

Oregon Science Olympiad New Coaches' Workshop

11.03.25

Ashley da Silva



Exploring the World of Science

What is Science Olympiad?

[Link to Oregon's Website](#)

[Link to National Organization Website](#)

Science Olympiad is a national program that develops a variety of tournament events in science & engineering. They also help plan the national tournament.

Oregon Science Olympiad is the state organization that organizes MS and HS teams and prepares the state tournament.

Science Olympiad Season

Here is a Timeline Typical of Many Teams:

September	October	November	December	January	February	March - April
Decide to have a team	Recruit students, volunteers, coaches	Organize team; decide events	Have students able to work over break	National Invitational Oregon SO Registration Deadline	Practice tests, including trials for build events	Tournament itself

Where are you on this timeline?

What obstacles do you face right now?

September	October	November	December	January	February	March - April
Decide to have a team	Recruit students, volunteers, coaches	Organize team; decide events	Have students able to work over break	National Invitational Oregon SO Registration Deadline	Practice tests, including trials for build events	State Tournament Saturday, March 14

Role of the Coach

Should be a faculty member at student's school (because of student privacy / medical needs)

A parent or parents can be assistant coach(es)

If this is not possible, there is an extra form for the school to sign.

- **Help students obtain the money, practice space, and materials**
 - **Fill out tournament paperwork**
 - **Assist team captains with coordinating necessary forms**
 - **Provide supervision and food at tournament**
 - **Leave most roles to students**
-

Role of the Team Captain

[SO Student Advice](#)

- **Talk to classmates at the beginning of the season regarding what Scioly is and time commitment**
 - **Decides teammates for upcoming season (through tryout results, prior STEM experience, etc.)**
 - **Organize weekly meetings for studying & building**
 - **Play key role in organizing events of teammates**
 - **Communicate with the coach about what teammates need**
 - **Help coach coordinate team at tournament**
-

Team Members

B Division = Middle School

C Division = High School

- **1-15 students from same school**
- **Special rules from national organization linked here**
- **You do not have to have membership finalized before registration**



Good Ideas at Practices

Consider:

- ❖ Having smaller groups of students meet (eg, those doing lab events)
- ❖ Asking for community locations vs. only at schools
- ❖ Virtual prep, like Zoom meetings or Discord

Frequency of Practices

Science Olympiad recommends **weekly practices** after students have been assigned to events

- ❖ Provide access to tools & tech
- ❖ Monitor progress & solve problems
- ❖ Inform students of available practice opportunities, help them find practice tests, videos, etc.
- ❖ High school students often can organize themselves to ___practice

Who is on your team so far and/or what are your ideas for recruiting members?

Who is supporting your team and/or who might be available to help?

What is your practice schedule like?

About the Tournament

Saturday, March 14, at University of Portland

❖ Tournament Schedule Posted at oregonscienceolympiad.org

- ❖ When assigning students to events, think about...
 - who is interested in each topic -- let students have fun :)
 - whether you want a high team score -- if so, joining more events is better -- or want to aim only for event awards
 - schedule conflicts: please note that any student team member may attend a build event device testing and that students outside of the official partnership/trio can help with preparation for other events



Types of Events

“Knowledge” Events:

Teams complete a written test, which may involve specimens to identify, calculations, a slideshow, and/or limited hands-on work.

“Build” or Engineering Events:

Teams create structures, vehicles, or devices prior to the competition and have them tested at the competition.

“Lab” Events:

Teams complete hands-on procedures on-site using materials that are provided and/or brought by the team members.

Build Event Examples

ROBOT
TOUR
2025
SEASON



HELICOPTER

2025
SEASON



Special Challenges for Build Events

- ❖ understanding the rules -- they are complex, and not following them affects scoring a lot
- ❖ testing and collecting data
 - many events give points for a log of observations
 - many devices must be customized to fit parameters on-site

- ❖ Events that fit this category:
 - Boomilever (B/C)
 - Hovercraft (B/C)
 - Electric Vehicle (C) and Scrambler (B)
 - Helicopter (B/C)
 - Bungee Drop (C)
 - Mission Possible (B) and Robot Tour (C)
 - Machines (B/C) - also has knowledge component

Which build events are your students most interested in?

Which seem the most confusing and/or logistically challenging?

Special Challenges for Lab Events

- ❖ assembling a bin of materials / ensuring safety
 - calculator requirements vary, see Rules Manual
- ❖ practice with typical lab activities
 - students should be able to follow and/or devise their own procedures and interpret the results quickly

- ❖ Events that fit this category:
 - Chemistry Lab (C), Crime Busters (B) and Forensics (C)
 - Experimental Design (B/C)
 - Codebusters (B/C)
 - Write It, Do It (B) and Metric Mastery (B)
 - Water Quality (B/C) -- lab testing of device made
 - Potions & Poisons (B) & Materials Science (C) - both have lab components

Lab Event Examples

SCIENCE OLYMPIAD: WRITE IT DO IT

Episode 1: Introduction & Basic Rules



Which lab events are your students most interested in?

Which seem the most confusing and/or logistically challenging?

Special Challenges for Knowledge Events

- ❖ organizing notes into a binder or usable notes page
 - partners may use copies of the same resource to avoid sharing OR have resources that add up to the allowed notes
 - check calculator rules for each event in Rules Manual
- ❖ take practice test using the notes to build fluency + revise them
 - be able to interpret images, graphs, science data sets

❖ Events that fit this category:

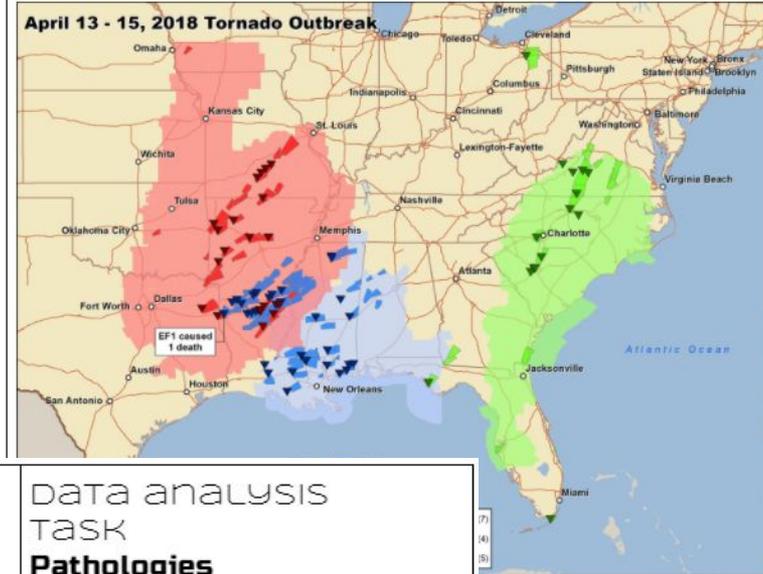
- Anatomy & Physiology (BC) and Entomology (BC)
- Heredity (B) and Designer Genes (C), Disease Detectives (BC)
- Solar System (B) and Astronomy (C), Meteorology (B)
- Remote Sensing (BC), Dynamic Planet: Oceanography (BC)
- Machines (B/C) - also has device building
- Potions & Poisons (B) & Materials Science (C) -- also lab

Knowledge Event Examples

METEOROLOGY STATION D

We can answer questions about the origin, life cycle, and hazards caused by tornadoes.

An outbreak of 73 tornadoes occurred on April 13 - 15, 2018, in several states within the southeastern United States. While the only fatality was from an EF1 tornado, 11 EF2 tornadoes formed, including one in Virginia that strengthened to an EF3.



Confirmed tornadoes by Enhanced Fujita rating

EFU	EF0	EF1	EF2	EF3	EF4	EF5	Total
0	22	40	10	1	0	0	73

anatomy station E

We can analyze data related to pathologies of the integumentary, skeletal, and muscular systems.

Data analysis Task Pathologies



Which knowledge events are your students most interested in?

Which seem the most confusing and/or logistically challenging?