



Exploring the World of Science

Science Olympiad



2023-2024 Information

If you are interested in Science, Technology, Engineering and Mathematics (S.T.E.M) or are just curious about the world around you, Science Olympiad (SO) may be right for you!

About The Club

We study, build devices, and conduct lab experiments to prepare for competitions in twenty-three science events against other schools. A brief description of each event is attached.

Program Schedule

The program will begin in November. SO classes are held every day from Monday to Friday, but each event is taught only once per week. The students decide which day(s) of the week that they want to attend, and are placed into events coached that day. Students will meet from 2:45-4:15 pm on their assigned days. The program will end in April/May after the State Tournament.

The Competitions

The table below shows the *tentative* tournament schedule. It may change and other tournament dates may be added. All competitions are on Saturdays. Parents are highly encouraged to attend to help supervise students and to bring them to their events. Some of the build events allow spectators.

Date	Event
Feb 17, 2024	University of Michigan Invitational
Feb 24, 2024	Holt High School Invitational
March 16, 2024	Western Michigan University (Regional Tournament)
May 4, 2024	Western Michigan University (State Tournament)

Cost

There is a \$20 fee to participate in this club. This fee will be waived if this is a hardship for your family. Please contact Mrs. Hake if this is the case. This fee covers a club T-Shirt and supplies associated with different events. Please fill out the google forms (email Paula.m.clare@gmail.com for access) and send in fee with the attached signed permission forms by Wednesday, Oct. 18th. Please make checks payable to PPS.

Scoring Team

All SO students will have an opportunity to compete at the invitational and regional competitions. At the regional competition, fifteen students will be placed on the "Scoring Team". Their scores, in the 23 events, will determine if WMS is invited to the state tournament. Selection for the scoring team is based on the student performance at the invitational events, as well as the ability to cover all 23 events with 15 students. Each student needs to be proficient in 3-4 events to be on the scoring team. To be eligible for the Scoring Team, the student will need a minimum of 2 practice days/week. Only the 15 scoring team students will be able to attend the state tournament.

Questions?

Head Coach - Paula Clare
Email - paula.m.clare@gmail.com



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Permission Slip 2023-2024

Please Write Clearly!

Student Name: _____

My child has permission to participate in the Science Olympiad Club for the 2023-2024 season.

Parent's Name: _____

Parent's signature: _____ Date: _____

Parent Volunteers

We need parent volunteers this year. If you are interested in coaching an event, please provide your contact information below.

Name: _____ Email: _____

If you can help, please indicate below which event(s) interests you and which day(s) of the week you are available.

Events/days _____

We will also need parents to help drive, chaperone, and provide food at the competitions. Details will be provided closer to the competition dates.

Please fill out Google Forms (parent and student) and turn in completed permission forms, along with \$20 fee, to main office or Mrs. Hake by October 18, 2023



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Air Trajectory - Design, construct and calibrate a device capable of launching projectiles onto a target. Competition - Operate device to shoot at target.

Anatomy & Physiology - Understand the anatomy and physiology of the human Cardiovascular, Lymphatic and Excretory systems. Competition - written test.

Can't Judge a Powder – Students will test and characterize one pure substance and then, based only on data they collect, answer a series of questions about that substance. Competition – Lab event

Codebusters – Teams will code and decode encrypted messages using various cryptanalysis techniques. Math experts needed! Competition – Decode encrypted messages

Crime Busters – Learn to differentiate between various white powders, liquids and fibers, among other possible crime scene evidence. Competition - Given a scenario, evidence, and possible suspects, perform a series of tests that will be used to help solve a crime.

Disease Detectives – Develop and use investigative skills to study disease, injury, disability and health in populations of people. Competition – Written Test.

Dynamic Planet – Teams will demonstrate an understanding of the large-scale processes affecting the structure of Earth's crust. Earthquakes! Volcanoes! Plate tectonics! Competition – Written Test.

Ecology - Learn about ecology and adaptations in select North American biomes. Competition - Written Test.

Experimental Design - Design, conduct, and report the findings of an experiment. Learn to write a good lab report. Competition – Design, conduct and report the findings of an experiment conducted during the competition.

Fast Facts - Teams will fill in a grid of terms that begin with a given letter to match given science categories. Competition – Written test.

Flight – Teams will design, construct and test free flight rubber-powered aircraft to achieve maximum time aloft. Competition - Test your plane(s). Max time in air wins.

Forestry – Learn about general forestry and the trees found in the United States that are on the 2024 Official Science Olympiad National Tree List. Competition – Written Test

Fossils - Learn to identify and classify fossils, as well as increase your knowledge of ancient life. Competition - specimen identification and written test.

Meteorology - Learn about Severe Weather and Storms, and the factors that contribute to, cause and influence them. Competition – Written Test.



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Microbe Mission - Learn about bacteria, viruses, prions and other organisms, and how to identify, culture, and describe them. Competition - lab stations and written test.

Optics - Learn about the principles of geometric and physical optics. Practice positioning mirrors to direct a laser beam towards a target. Competition - mirror positioning exercise and written test.

Reach for the Stars - Learn about the formation and early-stage evolution of stars and their observation across the electromagnetic spectrum. Identify constellations. Competition - written test.

Road Scholar – Learn how to interpret various maps and satellite images. Competition – Written Test using maps.

Roller Coaster – Teams design, build and test a Roller Coaster track to guide a ball/sphere that uses gravitational potential energy as its sole means of propulsion to travel as close as possible to a target time. Competition – Operate your roller coaster.

Tower - Design and build a tower out of balsa wood meeting certain requirements. Competition - Test the Tower

Wheeled Vehicle – Teams must design, build and test one Vehicle that uses non-metallc, elastic material as its sole means of propulsion to travel a distance as quickly and accurately as possible. Competition – Test the wheeled vehicle.

Wind Power - Learn about principles of alternative energy and build a blade assembly device designed to capture wind power. Competition - written test and blade device test.

Write It/Do It - One person writes a description of an object and the other person tries to construct it. Competition – One person writes a description of an object, and the partner uses the description to build a replica.



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Code of Conduct Agreement

Portage West Middle School

Science Olympiad (“SO”) is a school endorsed program and all rules of West Middle School and the Portage Public School District are to be adhered to. Violation of any school rules including, but not limited to: drugs, alcohol, violence, intimidation, harassment, profanity, abusive language or property damage will result in disciplinary action and/or permanent exclusion from the Science Olympiad team. These expectations apply to students, siblings, friends, parents and any visitors conducting any activity; online or in person, related to Science Olympiad. In addition, both student and parent agree to be responsible for any damage done, accidentally or purposefully, during the competition or coaching sessions.

Student Agreement:

Students will participate consistently in practices, have a positive, encouraging attitude, be willing to build or study and test for any event regardless of interest, and listen to instruction from coaches. Students will be respectful towards their coaches and teammates. Students may be required to participate in events they are not interested in, to help the team succeed. This is a team activity. Students are responsible to help advance the team, not just their own interests.

Parental Agreement:

Science Olympiad is intended to provide a fun, encouraging and exciting outlet for students to enjoy the “STEM” disciplines. It is all about the students, not parents. It is the coaches’ goal to assemble the best teams possible for competitions. Placement on teams depends on many factors, such as, but not limited to: student seniority in SO, consistent practice participation, student abilities and skills, and availability for competitions. Head coaches are supported by West Middle School Staff and have full discretion to place students on either scoring or non-scoring teams as they see fit. There is no guarantee of student participation in meets or specific events. By agreeing to participate in Science Olympiad, parents will respect coaches’ decisions regarding student’s placement on teams.

A signed Code of Conduct Agreement must be completed by both the student, and all appropriate parents or guardians, before any student may participate in any event, meet or practice for Science Olympiad.

Student’s signature

Date

Parents’ signature

Date