboration (Forbidden Island, Ticket to Ride, and Settlers of Catan), when compared to military, war-themed, or “winner take all” games.
- **Coding video games.** Girls may be more interested in the story that drives the game rather than the game’s actual outcome. At the Center for Talent Development, while boys were more likely to use Scratch to explore different kinds of special effects, girls more often wanted to create a character and then use Scratch tools to create a setting and story about that character. Scratch and Scratch Jr. are great ways to introduce computer programming and coding to girls of all ages.

In short, girls—and, of course, boys, too—are most inspired to learn when learning is meaningful. This is especially true in challenging STEM subject areas. However, whether your daughter is playing a board game at home or studying physics at school, girls with interest and ability in STEM seem to thrive most when they are engaged in creating stories, solving real-world problems, and collaborating with others.

**Resources**

- **Websites**
  - Code.org: www.code.org/learn
  - Girls Who Code: girlswhocode.com
  - Amy Pochler’s Smart Girls: amysmartgirls.com/smart-girls-in-stem/
  - Vi Hart, Mathematician: www.youtube.com/user/Vihart/featured
  - Scratch: www.scratch.mit.edu
  - www.scratchjr.org
  - GoldieBlox: www.goldieblox.com

**Author’s Note**

Ann Gadzikowski brings 25 years’ experience as a teacher and administrator to her role as Early Childhood Coordinator at Northwestern University’s Center for Talent Development. Ann’s primary responsibility at CTD is coordinating the summer Leapfrog program for children age 4 through Grade 3, at multiple locations in the Chicago area. A graduate of the Erikson Institute for Advanced Study in Child Development, Ann is the author of textbooks, leveled readers, and teacher guides including Challenging Exceptionally Bright Children in Early Childhood Classrooms (Redleaf Press, 2013) and Creating a Beautiful Mess: Ten Essential Play Experiences for a Joyous Childhood (Redleaf Press, 2015).

**Endnotes**

Center for Talent Development at Northwestern University is dedicated to helping gifted students, age 4 through grade 12, reach full potential. We provide research-based assessment, advanced programs and resources to enhance a child’s schooling. Our dynamic program pathways lead students on a journey of intellectual, emotional and social growth.

- Assessment to identify strengths  
  Currently Enrolling
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  Currently Enrolling
- Rigorous, individualized online courses  
  Currently Enrolling
- Residential and commuter summer programs  
  on top-tier college campus
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research about the childhoods of successful women, the women most frequently reported winning in competition as an important positive childhood experience. Winning builds confidence, but the experience of losing builds resilience. Girls will need to risk competing if they are to be successful in life.

**Social Pressures to Be Popular.** The middle school years seem to put great anti-achievement pressure on both girls and boys. Girls seem to struggle more with the concern that being an excellent student will prevent their being in the popular crowd. They need support at home and school to recognize that uncomfortable pressure.

**Subtle Unconscious Bias.** Research finds that there is continuous unconscious bias by both males and females that favors males. In blind controlled research studies of grading compositions, identifying students for gifted programming, and reviewing job and tenure applications, males are continually rated higher even when applications and written materials are identical except for gender. This has to change, and parents and educators can make this happen over time. As more girls and women are viewed in successful roles, perhaps evaluators will be less biased and more likely to recognize their talents.

**Family and Career Conflict.** The most difficult problem that women face in adulthood is the conflict between family and careers (see Figure 2). Although neither men nor women can actually “have it all,” our 15-year follow-up study of a sample of successful women found that 36% of the women (Balancers) believed they were able to successfully manage both family and career all at once. Another 27% (Sequencers) indicated that they could “have it all” by sequencing family and career. Fifteen percent of the women (Perfectionists) had both family and careers, but felt stressed and somewhat dissatisfied with their careers and frustrated about lack of time for family. These women would have been viewed from the outside as being highly successful in both roles. At the time of the study, 15% (Compromisers) believed they were not able to manage both. They skipped their career, or did not manage to have children. Only 7% (Strugglers) were at a place in their lives where they were feeling as if they had failed, but even in that group they had hope for a better future ahead. One hundred percent of the women interviewed were happy that career opportunities had been available to them.

There is reason for optimism and true hope for equality in future generations. Boys need good male role models to inspire effort and a positive work ethic. Girls need to see continual role models in adults, both men and women, who have been sufficiently successful in managing both family and career. Parents and educators play an important role in helping girls and boys to understand their tremendous possibilities for the future. Gifted programming holds out great opportunity for both genders. A 2005 survey of 5,000 middle grade students found that students in general programming viewed their first priority as making great amounts of money, while those in gifted programming were significantly more likely to see their primary goals for the future as making contributions to the world.

### Resources


Author’s Note
Sylvia Rimm, Ph.D., is a psychologist who directs the Family Achievement Clinic in Ohio, and specializes in working with gifted children. She is also a clinical professor at Case School of Medicine. Dr. Rimm speaks and publishes internationally on parenting, giftedness, creativity, and underachievement. Among her many books are Education of the Gifted and Talented, How to Parent So Children Will Learn, Keys to Parenting the Gifted Child, and Jane Wins Again. Dr. Rimm was a longtime contributor to The Today Show, hosted Family Talk on public radio nationally, and served on the Board of Directors of the National Association for Gifted Children. She has received many awards for her lifetime contributions to gifted children.

Endnotes

Figure 2. 15-Year Jane Follow-Up Study: “Can Women Have It All?”

Can women have both a successful career and family? Sylvia Rimm and her daughters recently published a 15-year follow-up to their study that reflects on the challenges and aspirations of women who want it all—education, career, marriage, family, and more. The original study includes surveys of 1,000 women and interviews with 100 of them. Following are the responses from a sample of the group interviewed.

<table>
<thead>
<tr>
<th>PRIMARY GROUP</th>
<th>% RESPONDENTS</th>
<th>CAN WOMEN HAVE IT ALL?</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balancers</td>
<td>36%</td>
<td>Yes</td>
<td>Sometimes difficult to balance.</td>
</tr>
<tr>
<td>Sequencers</td>
<td>27%</td>
<td>No</td>
<td>Not all at once.</td>
</tr>
<tr>
<td>Perfectionists</td>
<td>15%</td>
<td>Yes</td>
<td>Stressed, but glad they had both career and family; sometimes disappointed in career.</td>
</tr>
<tr>
<td>Compromisers</td>
<td>15%</td>
<td>No</td>
<td>Missed out on family or career to date.</td>
</tr>
<tr>
<td>Strugglers</td>
<td>7%</td>
<td>Yes &amp; No</td>
<td>Had unfortunate struggles, but conclusions not final.</td>
</tr>
</tbody>
</table>

Creativity has and always will be at the heart of American culture. It’s evidenced in our daily lives thanks to the contributions of society’s most revered icons—folks like Steve Jobs, Walt Disney, Thomas Edison, Bill Gates, George Eastman, and Albert Einstein, to name a few. These individuals didn’t obtain notoriety or fame as a result of intense and repetitive focus on mathematical and literacy skills while attending school. In fact, most of them openly admit it was the act of leaving school that gave them the freedom for their creative genius to grow.¹

For decades, creativity has languished in the educational system. Despite the work of educational thought leaders like Sir Ken Robinson, who advocate that creativity is as important as literacy, schools have yet to capitalize on this important skill.² Creativity is not the norm in schools, and seems to only survive in classrooms or enrichment programs when highly creative students find mentors and/or like-minded teachers.

We assume most would agree that being creative is enjoyable and that it enriches and enlarges our lives. It’s the genius behind all new innovations. It’s the “secret sauce” propelling companies to the top of global competitiveness. And, it’s often missing in structured or developmental ways in many of our schools.

Don’t be pushed by your problems. Be led by your dreams.  
—Chinese fortune cookie
As a parent or teacher, what can I do to nurture creativity in gifted children? How can I help bring creativity into both my and my child’s life? Creativity is a developmental skill that can be integrated into all teaching and learning. It’s essential for your child’s future work life and personal happiness. Because schools primarily focus on teaching content, parents often serve on the frontlines of helping their child nurture and protect their creativity:

- **In situations in and out of school, encourage and teach your child to be a proactive thinker.** Urge them to become intellectual risk-takers by making guesses, trying, failing, finding alternatives, and making decisions.
- **It’s as important to tell children stories as it is to read to them.** When children hear a story, they have to use their imagination to create characters and scenery. Ask them to describe or draw a picture of what they “see” as you tell a story. Infuse stories with phrases that include all five senses.
- **Facilitate your child’s artistic explorations.** Start with blank pages or coloring books that only have bits and pieces of images for children to complete.
- **Play is important!** Play with language (games like Scrabble or Scrabble Junior), play music. It increases emotional awareness, strengthens social skills, and aids in relaxation and distress reduction. Encourage both free play and directed play (organized games).
- **Learn and teach your child creative thinking tools.** SCAMPER, a mnemonic created by education administrator and author Bob Eberle, can be used to change an organization, fix a relationship, re-wind or pre-wind a social-emotional encounter, or invent something fun and useful. Google SCAMPER for useful tips and ways to use the tool.
- **Provide a strong foundation of creative tools and strategies** to change the “creative climate” in your home and inside your child to unleash their imagination.
- **Help your child understand that creativity is an essential ingredient** for personal and professional happiness and success.
- **Look for demonstrations of creative behaviors** such as playfulness, curiosity, and intellectual risk-taking in your child. Journal or chart this data to help confirm you are on the right track.

Perhaps Mihaly Csikszentmihalyi captured it best when he stated, “Studying creativity is not an elite distraction; it provides one of the most exciting models for living. If the next generation is to face the future with zest and self-confidence, we must educate them to be original as well as competent.”

Awareness is the important first step toward fostering creativity. Parents need to put up their antennae and dial into the creative opportunities for their children.

Authors’ Note

Dr. Rick Shade is an internationally known author, consultant, and speaker who is passionate about unleashing the power of creativity in the classroom, home environment, and work place. In addition to his U.S. teaching experience, Rick worked as a senior lecturer in the Gifted Research Center for Able Pupils at Oxford University, consulting with educators throughout England and Europe. He is co-author of several books on creativity, and is the recipient of the “Outstanding Educator” awards at two universities for innovative teaching practices.

Patti Garrett Shade has worked in education in Europe and the U.S. as a consultant, author, and educator. She is passionate about supporting educators as they respond to the differentiated needs of creative learners. She received national recognition for both her work as a state director of gifted and talented and for the development of an elementary science lab enrichment program. Her work focuses on creating interactive learning environments that result in the production of rigorous and creative student work. She is co-author of several books on creative thinking and learning.

Their latest book, *The Creativity Crusade: Nurturing and Protecting Your Child’s Creativity*, is a 2015 Legacy Award winner. Contact them at creativitycrusade@raspo.com.

Endnotes


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