

The Other IQ™

Imagination Quotient

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Educators face many dilemmas as they plan the learning experiences that shape students' futures.

Teachers ask:

- What skills will students need to succeed in life?
- How does creativity fit into long-term success?
- How does over-reliance on classic IQ tests hamper creative thinking?
- What can teachers do to build students' creativity?

Dr. Robert J. Sternberg, Dean of the School of Arts & Sciences at Tufts University, is a renowned psychologist who specializes in determining what makes people successful. Dr. Sternberg has conducted research that demonstrates that imagination is as important as intelligence in predicting how successful people will be later in life—and that standardized tests are not the best predictors of success.

There are two IQs, the classic Intelligence Quotient and now, the Imagination Quotient. "Intelligence is important, but so is imagination. While students need traditional analytical skills, that isn't enough. Imagination stretches their original thinking," Sternberg reports. Teachers who value students' imaginations and who challenge children to think of new ideas are nurturing the type of critical thinking skills that lead to long-term success.

What is creativity?

Dr. Sternberg defines creativity as "the ability to generate many ideas that are both novel (original, unexpected) and appropriate or useful." Creativity requires both imagination and intelligence. If wild ideas aren't based on knowledge, they aren't very useful. Generating a lot of creative ideas requires a willingness to take risks and go beyond the safety zone of what is commonly known. When children are taught to memorize "the one right answer," they become afraid of taking the risk of generating new and novel answers. Students need to be taught how to evaluate their own ideas and to "sell" those ideas they believe are best.

Why does creativity matter?

On the most personal level, creativity is what makes life interesting. Creativity is critical to solving problems that each of us faces every day. Dr. James Kaufman, Professor of Psychology at California State University, reports, "Creative people are more likely to be leaders, fulfill responsibilities, and be happy, successful, and purposeful in life." Many educators see these as long-term goals for their students.



On a societal or economic level, creativity leads to new inventions, discoveries, and innovations—critical to the future success of our nation. "In the past, creativity was considered by many to be optional or for a few gifted students. But in today's rapidly changing world, anyone who hasn't developed creative skills is at a distinct disadvantage. The future solutions that our challenging world needs will be discovered by this next generation—teachers must prepare students to be creative," Sternberg states.

Classic IQ Tests Don't Show the Complete Picture

Dr. Sternberg's belief that classic IQ tests don't show the complete picture of a child's capabilities started in his own childhood. Sternberg was a brilliant youngster who thought of alternative answers that didn't conform to the "one right answer" IQ tests. Now, as an extremely successful thought leader in the field of psychology, he has wondered how many other children were labeled inappropriately when they came up with different (perhaps better) answers than the tests' authors.

Sternberg shares stories of brilliant students who he felt had great potential, based on their creative thinking abilities. Unfortunately, low SAT scores kept them from being accepted into the college programs of their choice. His suspicions about over-emphasis on conventional test scores were heightened as he saw how some college students who had high standardized scores were not the top performers in upper-level psychology classes that required creative thinking.

Sternberg's personal and professional experiences made him wonder, "What can we do to validate the role of creative thinking in long-term success?"

Dr. Sternberg turned his curiosity into research while teaching Psychology at Yale University during the past three decades. He and his colleagues documented that students who scored well on creative tests often did better in college than students who had high SAT scores, but did poorly on creativity tests. Sternberg's creativity tests were simple—similar to what you might ask students to do.





When Sternberg looked at which of the students were successful, the creative people—not necessarily those with the highest test scores— were the most successful.

Is Creativity Innate or Can It Be Taught?

Often teachers wonder, “Can my teaching make a difference in students’ creative abilities? Aren’t some people born creative, while others aren’t?” The good news is that creativity is not a gift that some are blessed with at birth, while others are doomed to live without. Dr. Sternberg says, “Helping children develop their creative abilities is a decision that teachers and parents make and a habit that can be practiced in the classroom and at home.” Teachers can stretch children’s imaginations. A child’s Other IQ™ is not a fixed asset.

5 Ways to Increase Students’ Other IQ

1. Question and challenge assumptions. Learning involves more than remembering answers that others have already discovered. Help students address future problems and find new solutions by asking them for original thought. Ask students to imagine “What if...?” and wonder “How else could we...?”

2. Play with ideas. Knowledge and creativity go hand in hand. It is the playful spin on what we know that can lead to a new discovery. Playfulness helps set a tone of safe exploration. Help your students find new information and evaluate which ideas are strongest. Are your students struggling with math and science? Ask them to draw images and sculpt models. Hands-on experience makes abstract concepts real.

3. Explore other points of view. Ask your students to put themselves in others’ shoes. See the Earth as an insect would. Sketch what is seen from the clouds.

4. Encourage creative collaboration. Few creative solutions are generated in isolation or by one hero. Ask your students to build on each other’s ideas. Serve as a role model by tossing in your ideas, too.

5. Convince others. Having good ideas isn’t enough. Dr. Sternberg points out that creative people have to passionately believe in their own ideas and convincingly present them to others in order for those ideas to come alive. Persistence is important. Encourage students to generate diverse ideas, evaluate which are best, and then get others excited about them!

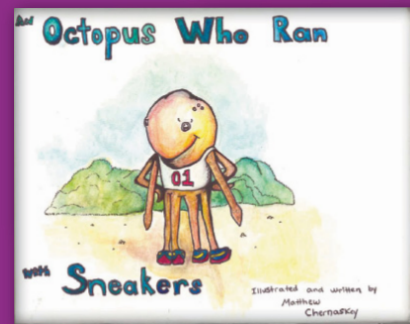
Sternberg’s and his research team’s findings are encouraging to educators. “Everyone has the potential to be creative, and creativity is the key to success. Teachers can help children build creative thinking skills. Just encourage exploration and experimentation. Practice imagining together.”



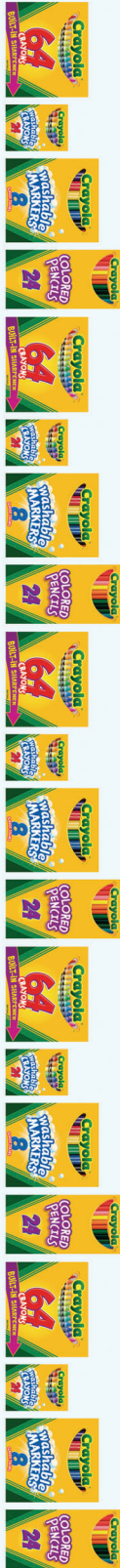
Sternberg’s creativity tests asked students to write or tell a story or to draw a picture. For example, students were asked to “draw a picture of Earth, as an insect would see it.”



Students’ art was evaluated on its originality and how well it fit the assignment, not artistic talent or aesthetic value.

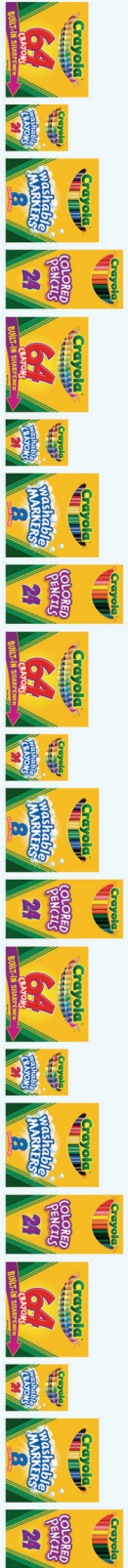


Students were asked to write and illustrate stories based on “What if an octopus wore sneakers...”



TheART of CHILDHOOD





Go to Crayola.com to find:

- Two Imagination Quotient Quizzes -- one for parents and one for educators
- Tips to share with parents on how to supercharge a child's Other IQ™
- More than 2000 craft and lesson ideas
- Information about free registration and how to receive free monthly e-newsletters



Arts Advocacy and Education Commission of the States

Creativity is relevant in every field, from visual arts to science and literature. Historically, some of the strongest advocates for emphasizing creativity in schools have been arts educators and arts advocates. Their advocacy work is making a difference, as the new Education Commission of the States report (released in July 2006) shows. The report contains a summary of support for the arts in public policy and research. For example,

- Thirty-six states and the District of Columbia include arts in their high school graduation requirements, either as a requirement or an elective.
- More than half of the states require classroom teachers to take coursework or demonstrate knowledge of the arts.
- All states (except Iowa) have state-level standards in the arts.
- Policymakers across the U.S. indicated they have a strong interest in seeing research that supports the links between the arts and academic achievement, dropout prevention, and workplace skills.
- The Commission report summarizes research that documents the benefits of Arts Education. Key benefits cited include: Improved performance in reading and math, increased student engagement and motivation in school, and improved school climate.

The Governor's Commission on the Arts in Education affirms the importance of state education policies that support the arts.

For a copy of this report and more information about the ECS Governor's two-year initiative, "The Arts—A Lifetime of Learning" visit <http://www.ecs.org/>

