

HANDS-ON STEM WORKSHOPS



Your students can explore more STEM topics by adding a hands-on workshop to your field trip! Reinforce a subject from class or choose something new for them to explore!

CHOOSE YOUR TOPICS

We have a wide variety of customizable workshops in topics like **engineering**, **chemistry**, **robotics**, and more. Look for these color-coded icons to help you choose a topic for your class!



Engineering



Robotics



Electricity



Science Meets Art



Motion



Chemistry



Environmental
Sustainability



Workshops are suitable for any grade K - 8. Activities for each workshop may vary depending on grade level and the length of the program. The maximum class size is approximately 25 students unless otherwise noted.

Continue to the next page for descriptions of each program!



If you can't bring your group to the Science Factory, let us bring our hands-on STEM programs to your classroom or library! Ask us how!

Wind Power



Students will use an assortment of tools and materials to create a sailcar that harnesses the power of the wind. Activities based on grade level may include testing and changing their design, speed competitions, or races.

Structural Engineering

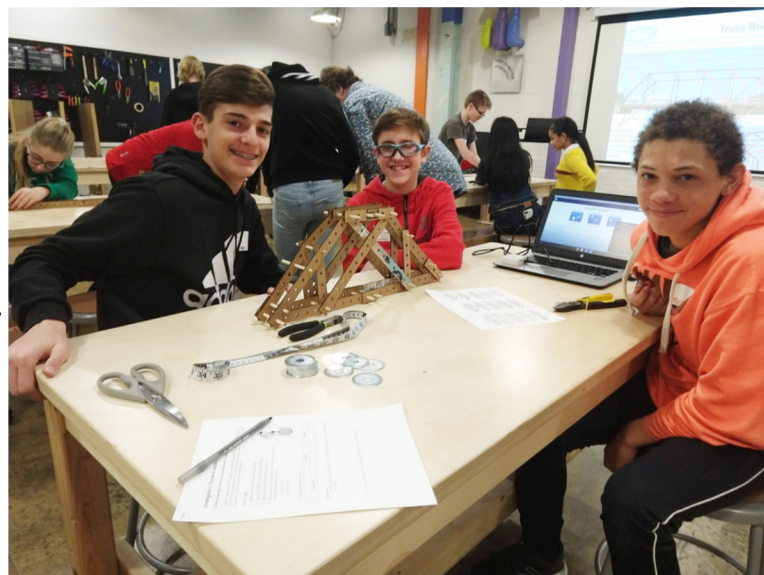


Students will be presented with a design challenge where they must think like an engineer to solve it. Challenges based on grade level may include keva plank blueprints, catapults, bridges, towers, or balancing nails.

Electric Motors



Students will explore the properties of electromagnetism and energy flow while building circuits that can power electric motors and generators.



Circuit Lab



Students will learn about electricity and how energy flows while building and experimenting with a variety of circuits from simple to complex. Activities based on grade level may include circuit boards, snap circuits, or paper circuits.

Robotics



Students will learn the basics of robotics and programming while interacting with Edison Robots. Robotics programs can be tiered for any grade level.

Newton's Laws of Motion



Students will learn about Newton's Laws of Motion and use them to perform dazzling feats! Activities based on grade level may include the tablecloth trick, remove the platform, egg drop devices, balloon races, and many more.

Biome in a Box



Students will learn about the different environments and habitats in which animals live. They will build an environment including terrain, plants, and animals in a box to take home.



Candy Molecules



Students learn about molecules like Oxygen (O₂) and chemical compounds like salt (NaCl) while building them out of candy and toothpicks.

Kitchen Chemistry



Students will explore chemical reactions using common household ingredients. Things may get messy! Experiments based on grade level may include acid-base reactions, decomposition chemistry, pressure and gas, and chromatography.

Create Art with Science



Students will create a watercolor project using household items like salt, baking soda, and vinegar. Activities based on grade level and time may be free-form or use stencils. Watch the watercolor react with the items to create a unique piece of art. Students take home what they make.

Our Solar System



Students will learn the order and characteristics of the planets in our solar system as they design and create a model individually or in small groups. Activities will vary based on allotted time and grade level.

Create a Constellation



Students will choose a constellation and use skills like measurement, cutting, and design to recreate it on paper.



FIELD TRIP PROGRAM PRICES

Options that fit your schedule:

25 minutes - \$75.00

45 minutes - \$135.00

60 minutes - \$175.00

Let us work with you to meet your student's needs. Longer and more customized workshops are available by request!



TO BOOK YOUR FIELD TRIP:

Contact Kyle Walsh at 717-509-6363 x104
or kwash@tlsf.org