

2023 Girls' STEM Day Activities

Name of Activity	Description of Activity
1 Coding	Students will use CodeCombat to learn coding
2 Coding Unplugged	Learn how coding works through fun activities like building fun objects and making a code bracelet.
3 Breaking Down the Brain	Discussing the different parts of the brain, the location of each part, and the various parts' functions. Each individual will tape together and color a paper skull cap that can be worn on the head and be taken home!
4 Explore Your Senses	Our sensory systems allow us to perceive and understand the world around us. Through hands-on sensory stations and examination of a real human brain you will gain appreciation for how our senses work and where they are processed in the brain.
5 How Helmets Protect Your Brain	Use an egg drop experiment to help demonstrate how helmets protect the brain.
6 Lung Function and Demonstration	Use plastic bottles and balloons to demo inhalation and exhalation physiology
7 Airway Management	Use of an airway management manikin to learn how the lungs work.
8 Robotics	Learn about robotics and take part in a Vex IQ activity.

9	Robotics	Learn about robotics and take part in a Lego NXT activity.
10	Is Yeast Alive?	How can we tell if something is alive? Using the scientific method, we experiment on yeast by adding resources and testing for a response.
11	The Physics of Sound	You will get to build your own creative listening devices that can simulate animal hearing to how movie special effects are made. You will explore and discover which variables are necessary for hearing sound. You also get to take home your creations!
12	Veterinary Clinic	Be a doctor for the day and treat your first patient!
13	Pigments: Unveiling the Magic of Plant Colors	Learn about plant pigments and their unique chemical properties (pH and hydrophobicity). In this hands-on activity, students will learn about chlorophyll, carotenoids, and flavonoids while extracting pigments from various foods using household items.
14	Chemistry Ice Cream	We will be making ice cream using milk, sugar, ice and salt. This activity teaches phase change and basic thermodynamics.
15	Rainbow Density	Testing density of different concentrations of liquids
16	Pasta and Marshmallow Towers	Create the tallest tower out of uncooked pasta and marshmallows

17	Rubber band Helicopter	Create helicopters in which they will propel because of the stored energy in the rubber band after it is twisted.
18	Lava Lamps: Why Can't You Mix Oil & Water	Make lava lamps from oil, water, food dye, water bottles, and alka-seltzer tabs. Students will learn why water and oil do not mix.
19	A Smashing Time With Marble Nuclei with FRIB	Get hands-on with a model nuclei that you can accelerate and smash to make isotopes that don't exist on Earth, but might be made in stars. Try several demonstrations that simulate the research done at MSU's world-class nuclear research facility!
20	Parachutes	Make a parachute that descends the slowest using common materials.