Science Olympiad

In Mission Possible, teams build a device that incorporates energy transfers from simple machines to perform a specific task; in this case, to unfurl a roll of toilet paper.

America's Most Exciting Team Science Competition

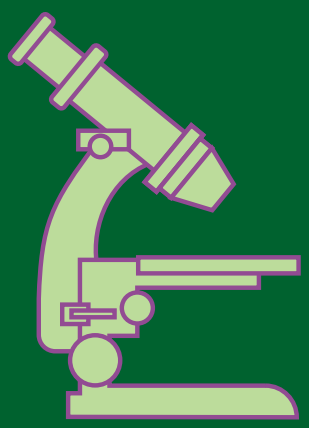
A researcher in the jungles of Panama studies a golden frog and remembers her favorite middle school Science Olympiad event, Amphibians and Reptiles. A high school science teacher prepares his lessons and recalls the singular influence that led him to major in Cellular and Molecular Biology at the University of Michigan and to pursue teaching, the Science Olympiad Designer Genes event. A geotechnical engineer who attended both MIT and UC Berkeley marvels at how learning to classify more than 200 rocks, minerals and fossils when she was 13 years old led her to a career sparked by Science Olympiad.

For nearly 25 years, Science Olympiad has led a revolution in science education. In the face of shrinking college enrollment in science majors, falling science test scores and a nationwide shortage of K-12 science teachers, Science Olympiad continues to challenge, inspire and inform the academic and professional careers of students and instructors across America.

Recently featured in *The Wall Street Journal, USA Today, WIRED* magazine, and on Comcast's "Education Showcase," Science Olympiad is committed to increasing global competitiveness for the next generation of scientists.

Reading, writing, arithmetic (and science)

Science Olympiad is a national non-profit organization dedicated to improving the quality of K-12 science education, increasing male, female and minority interest in science, creating a technologically-literate workforce and providing recognition for outstanding achievement by both students and teachers. These goals are achieved by participating in Science Olympiad tournaments and non-competitive events, incorporating Science Olympiad into classroom curriculum and attending teacher training institutes.



An alternative to science fairs.

Fulfilling a desire to bring excitement to science education and competitions, Science Olympiad was founded in 1983 by educators Dr. Gerard Putz and John Cairns. After successful tournaments were held in Michigan and Delaware, the program began to attract interest from school districts all around the country. What began as a grassroots assembly of science educators has now become one of the premier science competitions in the nation. Currently, Science Olympiad has members in all 50 states, totaling more than 14,000 actively participating K-12 schools.

At the competitive level, elementary, middle and high school students with a knack for science have a chance to excel inside and outside the classroom. Secondary school teams advancing to state and national tournaments are celebrated at pep rallies, travel to major universities, make new friends and experience what it's like to be a star in the community. One of Science Olympiad's main goals is to bring academic competition to the same level of recognition and praise normally reserved for athletic competitions in this country.

SCIENCE OLYMPIAD

Exploring the World of Science

www.soinc.org

The nuts and bolts of competition.

In March of 1992, **President George H. Bush** honored a group of 180 Science Olympiad students, teachers, coaches and administrators for their achievements and contributions to science at a Washington, D.C. ceremony.

Defy gravity. Boys and girls work together in events like **The Wright Stuff,** where students are challenged to build a rubber-motor-powered, propeller-driven monoplane that stays in the air for the longest time period.

Middle School Division B (Grades 6-9) and High School Division C (Grades 9-12)

Much like a football or soccer team, competitive Science Olympiad teams prepare throughout the year for tournaments. Each team is allowed to bring 15 students who may participate in a variety of events in their skill set. Practices vary from monthly meetings to weekly study sessions to daily work as tournaments near, supported by an interlocking group of peers, coaches, parents and mentors from academia and industry.

Science Olympiad competitions are like academic track meets, consisting of a series of 23 team events in each division. Each year, a portion of the events are rotated to reflect the ever-changing nature of genetics, earth science, chemistry, anatomy, physics, geology, astronomy, mechanical engineering and technology. By combining events from all disciplines, Science Olympiad encourages a wide cross-section of students to get involved. Emphasis is placed on active, hands-on, group participation. Through the Olympiad, students, teachers, coaches, principals, business leaders and parents bond together and work toward a shared goal.

Teachers from across the nation attend annual Science Olympiad **Summer Institutes and numerous regional workshops** to refresh their skills and learn about new events.

Teamwork is a required skill in most scientific careers today, and Science Olympiad encourages group learning by designing events that forge alliances. In **Tower Building**, an engineering whiz and a kid from wood shop can become gold medalists. Similarly, a talented builder and a student with a good scientific vocabulary can excel in **Write It, Do It**. Science Olympiad seeks to shatter the isolated scientist stereotype.

The prestige of winning a medal at a Science Olympiad national tournament is often a springboard to success. Individual medals as well as championship trophies for each division are awarded at tournaments. In addition, cash and tuition scholarships have been given in amounts exceeding $5 million, with some national tournament host sites offering four-year, full-ride scholarships for gold medal winners in the C division and tuition stipends for gold medalists in the B division. Some events like Chem Lab or Disease Detectives offer prizes at the national level such as calculators from Texas Instruments, trips to the Centers for Disease Control, cash awards and visits to professional conferences.

Teams from Alaska regularly draw cheers from the crowd for traveling the farthest to the **Science Olympiad National Tournament**, like the Teeland Middle School group pictured here at the 2005 event at the University of Illinois at Urbana-Champaign.

Alumni Notes

Of the working alumni responding to our online survey, nearly 90% said that participating in Science Olympiad had a direct impact on their career choice. Add your story under Alumni Survey at **www.soinc.org**.

"As a young girl, being on Science Olympiad with other girls created an important support group; together we discovered that women can succeed in the fields of engineering, math and science."

- **Vanessa Rogers,** Management Consultant, IBM

"Science Olympiad helped me to learn how to work with team members, each with different skills and talents, to accomplish a mutual goal. This has been an invaluable lesson for my current line of work, where I manage the resources of many engineers and scientists to come up with a solution to challenging problems."

- **Anthony Hays,** Division Manager, Michigan Aerospace Corporation

"Without my experience in Science Olympiad, I would not have majored in science and become a teacher. In both middle school and high school, my independent study in Science Olympiad gave me a passion for genetics, molecular biology and science in general. Without the inspiration of my coaches encouraging me, I would not be teaching."

- **Jennifer Dye,** Teacher and Science Olympiad Coach, Pope John Paul II High School, Tennessee

2005 Building the Future Award Winner

SME EDUCATION FOUNDATION sm

Killer apps.

To strengthen real-world application of skills and invent new ways to test the acumen of competitors, Science Olympiad invites partners from industry, trade groups and associations to design, guide and supervise events. In 2007, the Academy of Model Aeronautics (AMA) will assist with both the **Balloon Launch Glider** and **Wright Stuff** events while the Institute of Food Technologists Student Association (IFTSA) provides online study materials and mentor matching to students in the **Food Science** event.

These partners, along with many more, provide volunteers and invaluable expertise to teams, state Science Olympiad organizations and regional competitions. Many corporations find that Science Olympiad is an excellent source of students vitally interested in a specific sub-field, such as molecular genetics, and can offer career guidance to a target audience.

The **teamwork** required in many Science Olympiad events parallels the collaborative **group dynamic** of scientists in real-world settings.

Crunch the numbers.

More than 5,000 middle and high schools participate in Science Olympiad. With up to 30 participating students per school, that's 150,000 kids — now multiply that number by the coaches, teachers, parents, volunteers, experts, scientists and business leaders who are involved. Toss in everyone from each host site that works at the competitions. Then add in the 9,000 elementary schools participating, including students, teachers, parents, volunteers, experts, scientists and business leaders. We estimate that in a given year, Science Olympiad reaches more than two million people.

5,000 schools x 30 = 150,000 x (coaches, teachers, parents, scientists) + (host site volunteers and professors) + 9,000 elementary schools x (students, coaches, teachers, parents, experts) =

MORE THAN TWO MILLION

people experiencing Science Olympiad each year

Elementary Science Olympiad Divisions: A1 (Grades K-3), A2 (Grades 3-6), A3 (Grades K-5)

Learning happens when students are engaged. Mix up some Vaseline, food coloring and cocoa powder and you've got a recipe for a session on skin and the circulatory system. Science Olympiad shows kids in elementary grades that science is fun, accessible and exciting, with more than 9,000 elementary schools in the U.S. using Science Olympiad programs last year. Some held Fun Days, where every classroom in the school becomes a hands-on science lab, or a Fun Night, where small teams rotate through events staffed by experts and teachers. Some states even host district, regional or state competitions for grades 3-6, offering events like **Don't Bug Me, Science Crime Busters, Pasta Bridge** and **Rock Hound.**

Students from **Edison Elementary School** in Elmhurst, IL, make fake blisters and wounds in **The Skin You're In**, a grossology event often led by a local doctor or nurse.

APPROVED FOR LISTING NASSP 2006–2007 STUDENT CONTESTS & ACTIVITIES

National Science Standards

Science Olympiad events meet National Science Standards set by the National Research Council. Teachers searching for curriculum resources that illustrate standards in action have found success with Science Olympiad, for it emphasizes the close relationship between teaching and assessment. Science Olympiad highlights many of the elements of the Teaching Standards, Assessment Standards, Program Standards and Science Education System Standards.

SCIENCE OLYMPIAD

Accept the Challenge!

National Tournament Sites

1985	Michigan State University
1986	Michigan State University
1987	Ohio State University
1988	Delaware State University
1989	University of Colorado, Boulder
1990	Clarion University
1991	Penn Valley Community College
1992	Auburn University
1993	University of Southern Colorado
1994	University of Arizona
1995	Indiana University
1996	Georgia Institute of Technology
1997	North Carolina State University
1998	Grand Valley State University
1999	University of Chicago
2000	Eastern Washington University
2001	University of Colorado, Colorado Springs
2002	University of Delaware
2003	Ohio State University
2004	Juniata College *(pictured right)*
2005	University of Illinois
2006	Indiana University
2007	Wichita State University
2008	The George Washington University, Washington, D.C.
2009	Augusta State University
2010	University of Illinois
2011	University of Wisconsin, Madison

Science Olympiad accolades and affiliations:

- Winner of *Midwest Living's* Champions In Education™ Grand Prize 2005
- Winner of the 2005 SME Education Foundation Building the Future Award
- Approved by the National Association of Secondary School Principals (NASSP)
- Certified as "Best in America" by Independent Charities of America

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BEST IN AMERICA CERTIFIED BY INDEPENDENT CHARITIES OF AMERICA

Membership For a complete listing of events, state websites and tournament information, or to learn more about becoming a registered member team, please visit our website or contact us at: www.soinc.org

A team of two calibrates their **Wheeled Vehicle** on-site to travel between 5 and 10 meters and stop at a finish distance revealed only at the start of the competition.

Sponsors make our mission possible!

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Society for Neuroscience (SFN)
Terry Trippe

Students show their creativity and Missouri state pride with a tribute to President Harry S. Truman's famous catchphrase at the 2006 **Science Olympiad National Tournament Opening Ceremony** at Indiana University.

SCIENCE OLYMPIAD
Exploring the World of Science

Two Trans Am Plaza Dr.
Suite 415
Oakbrook Terrace, IL 60181
(630) 792-1251
(630) 792-1287 fax