

Division	Name	Description
Middle (trial in some regions)/High School	Amazing Mechatronics	Teams of students will develop a deep fundamental understanding of mechatronics, which is a multidisciplinary field of engineering at the intersection of mechanical engineering, electrical engineering and programming
Middle/High School	Anatomy & Physiology	Teams will be tested on their knowledge of anatomy and health concepts including the Nervous & Endocrine Systems and the Sense Organs.
High School	Astronomy	Teams will demonstrate an understanding of stellar evolution and Type Ia supernova events.
Middle/ High School	Bottle Rocket	Prior to the tournament, teams construct two rockets designed to stay aloft for the greatest amount of time.
High School	Chem Lab	Teams will demonstrate chemistry laboratory skills related to gas laws and thermodynamics.
High School	Codebusters	Competitors will work to break the codes based in cryptology.
Middle/High School	Crime Busters & Forensics	Teams will identify the perpetrators of a crime or crimes by using analysis of unknown solids, liquids, fibers, fingerprints, and chromatography at the scene of a crime.
Middle/High School	Disease Detectives	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 Food Borne Illnesses.
Middle/High School	Duct Tape Challenge	Teams will arrive at the competition and be given a set of materials, primarily Duct Tape, and a task. They will then have a given amount of time to complete whatever task they are assigned. At the end of the build time, teams will test their structures to determine the winner.
Middle/High School	Dynamic Planet	Teams will demonstrate an understanding of the large-scale processes affecting the structure of the Earth's crust.
Middle/High School	Ecology	Students will answer questions involving content knowledge and process skills in the area of ecology & adaptations in the North American biomes of Tundra, Tiaga, and Deciduous Forests.
High School	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.
Middle School	Fast Facts	Teams will fill in a grid of terms that begin with a given letter to match given science categories.
Middle	Food Science	Teams will build a calorimeter and answer questions around the topic of food grains.
High School	Helicopters	Prior to the tournament, teams will design, construct and test free flight rubber-powered helicopters to achieve maximum loft.
Middle/High School	Hovercraft	Prior to the tournament, teams will build a self-propelled air-levitated vehicle that can move down a track. There will also be a test on classic mechanics and related topics.

Middle/High School	Invasive Species	Teams will be asked to identify invasive species by order and family, answer questions about their origin, economic impact and treatment.
High School	Materials Science	Teams will answer a series of questions or complete tasks involving the science processes of chemistry focused on Materials Science.
Middle School	Meteorology	This event involves the use of process skills to demonstrate a multidisciplinary understanding of the Earth systems and anthropogenic factors that influence Severe Storms.
Middle/High School	Microbe Mission	Teams will answer questions, solve problems, and analyze data pertaining to microbes.
Middle School	Mission Possible	Prior to the competition, participants will design, build, test and document a Rube Goldberg-like device that completes a required Final Task using a series of simple machines.
Middle/High School	Optics	Teams will participate in a laser beam challenge as well as be tested on their knowledge of geometric and physical optics.
Middle School	Reach for the Stars	Teams will demonstrate an understanding of the basic concepts of math and physics relating to stellar evolution and star formation.
High School	Remote Sensing	Teams will use remote sensing imagery, data, and computational process skills to complete tasks related to climate change.
Middle School	Road Scholar	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.
Middle/High School	Rocks & Minerals	Teams will demonstrate their knowledge of rocks and minerals.
Middle School	Scrambler Car	Competitors must design, build and test a mechanical device that 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.
Middle/High School	Towers	Teams will design and build the lightest tower with the highest structural efficiency that can span a given opening meeting the requirements given.
Middle/High School	Wind Power	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.
Middle School	Wright Stuff	Prior to the competition teams design, construct and test free flight rubber-powered monoplanes to achieve maximum time aloft.
Middle/High School	Write it, Do it	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.