

2018-2019

ANNUAL

REPORT

# Inspiring the Next Generation of Scientists



*Exploring the World of Science*

# Letter From The Executive Director



“  
**Science Olympiad is well-positioned to continue as a leading voice and provider in the STEM space.**  
 ”

Welcome to the 2018-2019 Science Olympiad Annual Report! **We reached several program service milestones that you'll discover on the following pages:** hosted our 35th Annual Science Olympiad National Tournament at Cornell University; held a record-number of tournaments; expanded computer science and coding events; boosted alumni outreach; met goals of diversity, equity and inclusion; grew the Urban Schools Initiative; and recruited majorities of women on teams and across our national leadership.

Two years ago, Science Olympiad developed its first-ever Strategic Plan, which has served as our organization's guiding document ever since. We outlined Five Key Strategic Priorities, each paired with SMART Objectives which are Specific, Measurable, Achievable, Related to Goals and Time Limited, and use them as a yardstick to gauge success.

We are committed to exhibiting best practices of a well-functioning non-profit organization, and have done extensive work around Board improvement, including rewriting the Science Olympiad Bylaws, outlining a clear succession plan, and developing tools like a Board Handbook, Board Affirmations, Performance-to-Plan Reviews, Fiscal Narratives and On-Boarding Processes.

Throughout this Annual Report, you'll see highlights on several exciting fronts:

- » Girls in STEM
- » Workforce Development
- » Alumni Outreach
- » Urban Schools Initiative
- » National Tournament
- » Elementary Science Olympiad

You'll also take deep dives into our program service and financials, which represent 35 straight years of growth. None of this could be done without our partners and volunteers.

With the topic of STEM education central to conversations about innovation, global competitiveness, economic opportunity and workforce development, Science Olympiad is well-positioned to continue as a leading voice and provider in the STEM space.

I look forward to ever-increasing organizational success, and I'm proud to share this Annual Report with you.

Regards,

**Jenny Kopach**

Executive Director  
 SVP Marketing Communications

# By The Numbers



Just like an athletic team, **Science Olympiad clubs are coached by teachers, improved by mentors and filled with top talent.**

Each fall, Science Olympiad releases new rules and teams tackle the 23 STEM-aligned events in student pairs, building devices for on-site testing, studying for core knowledge challenges and preparing for rigorous hands-on lab experiments. All Science Olympiad events are aligned to the Next Generation Science Standards (NGSS), allowing teachers to extend their curriculum with engaged learners in an after-school setting.

## Science Olympiad: The Basics

**DIVISION B**  
(Grades 6-9)

**DIVISION C**  
(Grades 9-12)

**8K**   
Teams in 2019

**15**   
Members on a Team

**450** Invitational, Regional,  
State and National  
Tournaments

**23** Events in  
Each Division

**50**   
State Organizations





# Girls in STEM



"You have all heard the statistics, that women are under-represented in STEM, especially in industries like engineering, with even fewer minority women pursuing STEM careers. But ever since Science Olympiad was founded, **we've been inspiring women to shatter the glass ceiling of STEM**, and to overturn those negative statistics."

**Dr. Gerard Putz**  
Science Olympiad President and Co-Founder

"I believe Science Olympiad is the **best cross-gender team-based STEM outreach program in the nation**. In practices and competitions, I see young girls develop courage and independence, realizing the power they have to solve problems and support their team equal to or better than their peers."

**Enrica Quartini**  
National Event Supervisor  
University of Texas Institute for Geophysics Researcher

## Girls in STEM: By the Numbers

While women represent only 1 of every 4 STEM jobs, girls represent

# 50%

of Science Olympiad participants



On average

# 40%

of Science Olympiad National Tournament medalists are girls

**WOMEN HOLD MORE THAN HALF** of Science Olympiad's staff, board, advisory committee, state director and rules committee leadership positions



# Workforce



"Science Olympiad led me to explore new avenues of science and engineering, but most importantly, I built leadership skills, the ability to work on a team, and better problem-solving approaches. The effects are material when I work on group projects or need to cooperate with other people."

**Darren Chang**  
Cornell University

"We need these Science Olympiad students; this is the future of our country, this is the future of our company, the future of our economy. These students are going to be running our companies and moving us into the next generation of technology. It's a great opportunity for us to invest in our future."

**R.D. Parpart**  
Team Leader, Steelworker for the Future, ArcelorMittal



Employment in science, technology, engineering and math occupations has grown 79% since 1990, from 9.7 million to 17.3 million today, outpacing overall U.S. job growth. In 2018, 71% of all jobs required STEM skills, according to the Pew Research Center.

In 2018,

# 71%

of all jobs required  
STEM skills

**MORE THAN 3 IN 4  
FEMALE STUDENTS  
WHO HAVE A MENTOR**  
feel they will be successful  
pursuing a STEM career.



Through rigorous, multi-disciplinary events touching every letter in STEM, Science Olympiad lights pathways to apprenticeships, college and careers while at the same time developing essential employability skills. According to a LinkedIn survey of hiring managers, the three top soft skills in new employees are communication, organization and teamwork.

STEM extracurricular programs like Science Olympiad provide young adults with a glimpse into the future by providing opportunities for mentoring, achieving results: More than 3 in 4 female students interested in STEM careers who have a mentor feel they will be successful pursuing a STEM career.



# Alumni



The Science Olympiad Alumni Network is comprised of past participants of the program, stretching back to when the national organization first started registering teams in 1984-1985. **Each year nearly 240,000 students join Science Olympiad clubs**, adding to the millions with a SciOly background who are entrepreneurs, innovators and leaders in government, industry and academia.

## In a recent Alumni Task Force Survey:

**48%** said they are in contact with or mentoring a local Science Olympiad team

**73%** said they are currently volunteering with a local Science Olympiad tournament

**87%** said they intend to continue volunteering with Science Olympiad

**92%** said they want to network with other Science Olympiad alumni

"Write It Do It and Experimental Design help me every day as a scientist. They taught me how to write my methods sections precisely so that others can replicate my findings. Science Olympiad showed me I wanted to be a scientist, and now, I am pursuing that goal in graduate school where I've received a National Science Foundation Graduate Research Fellowship."

### Jordann Brandner

Kansas State University Graduate Research Assistant

"Recently, past competitors have started to realize that they have more in common than just memories. They are an alumni network, and they are bringing together the enthusiasm they once had for competition in a new role as active Science Olympiad alumni. I have been inspired by the way that so many alumni have created a new arena to provide elite tournament experiences, networking opportunities, and college exposure to a wider population of students."

### Amanda Baker

Scientific American Budding Scientist writer

"Science Olympiad has taught me to think in engineering design and what it means to be a part of a true team. The way most people feel about sports is how I feel about Science Olympiad. It's a huge part of who I am."

### Jessie Vander

Sylvain Labs, Brand Strategist



# Urban Schools Initiative

## Urban Schools Initiative: The Numbers

More than

**12K**   
Students

&

**900**   
Coaches

in Chicago Public Schools  
have participated in the  
Urban Schools Initiative  
since 2007

In 2006, the Science Olympiad Executive Board determined that increasing minority participation was a program priority, and the first Urban Schools Initiative (USI) was founded in the Chicago Public Schools. Since then, programs have been founded in:

Austin, TX	Los Angeles, CA
Baltimore, MD	Rockford, IL
Birmingham, AL	Rural Islands, Hawaii
Charleston, SC	Philadelphia, PA
Chicago, IL	San Francisco Bay Area, CA
Dover, DE	Washington, DC
Gary, IN	



But the STEM diversity gap persists: only 5% of engineers are Black; 8% are Hispanic. In computer science, both Blacks and Hispanics represent just 7% of employees. Science Olympiad is committed to closing these gaps.

With grants from industry partners and oversight from State Science Olympiad chapters, schools with underserved populations can experience hands-on STEM competition, career prep and standards-aligned teacher training. Perfect for employee mentoring, community outreach and workforce development programs. In many cities, Science Olympiad Alumni Network campus groups are inviting Urban Schools Initiative teams to their invitational tournaments, hosting special enrichment workshops, setting up sister-school peer networks and assisting with materials and resources.



# National Tournament

Science Olympiad teams are often celebrated for their STEM success by local politicians, school boards and community partners. **United States Senator Gary Peters from Michigan congratulated the Pioneer High School Science Olympiad team from Ann Arbor** by calling out their hard work and dedication. The team is pictured carrying in their banner at the Opening Ceremony Parade of States.



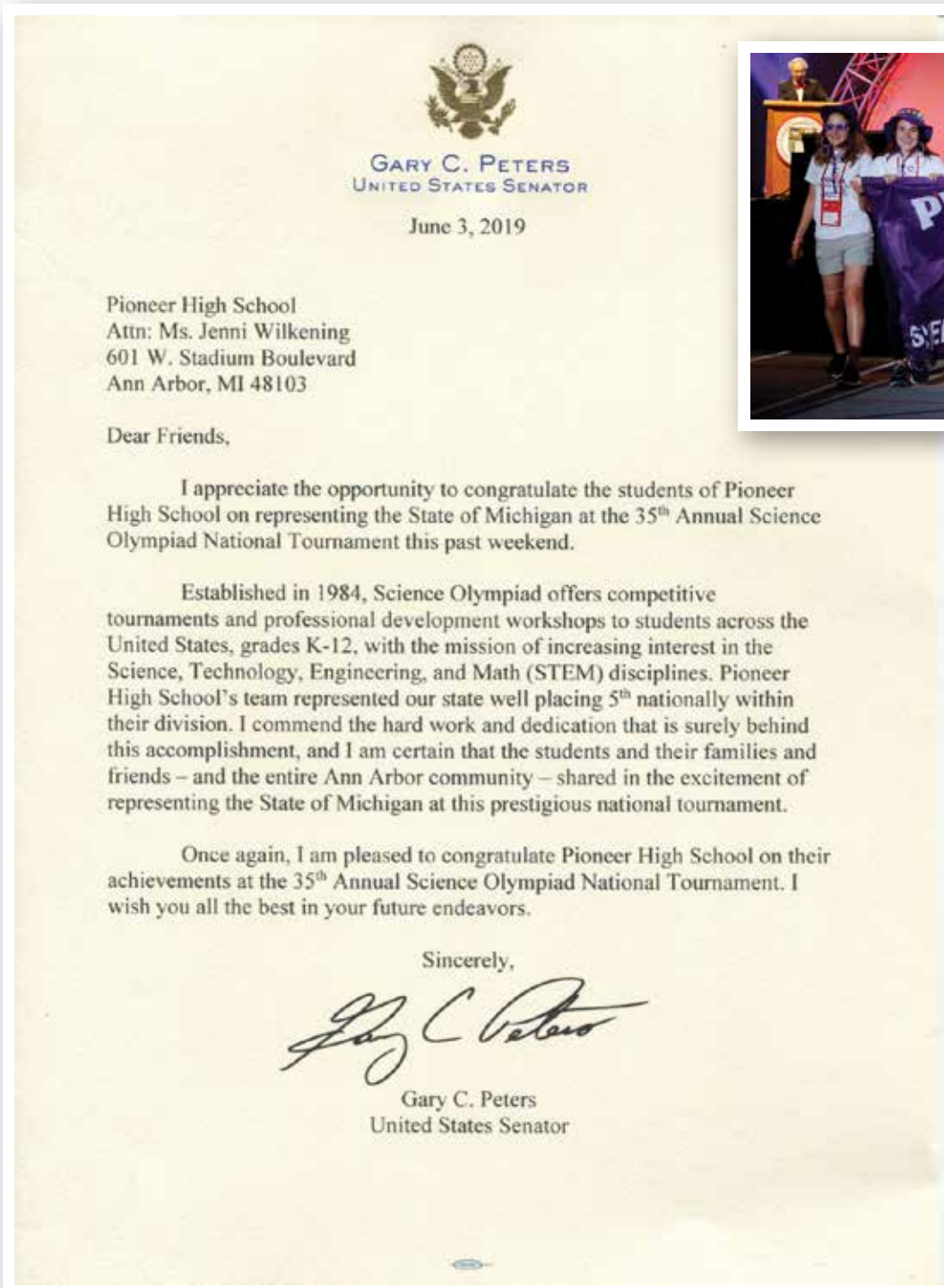
Keynote speaker Grant Imahara of MythBusters fame wows the crowd at the 35th Annual National Tournament hosted by Cornell University.

The Science Olympiad National Tournament is the highlight of the competitive season, with 120 champion teams and nearly 2,000 students from all 50 states demonstrating their STEM skills at this annual event. Program alums cite the experience of traveling as a team to Science Olympiad tournaments as one of the main reasons they became interested in a college campus and STEM career.

At the tournament, teams vie for medals in 50 different STEM events, with trophies going to the top 10 winners in each Division. Science Olympiad also honors educators with the Coaching Excellence Award, supports team sportsmanship with the annual Spirit Award and recognizes up-and-coming performances with the Team Enterprise Award. Other prizes include cash scholarships, full-ride and partial tuition awards and trips to professional conferences.



For the past eight years, a Global Ambassador Team from Japan has competed against US teams as guests at the Science Olympiad National Tournament, forging bonds of international friendship and demonstrating a shared love of science with their American peers. Science Olympiad and the Japan Science and Technology Agency have a cooperative agreement to explore the best ways to engage more boys and girls in hands-on science.





# Elementary



Science Olympiad's Division A (Grades K-6) allows students, teachers and families an opportunity to explore the world of STEM in classroom, club, community or competitive settings. Signature Science Olympiad events like **Mystery Powders, Gummi Bear Long Jump, Straw Towers, Metric Mastery and Don't Bug Me** bring core science concepts to life using everyday materials. Designed to be inclusive, welcoming and accessible to novice learners and educators, the Common Core and Next Generation Science Standards-aligned Elementary Science Olympiad curriculum will fit the needs of any school, after-school program or library.



**Elementary**  
SCIENCEOLYMPIAD



**1800**  
There are competitive Division A Science Olympiad teams in 12 states

The average per-student cost for materials and supplies of an Elementary Science Olympiad community event is  
**LESS THAN TWO DOLLARS**

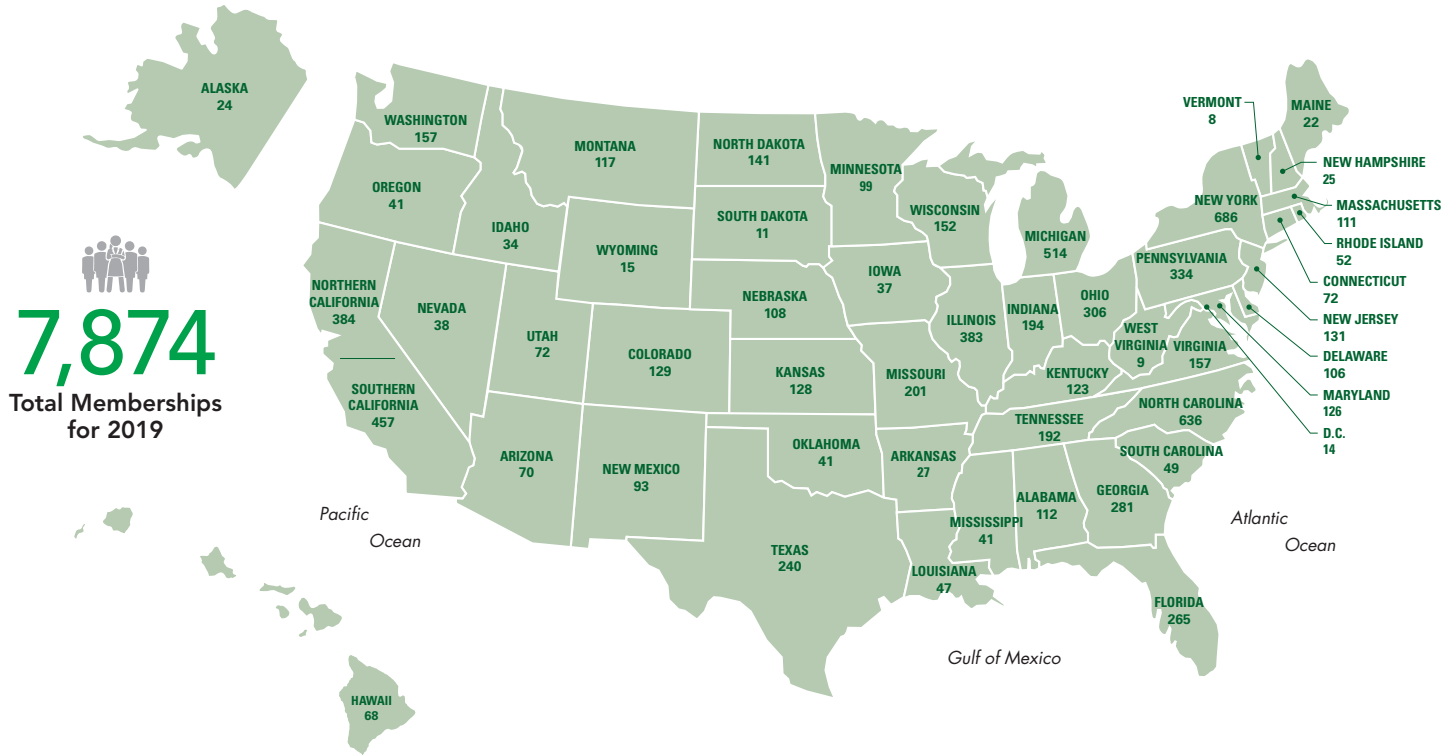


**10K+**  
There are elementary schools hosting PTA, community or school-organized Fun Day, Fun Night or Competitive Tournaments in the US

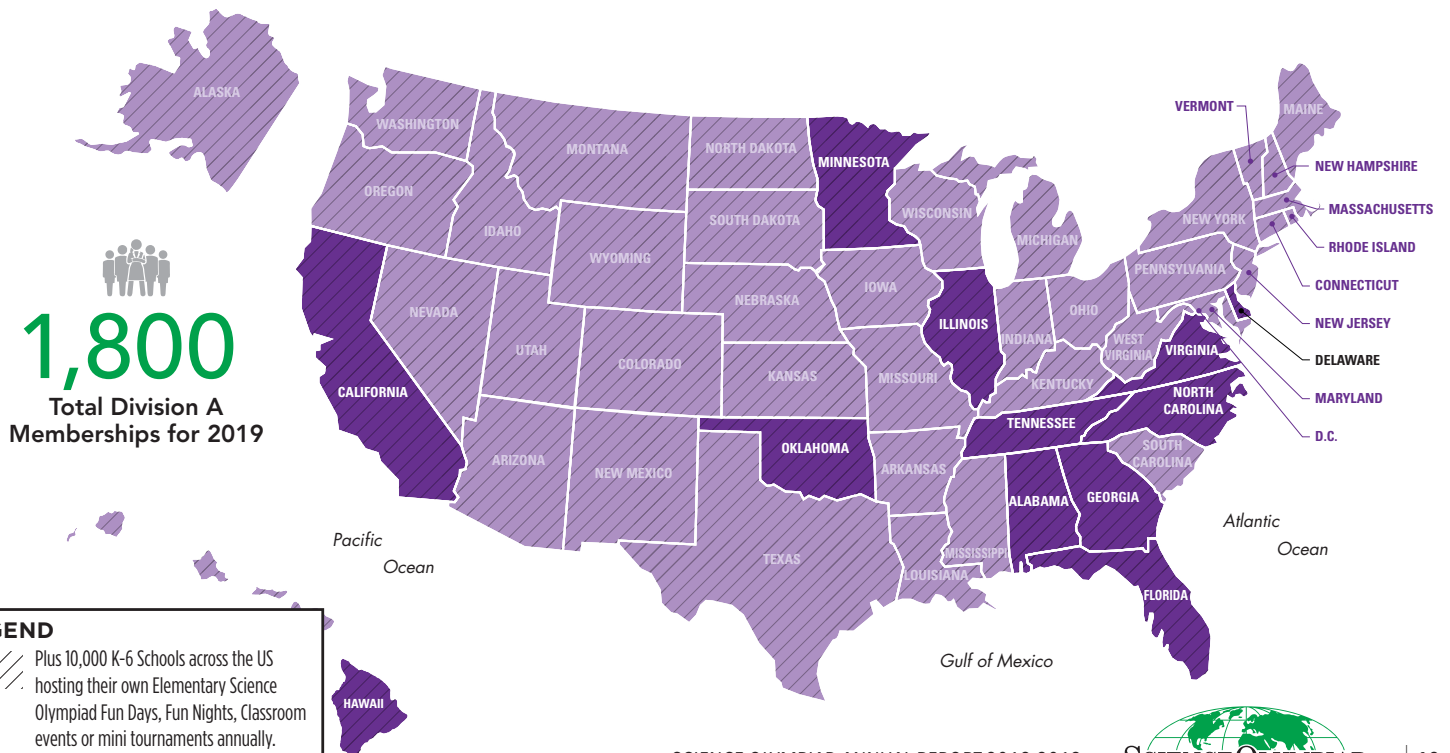


# Maps

## Number of Science Olympiad Memberships in Secondary Schools Per State, 2019



## States with Science Olympiad Memberships in Elementary Schools, 2019





# Program Service

Science Olympiad's national office works with a volunteer force to bring K-12 students the best team STEM experience in the US every year, comprised of:

## Content Development

Science Olympiad Rules Committees and Chairs develop Division B and C Rules Manuals containing 46 STEM events annually, which are the foundation for all workshops and tournaments each year, and also produce free resources for the Science Olympiad website

## State Chapter Leadership

Volunteer, part-time and full-time State Directors from K-12 education, universities and industry coordinate all Science Olympiad activities in all 50 states

## Science Olympiad Tournament Supervision

More than 450 Invitational, Regional, State and National Tournaments require up to 300 volunteers each; that equals 1.35M hours of volunteer service at tournaments valued at \$34.3 million dollars annually, according to Independent Sector

## Professional Development for Teachers

Science Olympiad experts run and staff more than 50 regional, state and national workshops, including the annual Science Olympiad Summer Institute and National Science Teaching Association (NSTA) sessions

## Public Outreach

Including Elementary Science Olympiad tournaments and Fun Nights, community events, summer camps and partner-hosted events like museum days

In addition to managing these efforts, Science Olympiad provides direct services to member schools and State Science Olympiad Chapters:

### To Schools:

- » Digital rules manuals for Divisions B and C
- » Sanctioned Invitational, Regional, State and National Tournaments
- » Free Educational Resources on the Science Olympiad Website including Rules Clarifications, FAQs and Score Sheets
- » Safety and Behavior-Governing Guidelines and Online Volunteer Training
- » Science Olympiad TV Videos on YouTube

### To State Chapters:

- » Annual State Directors Leadership and Event Supervisors Training Meetings
- » National Chapter and Club Liability Insurance
- » State Medals and Trophies
- » Directors Website including the Emergency Test Bank and Event Supervisor Resources
- » Public Relations, Marketing, Grant Writing and Sponsorship Materials
- » Tuition Awards, Prizes and Scholarships from National Sponsors
- » Non-profit Governance Assistance

# Key Personnel

## National Committees

### NATIONAL EXECUTIVE BOARD

**Steve Betza**

*Board Chair*  
Lockheed Martin, ret.

**Angela Davis**

*Board Vice Chair*  
Ohio State University

**Dr. Gerard Putz**

*Board Treasurer*  
Science Olympiad President and Co-Founder

**Sharon Putz**

*Board Secretary*  
Science Olympiad Executive  
Administrator

**Jennifer Kopach**

*Science Olympiad Executive Director*  
SVP Marketing Communications

**Peggy Vavalla**

DuPont Corporation, ret.

**Dr. Jon Pedersen**

*Dean, School of Education*  
University of South Carolina

**Renae Cubbin**

*VP Tax*  
CNH Industrial

**Jack Cairns**

*Board Member Emeritus*  
Science Olympiad Co-Founder

### ADVISORY COMMITTEE

**CeAnn Chalker**

*2017 Tournament Director*  
Wright State University

**Dr. Ralph Cordell**

*Centers for Disease Control*  
Georgia

**Jamie Cucinotta**

*2019 Tournament Director*  
New York

**Dr. Peter Hung**

*State Director*  
Southern California

**Steve Lovaas**

*2018 Tournament Director*  
Colorado State University

**Dr. Elizabeth Mulkerrin**

*Omaha Zoo Educ. Director*  
Nebraska

**Kelly Nissan**

*ArcelorMittal*  
Indiana

**Dr. Kelly Price**

*Forsyth County Schools*  
Georgia

**Fred Siegel**

*State Director*  
Washington, DC

**Joe Simmons**

*Ward's Science*  
Illinois

**Donna Young**

*NASA Educator*  
Arizona

### NATIONAL RULES COMMITTEE CHAIRS

**Karen Lancour**

*Life Personal & Social Science*

**Dr. Dusty Schroeder**

*Earth & Space Science*

**Dr. Alan Chalker**

*Physical Science*

**Linda Wozniowski**

*Chemistry*

**CeAnn Chalker**

*Technology & Engineering*

**Dan Nichols**

*Inquiry & Nature of Science*

## National Office Staff

Oakbrook Terrace, Illinois

**Dr. Gerard Putz**

*President and Co-Founder*

**Sharon Putz**

*Executive Administrator*

**Jennifer Kopach**

*Executive Director, SVP Marketing Communications*

**Deb Mendenhall**

*Business Manager*

**Dr. John Loehr**

*Director of STEM Education*

**Shari Haug**

*Elementary Coordinator*

**Graphic Design by:**

Toolbox, Inc.

**Website Design by:**

Xeno Media, Inc.

**Science Olympiad Store by:**

Continental Global Solutions, Ltd.

**Medals and Trophies by:**

Maxwell Medals, Inc.

**Video Production by:**

Equity Studios, Inc.

Two Trans Am Plaza Drive, Suite 310  
Oakbrook Terrace, Illinois 60181  
(630) 792-1251 phone (630) 792-1287 fax

[www.soinc.org](http://www.soinc.org)



# Financials

Since its founding in 1984 as an entrepreneurial non-profit organization with a single generous sponsor and a handful of dedicated state chapters, Science Olympiad has grown to a multi-partner, 50-state, multi-million-dollar enterprise. No well-functioning non-profit can exist, much less persist, without superior fiscal as well as program management.

Science Olympiad reports to a board that takes its fiscal responsibility role seriously, and we are proud that Science Olympiad has a 35-year history of income outpacing expenses. Science Olympiad operates like a lean start-up, and employees are cross-trained in several task areas. Overhead is kept low, and cost-cutting measures are constantly reviewed. One of the largest line items in the annual budget, the National Tournament, is consistently offset by major in-kind donations from university hosts in recognition of the value and prestige of the event. These savings, along with a healthy investment portfolio, have accrued into a fund balance that will ensure the longevity and future of Science Olympiad.

With three main sources of income – membership, contributions, and sales – Science Olympiad has a diversified revenue stream that serves as a foundation to pursue and fulfill its main mission: improving the STEM experience for students and teachers.

## Membership

A decentralized state chapter management plan that goes back to the founding has become a hallmark of Science Olympiad, allowing for local

independence while still operating in sync. With the nationally-developed rules, training and content as the playbook, the game is the same across the US. Each state chapter handles its own budget and collects funds from local teams who wish to participate in tournaments and workshops; \$60 of each state membership goes to the national office, one of the lowest fees for a STEM competition in the country, and unchanged for 20+ years.

## Contributions

Science Olympiad works with a variety of partners from academia, industry and government that help support the mission of improving STEM education; these sponsorships support mentoring and workforce development programs, Urban Schools Initiatives, content, resource production, scholarships and awards.

## Sales & Training

Sales revenue comes from educational materials in the Science Olympiad e-commerce Store, from the Science Olympiad Summer Institute and Elementary Science Olympiad workshops, and from sales of official Science Olympiad medals and trophies.

## Outside Review

For 24 straight years, Science Olympiad has received the Best in America rating from the Independent Charities of America agency, qualifying for the America's Best Charities program under the Combined Federal Campaign. In conjunction with our annual external audits and key performance indicators, these accolades underscore Science Olympiad's excellent financial health.

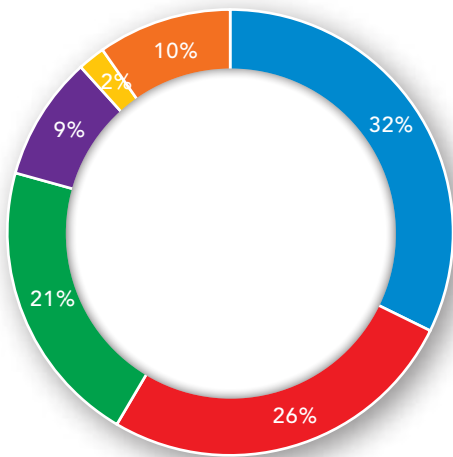
# Financials

## Expenses

Program Services/Wages/Benefits	\$663,616
Tournaments/Scholarships	\$539,235
Educational Resources/Shipping	\$427,980
Training	\$185,188
Investment and Professional Fees	\$40,735
Rent/Utilities/Supplies	\$199,744

**Total Expenses** **\$2,056,498**

*For the year ending September 30, 2018*



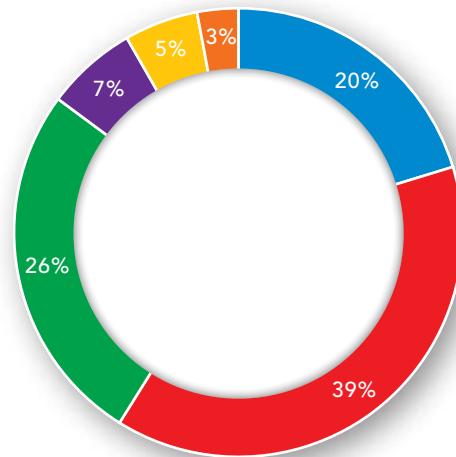
- Program Services/Wages/Benefits
- Tournaments/Scholarships
- Educational Resources/Shipping
- Training
- Investment and Professional Fees
- Rent/Utilities/Supplies

## Revenue

Memberships	\$446,287
Contribution/Scholarships	\$850,056
Educational Resources/Awards	\$577,948
Training	\$144,645
Interest/Dividends	\$117,253
Net Realized Gains on Investments	\$65,136

**Total Revenues** **\$2,201,325**

*For the year ending September 30, 2018*



- Memberships
- Contribution/Scholarships
- Educational Resources/Awards
- Training
- Interest/Dividends
- Net Realized Gains on Investments



# Sponsors

For the 2019-2020 tournament year, **Science Olympiad is privileged to have sponsors who are true partners in our mission.** Each of the corporations, associations and groups listed below have a vested interest in improving the quality of K-12 STEM education.

## PLATINUM SPONSORS



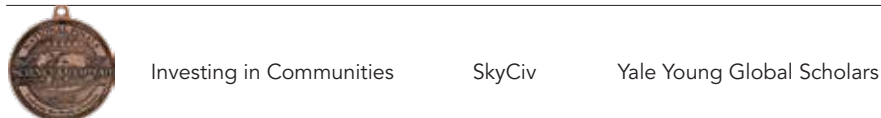
## GOLD SPONSORS



## SILVER SPONSORS



## BRONZE SPONSORS



## STRATEGIC PARTNERS



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## 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 [soinc.org](http://soinc.org).

## UPCOMING TOURNAMENTS

2020 **NC STATE UNIVERSITY**      2021 **ASU Arizona State University**



## 2020 DIGITAL ONLINE STORE!

Please visit [store.soinc.org](http://store.soinc.org) to view the digital Division B and C Rules Manuals online for free and to order print and digital versions of CDs, DVDs, Test Packets and other educational materials you can use to prepare for Science Olympiad tournaments and classroom instruction.



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