

2018 NCSO Elementary Event Descriptions

3, 2, 1, Blast Off! (Science as Inquiry)

Prior to the tournament, teams construct two rockets designed to stay aloft for the greatest amount of time. Rockets are made from **1-liter** soda bottles and pressurized with air and water. In 2018, parachutes are allowed and rockets will be launched at 60 psi.

Backyard Biologist (1.E.2, 1.L.1, 2.L.1, 3.L.2, 6.L.1)

Teams will be assessed on their knowledge of living organisms that they may encounter in their own backyard. In 2018, the focus will be on plants, trees and birds. Teams will be required to identify organisms from a provided list and know about the habitat and conditions required for growth of the organisms and which ones are North Carolina state symbols.

Bridge-a-Roni (Science as Inquiry, 4.P.2)

Teams will design and build ahead of time the lightest bridge from only pasta and glue, with the highest structural efficiency possible (lightest bridge that holds the most weight, up to 10 kg). Each team may bring and enter only one bridge.

Chew the Fat – Digestive System (3.L.1, 4.L.2, 5.L.1)

Teams will demonstrate knowledge of the human digestive system and nutrition using diagrams and models. Team members may be required to identify body parts and their basic functions in this system.

Data Crunchers (Measurement & Data, Science as Inquiry)

Teams will demonstrate their understanding of mathematical concepts. Teams will need to be able to make and interpret graphs and make observations about trends in the data represented. Teams will also need to be able to estimate and measure basic units of length, weight, volume, and temperature and perform calculations of area, perimeter, volume, time, money, fractions, & percentages.

Describe It, Build It (Science as Inquiry)

Technical writing skills are an important part of an engineer or scientist's abilities to communicate precisely and clearly. This event will test a team's ability to effectively communicate by having one team member write a description of how to build a device and having his or her partner re-construct the device from raw materials using their partner's description.

Duct Tape Challenge (Science as Inquiry)

Teams will arrive at the competition and be given a set of materials, including Duck Tape, and a task. They will then have a given amount of time to complete whatever task they are assigned, such as building the tallest tower, widest bridge, most bouyant boat, etc. The task parameters will be clearly outlined for the teams. At the end of the build time, teams will test their structures to determine the winner.

Ecology Experts – Forests, Deserts & Grasslands (3.E.2, 4.P.1, 5.L.2, 6.L.2)

Teams will be assessed on their knowledge of the following biomes: Forests, Deserts & Grasslands. Topics include but are not limited to the ecology of the biomes and the roles and interactions of living and nonliving things within them.

Fossil Frenzy (4.E.2)

Teams will be assessed on their knowledge of geologic time, dinosaurs, fossils, and the fossilization process.

Movers & Shakers (3.E.2)

Teams will be assessed on their knowledge of plate tectonics, earthquakes, volcanoes and related land formations.

Science Password (Science as Inquiry)

Team members will take turns giving clues for a set of scientific terms or concepts from across all K-5 science and math objectives for their teammates to guess. Teams of up to 3.

Sky Quest (1.E.1, 3.E.1, 4.E.1)

Teams will be tested on their knowledge of the solar system. Topics include the sun, moon, planets, rotation and revolution, moon phases, seasons, and identification of constellations/stars based on a provided list.

STEM Design Challenge by ThermoFisher (Science as Inquiry)

Teams of 3 will be given a challenge to complete in advance using only K'nex pieces. They must practice designs in advance but build on site.

Super Sleuths (3.P.2, 4.P.2, 5.P.2, Science as Inquiry)

Given a mystery scenario, evidence, and a list of possible suspects, teams will be expected to perform a series of tests to draw specific conclusions about the scenario and suspects. The test results along with other evidence will be used to solve the mystery of the scenario. 2018 topics include identifying unknown powders, distinguishing between different types of hairs, fibers and shoeprints.

The Heat is On (2.P.2, 3.P.2, 3.P.3, 4.P.2, 4.P.3, 5.P.2, 5.P.3)

Teams will be assessed on their knowledge of energy forms, transfer of energy, physical changes, and changes in states of matter due to heating and cooling.

Trajectory (Science as Inquiry)

Teams will build on site a device to protect a raw egg from breaking when tossed over a bar or barrier and allowed to fall to the floor or pavement. The goal is to build the lightest device that keeps the egg from cracking or breaking during its impact with the floor or pavement.

Weather Permitting – (K.E.1, 2.E.1, 5.E.1)

Teams will be assessed on their knowledge of conducting investigations and using appropriate technology to build an understanding of weather and climate with a special focus in 2018 on severe storms.

What's the Matter? (2.P.2, 3.P.2, 4.P.2, 5.P.2, 6.P.2)

Teams will be assessed on their knowledge of the physical properties of matter and the behavior of solids, liquids, and gases before and after they undergo changes or interactions.

Work It Out (Science as Inquiry)

Teams of 4 will compete in a relay race to show their overall understanding of the topics covered in NCSO events this year. Pairs of students will complete an activity or task and answer quiz questions before their teammates can begin their portion of the relay.