Science Olympiad

America's Most Exciting Team Science Competition

For the past 27 years, Science Olympiad has led a revolution in science education. What began as a grassroots assembly of science teachers is now one of the premiere science competitions in the nation, providing rigorous, standards-based challenges to nearly 6,000 teams in 49 states. Science Olympiad's ever-changing lineup of events in all STEM disciplines provides a variety of career choices and exposure to practicing scientists and mentors. Recognized as a model program by the National Governors Association Center for Best Practices, Science Olympiad is committed to increasing global competitiveness for the next generation of scientists.

Urban Schools Initiative

> "After participating in Science Olympiad and winning two medals at the Regional Tournament, I decided I wanted to major in science. This fall I will be attending Northeastern Illinois University majoring in Biology."

BRITTANY FIRSZT, STEINMETZ HIGH SCHOOL, CHICAGO PUBLIC SCHOOLS

Since 2006, the Urban Schools Initiative (USI) has increased minority participation in Science Olympiad by providing teams with membership, materials and extensive professional development. The program uses a three-year stepping-up progression of events and a protected regional concept to support teams as they advance to the state tournament. Student development workshops called "Build It Learn It Days" bring experts from leading museums, universities and businesses together to give USI participants a chance to design and construct planes, study fossil specimens and solve a crime using forensic techniques. An evaluation report by the University of Illinois I-STEM Education Initiative found that a majority of students felt Science Olympiad helped increase their interest in science and STEM courses, and also increased their confidence in their ability to do science.

Science Olympiad Urban Schools Initiative

Science Olympiad™

Exploring the World of 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. www.soinc.org

Teamwork Rules!

Fulfilling a desire to bring excitement to science education and competitions, Science Olympiad was founded in 1983 by educators Dr. Gerard Putz and Jack Cairns. Currently, Science Olympiad holds 320 invitational, regional and state competitions, engaging close to 200,000 students on 6,000 secondary school teams. Another 10,000+ schools participate in grades K-6.

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. Individual medals and championship trophies for each division are awarded, with cash and tuition scholarship offers exceeding $11 million to date.

Science Olympiad Competition

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

Much like a football or soccer team, Science Olympiad teams prepare throughout the year for tournaments. Each team is allowed to bring 15 students to participate in events in their skill set. Practices vary from monthly meetings to daily work as tournaments near, supported by an interlocking group of coaches, parents and mentors from the community, academia and industry. Science Olympiad competitions are like academic track meets, consisting of a series of 23 team events in each division. Annually, a portion of the events are rotated to reflect the changing nature of anatomy, physics, geology, astronomy, mechanical engineering and technology. By combining events from many disciplines, Science Olympiad encourages a wide cross-section of students to get involved in active, hands-on, group participation.

Elementary Science Olympiad

Elementary School Division A (Grades K-6)

Learning happens when students are engaged. Grab a handful of straws, some masking tape and a tennis ball and you've got an easy lesson in structural engineering that leaps off the page. Elementary Science Olympiad (ESO) shows kids that science is fun, accessible and exciting, with more than 10,000 elementary schools in the U.S. using Science Olympiad programs. 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. ESO is a great jumping-off point for Science Olympiad in the upper grades and a perfect way to enhance any school's curriculum.

The Science Olympiad Straw Tower Challenge engaged more than 5,000 kids and families at "Science in the City" Neighborhood Science Carnivals hosted by the City of Chicago.

"As a 5th grader, I became hooked on Science Olympiad thanks to creative events like Straw Towers and Mystery Powders. With the cheering support of dedicated parents and coaches and the competitive spirit of my friends, Science Olympiad played an integral part in nurturing my love for science."

DR. JED PACK, IMAGING SCIENTIST, GENERAL ELECTRIC GLOBAL RESEARCH CENTER

Workforce Development

To strengthen real-world application of skills, Science Olympiad invites partners from industry, trade groups and associations to design and supervise events. Since 1996, the Centers for Disease Control has sponsored Disease Detectives, running the event at tournaments, maintaining a dynamic web site on epidemiology and presenting at Science Olympiad professional development workshops across the U.S. These partners and others act as STEM role models and provide volunteers and invaluable expertise to teams, state organizations and local competitions.

Relationships between Science Olympiad and partners like Lockheed Martin, DuPont, The College Board, Discovery Education and Texas Instruments expose students and teachers to practicing scientists and cutting-edge research and technology.

"Science Olympiad is a major factor in my decision to become a teacher. On my team in Pennsylvania, I was able to follow the scientific process, learn from my mistakes and redesign solutions. I realized I could work with others and make science fun as my career choice."

DAVID ULRICH, SCIENCE TEACHER,
NORTHERN BURLINGTON COUNTY REGIONAL HIGH SCHOOL

National Science Education Standards

All Science Olympiad events are aligned with current National Science Standards set by the National Research Council. Teachers seeking curriculum resources that illustrate standards in action have found success with Science Olympiad because 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.

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

Events Include:

DIVISION B EVENTS FOR 2011

Life, Personal & Social Science
Anatomy (Respiratory, Muscular)
Disease Detectives (Food Borne Illness)
Ecology (Tundra, Taiga)
Microbe Mission
Ornithology

Earth & Space Science
Dynamic Planet (Earth's Fresh Waters)
Fossils
Meteorology (Severe Storms)
Road Scholar
Solar System

Physical Science & Chemistry
Optics
Shock Value
Storm the Castle
Can't Judge A Powder
Crime Busters

Technology & Engineering
Battery Buggy
Bottle Rocket
Junkyard Challenge
Towers

Inquiry & Nature of Science
Awesome Aquifers
Compute This
Experimental Design
Write It Do It

DIVISION C EVENTS FOR 2011

Life, Personal & Social Science
Anatomy & Physiology (Respiratory, Muscular, Endocrine)
Disease Detectives (Food Borne Illness)
Ecology (Tundra, Taiga)
Microbe Mission
Ornithology

Earth & Space Science
Astronomy
Dynamic Planet (Earth's Fresh Waters)
Fossils
Remote Sensing (Human Impact on Earth)

Physical Science & Chemistry
Optics
Sounds of Music
Wind Power
Chem Lab
Forensics
Protein Modeling

Technology & Engineering
Helicopters
Mission Possible
Mousetrap Vehicle
Towers

Inquiry & Nature of Science
Experimental Design
Sumo Bots
Technical Problem Solving
Write It Do It

Science Olympiad National Tournament

Since the first National Tournament was held at Michigan State University in 1985, Science Olympiad has grown to include a field of more than 6,000 teams at the secondary level. Today, hosts like The George Washington University, Indiana University and the Georgia Institute of Technology provide state-of-the-art facilities, superb faculty and a wealth of scholarship opportunities at the Science Olympiad National Tournament, hoping to attract the next wave of engineers, doctors, researchers and technicians to the US workforce.

UPCOMING NATIONAL TOURNAMENT SITES:

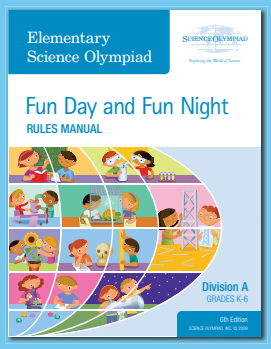
2011
University of Wisconsin, Madison, WI

2012
University of Central Florida, Orlando, FL

2013
Wright State University, Dayton, OH

"Science Olympiad was one of my most significant high school experiences. It helped me decide that I wanted to continue studying and doing research labs in the science fields, particularly physics and astronomy."

HANA KHALIL, UNDERGRAD, MASSACHUSETTS INSTITUTE OF TECHNOLOGY



ONLINE STORE:

Please visit **store.soinc.org** to order Rules Manuals, CDs, DVDs, Test Packets and other educational materials you can use to prepare for Science Olympiad tournaments and classroom instruction!

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.

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Exploring the World of Science

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