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 creature
- 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

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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

In-depth focused learning

Synthetic Biology Grades: 9-12 Capacity: 30 students Length: 45 minutes Students will: • Survey ways that humans alter DNA to benefit themselves • Explore the intersection of technology and society • 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

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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
- Create an efficient, cost effective design within a defined set of parameters (grades 6-8)

Ziplock Chemistry 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