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# EDUCATION PROGRAM GUIDE 2023- 2024

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Science Enrichment | Field Trips | Family Science Night  
Planetarium | Virtual Science Lab



**Plan an educational experience that leaves your students inspired with one of our many in-house or outreach programs.**





# Science Enrichment Program



The Science Enrichment Program is designed for elementary and middle school grades with customized schedules upon request. This program consists of a range of hands-on lessons specifically designed to help students grasp difficult science standards while fostering a love across STEM disciplines. Lessons may be booked at any interval to meet the needs of your class and curriculum. Multiple lessons are recommended to provide the most beneficial programming for your students.

## Standards-Based Lessons

### **Adaptation Investigation**

Using Ozobots, students will learn about the various ways the octopus has adapted to survive in its ocean habitat.

### **Energy is Everywhere**

Students will discover the various forms of energy and how to distinguish them from one another as well as where they can be found in the environment. They will also learn how to create different types of energy using scientific and household tools.

### **The Great Erosion Experiment**

Students will gain a greater understanding of physical weathering and erosion (using wind, water, and ice). Using special materials to mimic the breakdown of rock and the movement of rock, they will observe, test for differences, and discover the impact both have on all forms of Life.

### **Weather Station Exploration**

What's the weather like? Through careful observation and studying the condition of the atmosphere, students can report and predict the weather, just like the weatherman on TV! This lesson will allow students to explore many different types of weather that are experienced all over the world, and explore how each is different.

### **What's the Matter?**

How do scientists use the properties of matter to distinguish solutions and their functions? After an introduction to the basic properties of solids, liquids, and gases, students will use a brief process of scientific inquiry to determine what the "mystery matter" is.

### **What Do You Seed?**

Students will compare, contrast, and identify different types of seeds as well as identify why the seeds are important and what they do to make a whole plant.

### **Dive into Science**

Students will learn the differences between the water that comes from the ocean and the water that comes from our sinks by doing experiments on salinity, density, and waves.

### **Salty Sea Creature Science**

Students will classify marine animals into a few major groups (mammals, reptiles, fish) according to their physical characteristics and behaviors through hands-on experiments. They will also learn how important these animals are to their ecosystem and best ways to protect them.

### **Lab Life Cycles (Insect)**

Life cycles are like the rhythms of nature, guiding us through changes and growth. Students will observe and describe major stages in the life cycles of arthropods such as insects and crustaceans.

### **Design, Build, Balance**

Students will explore symmetry, balance while learning about gravity and equilibrium. They will weigh and record different solids, then adding rods and weights to the spinning pedestal that they think will balance the best.

### **Space Race**

Students will become astronomers and explore space using our Merge cubes as a "handheld planetarium." During this they will distinguish among the following objects of the solar system – Sun Planets, moon, and asteroid's, comets and identify Earth's position in it before discovering challenges involving planet size and weights.

### **Water Cycle**

Learn about the water cycle using our augmented Reality coloring technology that will bring learning to life.





# Field Trips at the Center



We provide exceptional interdisciplinary learning opportunities for students of all grade levels. Standard field trips provide students with an animal presentation, immersive lesson, sciPad experience, and museum exploration. Custom lessons are available for any grade level upon request for an additional \$25 and must be planned in advance.



## 🌌 Lessons for Grades K-2

### **Super Body Senses**

Students will explore the fascinating world of sensory perception, discovering how our bodies interpret and respond to various stimuli such as touch, taste, smell, sight, and hearing. Through interactive activities and discussions, they will gain a deeper understanding of the intricate mechanisms that allow us to experience and navigate the world around us.

### **Changes That Matter**

Changes in matter happen every day- some changes make matter look different; other changes make one kind of matter become another kind of matter. Students will explore three types of changes that occur in matter: physical change, physical phase change, and chemical change.

### **Weather Station Exploration:**

This fun, hands-on lesson will allow students to create, observe, and explore many different types of weather experienced all over the world.



## 🌌 Lessons for Grades 3-5

### **Adaptation Investigation:**

Using our awesome Ozobots, students will learn about the various ways amazing octopuses have adapted to survive in their ocean habitat.

### **Energy is Everywhere:**

Students will discover the various forms of energy and how to distinguish them from one another as well as where they can be found in the environment. They will also learn how to create different types of energy using scientific and household tools.

### **The Great Erosion Experiment:**

Students will gain a greater understanding of physical weathering and erosion (using wind, water, and ice). Using special materials to mimic the breakdown of rock and the movement of rock they will observe, test for differences, and discover the impact both have on all forms of Life.



# Family Science Night



## Hands-on science brought into your school

We provide 15 hands-on science experiments, and you provide the adult volunteers to man them! Our two facilitators will show up an hour before the event to teach your volunteers how their experiment works and how to teach it to kids and parents.



## 2023-24: Space Exploration Stations

**15 Different Space Exploration Stations all offer various hands-on activities for children and families to enjoy together while they learn about Earth, space, and beyond. Stations include:**

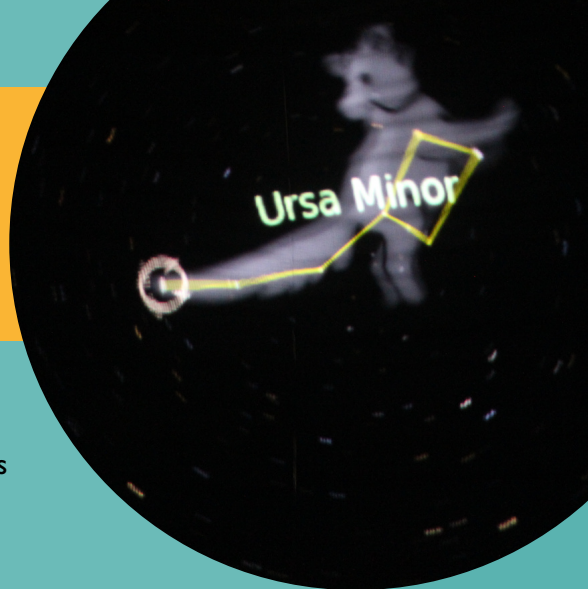
- Planets in AR
- Investigating Clouds
- Space Suit Selfie
- Soda Straw Rocket
- Star Formation
- Design, Build, Test
- Hide and Seek Moon
- Orbiting Objects
- Solar Flares
- Solar System Trek
- Planetary Soup
- Galaxy Pinwheel
- Rover Robotics
- Defying Gravity
- Space Souvenir



**Full kit descriptions for Space Exploration Stations available upon request. Book your Family Science Night now! Email [lisa@ecscience.org](mailto:lisa@ecscience.org) or call 850-664-1261.**



# Mobile Planetarium



Our planetarium is an excellent resource for all grades and ages to discover just what makes up the night sky. Shows typically run either 25 minutes or 45-50 minutes in length depending on your needs and class schedules. The planetarium is an inflatable mobile dome that can house 20-25 students at a time depending on the grade level.

## Custom Lessons (K-12)

Available for any grade level upon request for an additional fee and must be planned at least 4 weeks in advance.

## Global Soundscapes (K-12)

Our world is full of sound, and Global Soundscapes: Mission to Record the Earth takes students on an ear-opening journey into the science of sound and the emerging field of soundscape ecology. Students will learn all about soundscapes: what they are, how scientists record them, and why they are important in learning about the biodiversity of different ecosystems. Global Soundscapes combines full dome imagery, surround sound, and a live presentation- students will hear the Earth in a whole new way.



## Standards-Based Lessons

### Mobile Planetarium Lesson Grades K-5

*DISCIPLINE: Space*

Students have the opportunity to travel through space and learn all about our solar system. They will discover the planets, moons, dwarf planets, and constellations that call the Milky Way Galaxy home.

Meets NGSSS:

SC.K.E.5.2, SC.K.E.5.3, SC.K.E.5.4, SC.K.E.5.6, SC.1.E.5.1, SC.1.E.5.3, SC.2.E.6.1, SC.2.E.7.2, SC.3.E.5.1, SC.3.E.5.2, SC.3.E.5.3, SC.3.E.5.5, SC.3.E.6.1, SC.4.E.5.1, SC.4.E.5.2, SC.4.E.5.3, SC.4.E.5.4, SC.5.E.5.1, SC.5.E.5.2, & SC.5.E.5.3

Our Planetarium is Powered by



**To book your Mobile Planetarium:  
Email [lisa@ecscience.org](mailto:lisa@ecscience.org) or call 850-664-1261 with your preferred date and two alternate dates.**



# Virtual Science Lab



With our Virtual Science Lab, students in grades 4-8 can explore a different subject every month. Our standards-based lessons include four weeks of programming for each topic listed below.

**All lessons are prerecorded and will be released in full for each topic, so you'll receive videos for weeks one through four after you've selected your topic.**

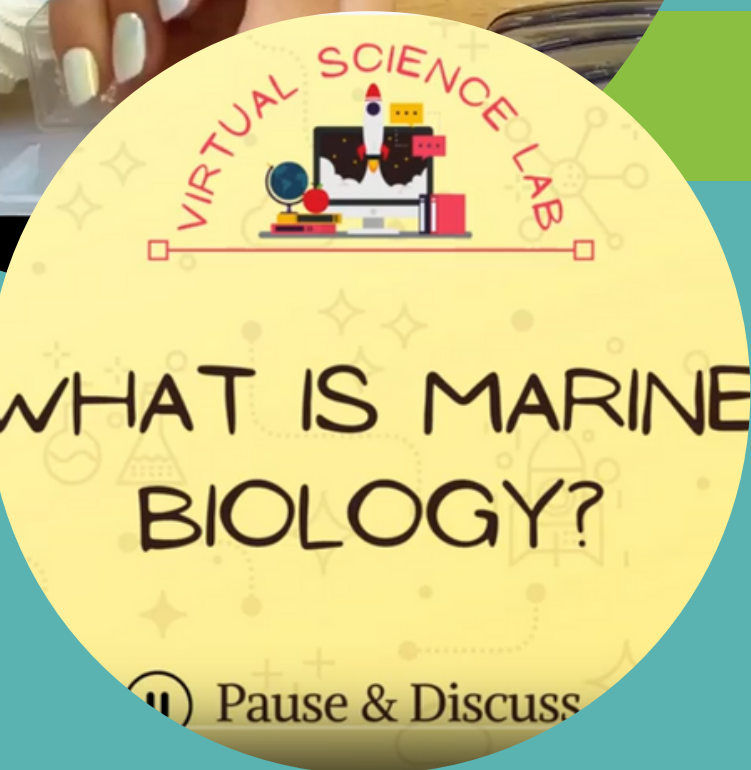
Week one includes a prerecorded video lesson and a brief Science Snap: a subject-based experiment to carry out at home or in the classroom. The video focuses on introducing the topic for that month and provides a hands-on activity to complete at home or in the classroom, and the Science Snap is an additional brief 6-8 minute video lesson. In week two, students will be able to participate in a second Science Snap. During week three, students can expect a third Science Snap that dives into exploring different career fields related to the subject. In the final week, our Science Snap will allow an expert in one of these career fields to explain the science behind their job in a brief video.



## Subjects:

Each month will provide in-depth exploration about a different field of science. This includes lessons, activities, studying career pathways, and the chance to hear from an expert in the field describe their work. See our subject options below!

- Marine Biology
- Chemistry
- Paleontology
- Zoology
- Mechanical Engineering
- Robotic Engineering
- Microbiology
- Space/Astronomy
- Geology
- Acoustic Technology/Sound Engineering



**Book your Virtual Science Lab now! Email [lisa@ecscience.org](mailto:lisa@ecscience.org) or call 850-664-1261.**