Science Olympiad Event Descriptions (2016)

Air Trajectory (B/C) - Prior to the competition, teams will design, construct and calibrate a single device capable of launching projectiles into a target and collect data regarding device parameters and performance.

Anatomy & Physiology (B) - This event encompasses the anatomy and physiology of selected body systems, this year limited to skeletal, muscular and integumentary systems.

Anatomy & Physiology (C) - This event encompasses the anatomy and physiology of selected body systems, this year limited to skeletal, muscular and integumentary systems.

Astronomy (C) - Teams will demonstrate an understanding of the basic concepts of math and physics relating to stellar evolution and star and planet formation.

Bio-Process Lab (B) - A lab-oriented competition involving the fundamental science processes of a middle school life science/biology lab program.

Bottle Rocket (B) - Prior to the tournament, teams construct two rockets designed to stay aloft for the greatest amount of time.

Bridge Building (B/C) - Teams will design and build the lightest bridge with the highest structural efficiency that can span a given opening meeting the requirements given.

Cell Biology (C) - This event integrates content knowledge and process skills in the areas of cell biology and cellular biochemistry.

Chemistry Lab (C) - Teams will demonstrate chemistry laboratory skills related to kinetics, chemical reactions and stoichiometry.

Crave The Wave (B) - Competitors will demonstrate knowledge and process skills needed to solve problems and answer questions regarding all types and areas of waves and wave motion.

Crime Busters (B) - Teams will identify the perpetrators of a crime or crimes by using paper chromatography and analysis of unknown solids, liquids, and plastics found at the scene of a crime.

Disease Detectives (B/C) - Students will use investigative skills in the scientific study of disease, injury, health and disability in populations or groups of people with a focus on population growth.

Dynamic Planet (B/C) - Teams will use NGSS science and engineering practices to complete tasks related to physical and geological oceanography.

Elastic Launched Glider (B) - Students will design, build and test two elastic launched gliders capable of the maximum time aloft.

Electric Vehicle (C) - 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.

Experimental Design (B/C) - Given a set of unknown objects, teams will design, conduct, analyze and write-up an experiment.

Food Science (B) - Teams will study the science behind milk products and experiment with ingredients and physical parameters to produce and analyze these products.

Forensics (C) - Students will identify polymers, solids, fibers, and other materials in a crime scenario.

Fossils (B/C) - Teams will demonstrate their knowledge of ancient life by identifying fossils and answering questions about classification, habitat, ecologic relationships, behaviors, environmental adaptations and the use of fossils to date and correlate rock units.

Game On (C) - This event will determine a team's ability to design and build an original computer game incorporating the theme provided to them by the supervisor using the program Scratch.

GeoLogic Mapping (C) - Students will demonstrate understanding in the construction and use of topographic maps, geologic maps, cross sections and their use in forming interpretations regarding subsurface structures and geohazard risks.

Green Generation (B/C) - Students will answer questions involving the history and consequences of human impact on our environment, solutions to reversing trends and sustainability concepts.

Hydrogeology (C) - Students will manipulate a groundwater computer model, answer questions about groundwater concepts, and evaluate solutions, based on hydrogeological evidence, to reduce anthropogenic effects on groundwater.

Invasive Species (B/C) - This event will test student knowledge of invasive species in local and national ecosystems.

It's About Time (C) - Competitors may construct one non-electrical device to measure time intervals between 10 and 300 seconds and answer questions related to time.

Meteorology (B) - This event involves the use of process skills to demonstrate a multidisciplinary understanding of the Earth systems and anthropogenic factors that influence world climate.

Mission Possible (B) - Prior to the competition, participants will design, build, test and document a Rube Goldberg-like device that completes a required Final Task through an optional series of simple machines.

Picture This (B) - Team members will take turns drawing representations of a set of scientific terms/concepts (not scientists) while the other team member guesses the term being drawn.

Protein Modeling (C) - Students will use computer visualization and online resources to construct physical models of proteins.

Reach for the Stars (B) - Students will demonstrate an understanding of the properties and evolution of stars especially star forming regions and supernova remnants and their observation with different portions of the electromagnetic spectrum.

Road Scholar (B) - Teams 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.

Robot Arm (C) - Prior to the competition, teams must design, build, document and test one robotic device to move scoreable items.

Scrambler (B) - Competitors must 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.

Wind Power (B/C) - Teams will build a blade assembly that consists of any kind of propeller/pinwheel/rotor attached to a CD which will be used to capture wind power. Students will also be tested on their knowledge relating to alternative energy.

Wright Stuff (C) - Prior to the competition teams design, construct and test free flight rubber-powered monoplanes to achieve maximum time aloft.

Write It/Do It (B/C) - A technical writing exercise where students write a description of a contraption and other students will attempt to recreate it using only the written description.