

East Tennessee Discovery Center Outreach Program Guide 4th Grade

Scheduling Your Outreach!

Call 865-594-1494 to schedule your outreach.

Please provide the following information:

1. Name of school and school phone number.
2. Teacher contact name and e-mail address.
3. Grade level, number of classes, number of students per class.
4. Time programs may begin, lunch schedule.
5. Name of program & month requested.

Starlab Outreach Programs

Starlab is a portable, inflatable planetarium that brings the nighttime sky to your school. The sky is projected on the inside of an inflatable dome where students investigate the stars and constellations. **The portable planetarium requires 22x22 feet of floor space and an 11-foot ceiling.** The ideal class size for Starlab is 20, but it can hold a maximum of 25 3rd - 6th graders.

Meeting Your Curriculum!

Every Discovery Center program is aligned with and reinforces the grade level expectations set by the Tennessee Department of Education. Included is a list of programs and the state science curriculum grade level expectations they meet.

Health programs meet the standards set by the Knox County Board of Education Health and Wellness curriculum.

Erosion: Good v/s Bad

Learn how human practices can increase the otherwise natural process of erosion caused by wind, water and ice, and how we can help balance the scales to the “good”. Explore the process of “weathering” and the potential resulting benefits.

- 7.7.1 Investigate how the Earth’s geological features change as a result of erosion (weathering and transportation) and deposition.
- 7.7.2 Evaluate how some earth materials can be used to solve human problems and enhance the quality of life.

Earth, Sun & Moon

Students will really “use their heads” as they create moon phases and solar eclipses. By imitating the movements of the earth, sun and moon, students understand the whys of day & night and seasonal changes.

- 7.6.1 Analyze patterns, relative movements, and relationships among the sun, moon, and earth.

Batteries, Bulbs & Wires

Be ready for a fun-filled hour of “shocking” science. See “dancing” magnets, learn about static & current electricity and solve problems in order to create a “circuit”. Test the conductivity or insulating properties of different materials. Series versus parallel circuits – which works best?

- 7.12.1 Explore the interactions between magnets.
- 7.12.2 Observe that electrically charged objects exert a pull on other materials.
- 7.12.3 Explain how electricity in a simple circuit requires a complete loop through which current can pass.

Farming for Fuels

Describe and demonstrate through hands-on activities, alternative energy sources with emphasis on biofuels made from non-food plants, that are appropriate sources for transportation and reduce the amount of carbon dioxide that our present use of fossil fuels introduce into the atmosphere.

- 7.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data.
- 7.Inq.2 Select and use appropriate tools and simple equipment to conduct an investigation.
- 7.T/E.1 Describe how tools, technology, and inventions help to answer questions and solve problems.
- 7.T/E.2 Recognize that new tools, technology, and inventions are always being developed.
- 7.T/E.4 Recognize the connection between scientific advances, new knowledge, and the availability of new tools and technologies.
- 7.1.1 Recognize that cells are the building blocks of life.
- 7.3.1 Demonstrate that plants require light energy to grow and survive.
- 7.7.2 Evaluate how some earth materials can be used to solve human problems and enhance the quality of life.

Solids, Liquids & Gases

What are atoms? What do they look like? Learn about the periodic table and the three states of matter. Watch experiments that cause matter to change form.

7.9.2 Explore different types of physical changes in matter.

Dental Health

Did you know that bacteria live in your mouth? How does it affect your health?

The importance of proper tooth brushing techniques are emphasized as the means to prevent cavities, gum disease and tooth loss.

The student will understand:

1. the role of personal health (hygiene) practices as it relates to their total wellness.
2. the role of body systems as related to healthful living.
4. the relationship of nutrition to healthful living.
7. the need and process of setting personal goals and standards for healthful living.
10. attitudes and behaviors for preventing and controlling disease.

You Are What You Eat

A mystery bag of foods and the Food Pyramid game will teach students how to create a balanced meal. Learn about the digestive system, how to “burn” calories and the importance of reading “nutrition labels”. “Fat models” will allow children to feel how extra weight affects their movement. Fast food healthy choices are emphasized along with some ways to make exercise “fun”.

The student will understand:

2. the role of body systems as related to healthful living.
3. the relationship of physical activity as it relates to healthful living.
4. the relationship of nutrition to healthful living.
7. the need and process of setting personal goals and standards for healthful living.
10. attitudes and behaviors for preventing and controlling disease.

Starlab Seasons of the Stars

Students will learn to identify the “Big Dipper” and use it to locate other constellations. View and learn about some constellations visible during each of the four major seasons of the year. Long standing “myths” associated with the constellations will be shared. Content will correlate with grade level expectations.

Starlab Multicultural Mythologies

The most widely known stories, or “myths” as they are often referred to, about the constellations are based on the Greek’s interpretation of star patterns. Student will be fascinated to hear the many different stories from other cultures around the world and how they explained the constellations to their peoples. Content will correlate with grade level expectations.