



2024-2025 MSO Event Descriptions Division C High School – Eastern MD

Air Trajectory - In this build event, teams will design and construct a device that can launch projectiles at a target.

Anatomy & Physiology - In this event, teams will answer questions about the integumentary, muscular, and skeletal systems of the human body.

Astronomy – A test event where teams will be assessed on their understanding of stellar evolution, focusing on star formation and exoplanets.

Bungee Drop - Teams will design an elastic cord to drop a mass as close as possible to, but without touching, a landing surface.

Chem Lab – In this lab event, teams will complete tasks and answer questions focused on chemistry concepts like equilibrium and chemical reactions/stoichiometry

Codebusters - In this test event, teams will cryptanalyze and decode encrypted messages using a variety of modern and historical techniques and ciphers.

Disease Detectives – A test event where teams will use investigative skills for the study of disease, injury, health, and disability in groups of people.

Dynamic Planet – In this event, teams will be tested on their understanding of the large-scale processes related to the Earth's cryosphere, focusing on glaciers.

Ecology - In this event, teams will answer questions relating to the ecology and adaptations of North America, focusing on deserts and grasslands.

Electric Vehicle - Teams will design, build, and test a vehicle powered by electrical energy that travels as quickly as possible and stops close to a Target Point.

Entomology - Teams will classify insects and answer questions about the effects of various insect species on the economy and human health.

Experimental Design – In this lab event, teams will design, conduct, and report the results of a scientific experiment from start to finish in a limited time frame.

Helicopter - In this engineering challenge event, teams will design, build, and test free-flight rubber-powered helicopters that maximize their time in the air.

Forensics – In this lab event, teams will solve a mock crime scene scenario by analyzing data and performing tests on provided evidence.

Fossils - Teams will be tested on their abilities to identify and classify fossils while completing tasks relating to interpreting past environments and ecosystems, evolutionary relationships, and using fossils to date rock units.

Geologic Mapping - Teams will be tested on their understanding of the construction and use of topographic maps, geologic maps, and cross sections.



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Materials Science - Teams will complete lab activities and answer a series of questions related to the materials science of ceramics with an emphasis on chemical and crystalline structure, and behavior.

Microbe Mission - Teams will be tested on their knowledge of and ability to solve problems and interpret data pertaining to microbes.

Optics - In this event, teams will participate in activity involving positioning mirrors to direct a light beam towards a target and complete a test on the principles of geometric and physical optics.

Robot Tour - In this engineering event, teams will design and build a robotic vehicle to navigate a track and reach a target in a set amount of time.

Tower - In this event, teams design and build a tower that meets design requirements and achieves the highest structural efficiency.

Wind Power - In this event, teams will need to build a blade assembly device designed to capture and use wind power and then complete a test on the principles of alternative energy.

Write It/Do It - In this event, one team member will write a description of an object and how to build it. The other team member will attempt to recreate the object using only the written description.