DASEF's K- 8 Field Trip Offerings

Located just two minutes off Route 1 in Smyrna, DASEF's ***Environmental Outpost*** and ***Discovery Center*** are ready to schedule your classes for exciting STEM programs! Most programs are designed to align with DE State Science Standards, making them perfect for all students, **but we can also adapt programs to meet your specific curriculum needs**. Costs are $8.00 per Student for Programs at DASEF and $9.00 per Student for Outreach to your location (plus travel cost). To schedule a visit to DASEF or Outreach to your school, visit https://www.dasef.org/schedule, email our scheduling coordinator at LynneB@dasef.org, or call us at (302) 659-5003. Due to weather and other conditions beyond our control, we may, in some instances, substitute other activities. Directions, Program Descriptions, Scheduling Info, and more can be found on the DASEF website at https://www.dasef.org.

For Kindergarten Classes:

"Weather in Your Life" - make a weather wheel and use it to discuss weather predictions, dress a weather bear for different Weather conditions, **learn** about the water cycle and types of weather, tour of DASEF's weather monitoring station**,** make weather instruments and learn what causes **the** wind and make a kite to keep.

"In the Sky at Night" - Learn about Earth's movement by looking at constellations, the moon, and planets in the Star Lab planetarium.

"Forces that Push and Pull" – Explore pushing and pulling forces, including connecting movable gears, making a marble roller coaster, testing cars on ramps, and assembling a "make-and-take" climbing creature. **For First Grade Classes:**

"Predictable Patterns: Sun, Moon, and Stars" - Learn about the phases of the moon, the predictable rising and setting of the sun and the moon. In the Star Lab Planetarium, learn when and why stars are visible at night, but not in the day (except for our sun), learn why there are different amounts of daylight throughout the year.

"Inside Plants and Animals" – compare skeletons of different animals regarding structure and function; examine parts of a seed; study how seeds change as they grow; investigate variation in types of seeds of fruits and vegetables, study life cycle changes of butterflies and ladybugs.

"Between and Beyond Solids and Liquids" – make a polymer called "gluep"; use seltzer rockets to see the power of gases in action. Identify the properties of solids, liquids, and gases that make each unique, and learn what they all have in common. **For Second Grade Classes:**

"Bridges: Spanning with Strength" – Introduction to forces of tension and compression and how they function in bridge designs; small group problem-solving and construction challenge; presentation and testing of bridge designs; build an arch bridge using a building kit.

1st grade programs can be adapted for 2nd graders.

For Third Grade Classes:

"Climate: Weather or NOT?" - learn the difference between climate and weather, learn how weather is predicted using weather instruments.

"Attractive Science: Magnets" – review magnetic properties; use magnets with iron filings and paper clips to view magnetic fields, predict and test strength of attraction, magnetic permeability of materials, and induced magnetism; magnetize nails using a cow magnet, and make an electromagnet.

For Fourth Grade Classes:

"Motion and Design: Pinball and Roller Coasters" – review forces and Newton's Laws of Motion; examine energy and gravitational force on falling objects; two group challenges: given materials and requirements, design and build a marble roller coaster and a pinball machine.

For Fifth Grade Classes:

Silent Travelers: Earth, Moon, and the Planets" – examine star "movement", lunar phases, and our solar system in the Star Lab planetarium; design and build a lunar/planetary rover.

"Energized by the Sun" – Create a model that shows the sun as the source of the energy needed by animals to survive. Using a food web, trace the food of most animals back to plants, and show how the balance of an ecosystem can be damaged by an "invasive" species.

For Sixth, Seventh, and Eighth Grade Classes

"Investigating Force and Motion" – learn about Newton's Laws of Motion, explore how inertia and momentum are related, investigate potential and kinetic energy by making a pendulum and a roller coaster

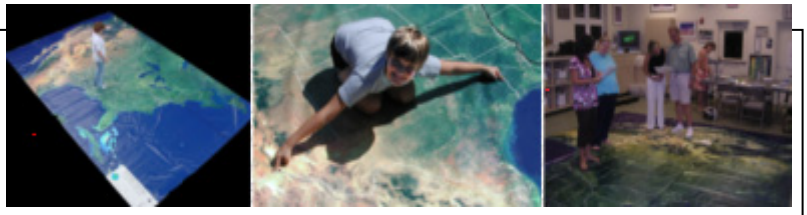
"Investigating Near-Earth Objects" – Lunar study in Star Lab planetarium including lunar phases; comparison of earth and lunar geology; learn to identify constellations, and determine Earth's "address" in our Solar System and the Universe. .

School Outreach Science STEM Programs

STARLAB Planetarium

Students will spend 40 minutes in our inflatable planetarium, learning about the stars and constellations, as the night sky is projected above them. Lesson emphasis is on the circumpolar constellations and those currently visible in the night sky, the myths behind the constellations, and how students can find them from their own backyard. One class of approximately 25 students can be accommodated in the STARLAB at a time. Appropriate for K - 8th grade. Space needed: STARLAB inflates to 12' high X 16' around.

Earth Walk



Students will spend 40 minutes with our Earth Walk, a 16' X 20' high-resolution satellite image floor map of the continental United States. True life colors of mountain ranges, rivers, ocean coastlines, watersheds, and the other geographic features of our country, as well as superimposed state boundaries are featured. Students work in cooperative groups to locate and label examples of the geographic features on the Earth Walk map. One class of approximately 25 students can be accommodated at a time. Appropriate for 4th – 8th grades

Planet Earth

Students will spend 40 minutes with our 20x22 foot, inflatable globe learning about U.S. and world geography and their own place on Earth. Emphasis will be on differentiating landforms and bodies of water, plate tectonics, and understanding how humans interact with the natural world; developing an understanding of the diversity of human culture and the unique nature of places; understanding regions and the connections between them; and understanding how geography can be used to make decisions about human life on Earth. Minimum space requirements: floor space – 60x60 feet and ceiling height – 25 feet. Programs meet Delaware State Science and Social Studies Standards, for K - 8th grade.

Endangered Species

Using life-size, authentic inflatables, DASEF's Endangered Species programs have been developed to bring an awareness and an appreciation not only of the beauty and size of these magnificent creatures but also to present ways to safeguard habitats and work across international borders.

Have you always wanted to meet an endangered species? Are you teaching a lesson about preserving the environment? DASEF's host of life-sized inflatables add a wonderful visual aid to any such educational experience. Programs include activities associated with the environment, ecosystem, and biology of the selected species. Participants will make and take various creations, meet the endangered friend to compare their sizes and shapes, and learn more about how it lives and its habitat. One inflatable can be brought to your location or hosted at our Environmental Outpost. Please be sure to ask and check the list for any size and space requirements. **Length:** 1-2 hours **Fee:** Please call for more info & pricing information.