2025 Division B Event Descriptions (Grades 6 – 9)
Idaho Science Olympiad at BSU April 26, 2025
www.idahoscioly.org

AIR TRAJECTORY Prior to the competition, teams will design, construct, and calibrate a single device capable of launching projectiles onto a target and collect data regarding device parameters and performance.
ANATOMY AND PHYSIOLOGY Participants will be assessed on their understanding of the anatomy and physiology of the human Integumentary, Muscular, and Skeletal systems.
CODEBUSTERS Teams will cryptanalyze and decode encrypted messages using cryptanalysis techniques for historical and modern advanced ciphers.
CRIME BUSTERS Given a scenario, a collection of evidence, & possible suspects, students will perform a series of tests. Test results along with other evidence will be used to solve a crime and answer questions.
DISEASE DETECTIVES Participants will use investigative skills in the scientific study of disease, injury, health and disability in populations or groups of people.
DYNAMIC PLANET Participants will demonstrate an understanding of the processes involving the cryosphere of the Earth including glaciers and other ice formations and processes.
ECOLOGY Participants will answer questions involving content knowledge and process skills in the area of ecology and adaptations in featured North American biomes.
ENTOMOLOGY Students will be asked to identify insects and selected immature insects by order and family, answer questions about insects, and use or construct a dichotomous key.
EXPERIMENTAL DESIGN This event will determine a participant's ability to design, conduct and report the findings of an experiment entirely on-site.
FOSSILS Teams identify and classify fossils and demonstrate their knowledge of ancient life. Tasks will be related to interpretation of past environments and ecosystems, adaptations, evolutionary relationships, and the use of fossils in dating and correlating rock units.
HELICOPTER Prior to the tournament, teams will construct, collect data on test flights, analyze and optimize a free flight rubber-powered helicopter to achieve maximum time aloft.
METEOROLOGY Participants will use scientific process skills involving qualitative and quantitative analyses to demonstrate an understanding of the factors that influence world climate and climate change through the interpretation of climatological data, graphs, charts and images.
METRIC MASTERY Teams will estimate and then measure properties of identical objects including mass, area, volume, density, force, distance, time, and temperature. Teams will also perform metric unit conversions.
MICROBE MISSION Teams will answer questions, solve problems and analyze data pertaining to microbes.
MISSION POSSIBLE Prior to the competition, participants design, build, test, and document a Rube Goldberg®- like Device that completes required Start and Final Actions through a series of specific actions.
OPTICS Teams must participate in an activity involving positioning mirrors to direct a laser beam towards a target and are tested on their knowledge of geometric and physical optics.
POTIONS AND POISONS This event is about chemical properties and effects of specified toxic and therapeutic chemical substances, with a focus on household and environmental toxins or poisons.
REACH FOR THE STARS Participants will demonstrate an understanding of late-stage stellar evolution and stellar remnants, and their observation across the electromagnetic spectrum.
ROAD SCHOLAR Participants will answer interpretive questions that may use one or more state highway maps, USGS topographic maps, Internet-generated maps, a road atlas or satellite/aerial images.
SCRAMBLER Teams design, build, and test a mechanical device, which uses the energy from a falling mass to transport an egg along a track as quickly as possible and stop as close to the center of a Terminal Barrier without breaking the egg.
TOWER Teams will design and build a Tower (Structure) meeting requirements specified in these rules to achieve the highest structural efficiency.
WIND POWER Teams construct a blade assembly device prior to the tournament that is designed to capture wind power and complete a written test on the principles of alternative energy.
WRITE IT DO IT One student will write a description of an object and how to build it, and then the other student will attempt to construct the object from this description.

2025 Division C Event Descriptions (Grades 9 – 12)
Idaho Science Olympiad at BSU April 26th, 2025
www.idahoscioly.org

AIR TRAJECTORY Prior to the competition, teams will design, construct, and calibrate a single device capable of launching projectiles onto a target and collect data regarding device parameters and performance.
ANATOMY AND PHYSIOLOGY Participants will be assessed on their understanding of the anatomy and physiology for the human Integumentary, Muscular, and Skeletal systems.
ASTRONOMY Teams will demonstrate an understanding of Stellar Evolution: Star Formation & Exoplanets.
BUNGEE DROP Each team will design one elastic cord to conduct two separate drops at a given height(s) and attempt to get a drop mass, placed in a bottle, as close as possible to, but without touching, a landing surface.
CHEMISTRY LAB Teams will compete in one or more tasks and answer a series of questions involving the scientific process of chemistry focused on the areas of equilibrium and chemical reactions/stoichiometry.
CODEBUSTERS Teams will cryptanalyze and decode encrypted messages using cryptanalysis techniques for historical and modern advanced ciphers.
DISEASE DETECTIVES Students will use investigative skills in the scientific study of disease, injury, health and disability in populations or groups of people.
DYNAMIC PLANET Participants will demonstrate an understanding of the processes involving the cryosphere of the Earth including glaciers and other ice formations and processes.
ECOLOGY Students will answer questions involving content knowledge and process skills in the area of ecology and adaptations in featured North American biomes.
ELECTRIC VEHICLE Teams must design, build and test one vehicle that uses electrical energy as its sole means of propulsion to travel as quickly as possible and stop close to a Target Point.
ENTOMOLOGY Students will be asked to identify insects and selected immature insects by order and family, answer questions about insects, and use or construct a dichotomous key.
EXPERIMENTAL DESIGN This event will determine a participant's ability to design, conduct and report the findings of an experiment entirely on-site.
FORENSICS Given a scenario and some possible suspects, students will perform a series of tests. These tests, along with other evidence or test results, will be used to solve a crime.
FOSSILS Teams identify and classify fossils and demonstrate their knowledge of ancient life. Tasks will be related to interpretation of past environments and ecosystems, adaptations, evolutionary relationships, and the use of fossils in dating and correlating rock units.
GEOLOGIC MAPPING Teams will demonstrate understanding in the construction and use of topographic maps, geologic maps, and cross sections, and their use in forming interpretations regarding subsurface structures and past depositional environments on Earth and other planetary bodies.
HELICOPTER Prior to the tournament, teams will construct, collect data on test flights, analyze and optimize a free flight rubber-powered helicopter to achieve maximum time aloft.
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 answer questions, solve problems and analyze data pertaining to microbes.
OPTICS Teams must participate in an activity involving positioning mirrors to direct a laser beam towards a target and are tested on their knowledge of geometric and physical optics.
ROBOT TOUR Teams design, build, program and test one Robotic Vehicle to navigate a track to reach a target at a set amount of time as accurately and efficiently as possible.
TOWER Teams will design and build a Tower (Structure) meeting requirements specified in these rules to achieve the highest structural efficiency.
WIND POWER Teams construct a blade assembly device prior to the tournament that is designed to capture wind power and complete a written test on the principles of alternative energy.
WRITE IT DO IT One student will write a description of an object and how to build it, and then the other student will attempt to construct the object from the description.