# **Enrichment Experiences**

Enrichment Experiences are small group, classroom-style programs designed to enhance our field trips by offering in-depth content and more hands-on examples of learning by doing. Advance reservation is required. Programs available on the half hour from 10:30am to 1:30pm.

#### **Circuit Solutions**

Grades: 3-5, 6-8 Capacity: 30 students Length: 45 minutes Students will:

- · Assemble a working simple circuit
- ·Test insulators and conductors to learn about the transfer of energy (grades 3-5)
- · Experiment with polarity and create a parallel circuit to study the strength of electric forces (grades 6-8)

## **DNA Discovery**

Grades: 4-8 Capacity: 30 students Length: 45 minutes

#### Students will:

- · Observe and analyze their personal genetic traits
- · Translate genetic code into traits to make a unique
- · Extract plant DNA to see what it looks like up close and in person

## **Engineered by Design**

Grades: 3-8

Capacity: 30 students Length: 45 minutes

## Students will:

- · Explore the engineering design process (imagine, plan, create, test, improve)
- · Use this process to produce a solution for a given task

#### **Radical Reactions**

Grades: 1-2

Capacity: 30 students Length: 45 minutes Students will:

- · Use real science tools to run experiments
- · Learn the science behind various chemical reactions
- · Explore simple chemistry

## SciLab Enrichment Experience

Grades: 3-12 Capacity: 30 students Length: 45 minutes Students will:

- · Work in groups of six scientists and rotate through self-guided experiment stations
- · Follow lab procedures and protocols while observing chemical and biological phenomena
- Gain knowledge and experience using real laboratory equipment

## **Sensory Mystery**

Grades: PreK4-1 Capacity: 30 students Length: 45 minutes Students will:

- · Use senses to solve a mystery
- · Discover how the brain is connected to other parts of the body by nerves
- · Experiment to see how eyes, ears, skin, and noses function

## Soap Bubble Math

Grades: 2-3

Capacity: 30 students Length: 45 minutes Students will:

- · Answer a real world problem using math
- · Gather and share data through group participation
- · Design a question and procedure, guided by standards, to determine measurable information about soap bubbles

#### Stats Lab

Grades: 6-8

Capacity: 30 students Length: 45 minutes Students will:

- · Collect and analyze statistical data generated by toys and games
- · Calculate frequencies and probabilities
- · Compare predicted and observed outcomes

# **Sudsy Science**

Grades: PreK-1 Capacity: 30 students Length: 45 minutes Students will:

- · Experiment with various bubble wands and predict bubble shapes
- Combine materials to make a better bubble solution

# **Synthetic Biology**

Capacity: 30 students Length: 45 minutes

#### Students will:

Grades: 9-12

- · Survey ways that humans alter DNA to benefit themselves
- · Explore the intersection of technology and society

In-depth

focused

learning

· Discuss ethical issues related to engineered organisms

## What is That?

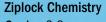
Grades: 4-8, 9-12 Capacity: 30 students Length: 45 minutes Students will:

- · Use the scientific process to investigate mystery boxes
- · Make hypotheses based on sensory perceptions and memories
- · Defend their hypothesis using empirical evidence

## Wind and Waves

Grades: 2-5, 6-8 Capacity: 30 students Length: 45 minutes Students will:

- · Determine what energy sources are derived from renewable and non-renewable resources and how their use affects the environment
- · Create a model of an offshore wind and wave energy farm to maximize energy output then optimize your solution to tackle multiple challenges



Grades: 3-8

Capacity: 30 students Length: 45 minutes

Students will:

- · Conduct chemical reaction experiments
- · Uncover how matter and energy are transformed
- · Determine which chemicals are responsible for an exothermic reaction



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