

AMSE
AMERICAN MUSEUM OF
SCIENCE & ENERGY
115 Main Street East
Oak Ridge, TN 37830
www.AMSE.org

WINNER
2019
ROY L. SHAFER
LEADING EDGE
AWARDS

The Oak Ridge
2018
Best
of
Anderson
County

Phone: 865-294-4531 or email:

amseoutreacheducation@gmail.com or lwright@amse.org

Experience.... American Museum of Science & Energy Outreach Programs

AMSE Outreach Programs deliver and demonstrate an innovative, memorable, hands-on experience of your choice with a variety of scientific content to explore. Your East TN classroom, homeschool group, church, or social gathering can be next to engage in world class scientific education!



Rates:

1- hour classes - \$75* 1st class** \$50 each additional class on the same day

2- hour classes - \$110* per class (no price breaks for additional classes)

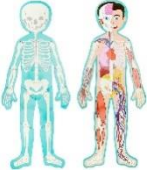



*Additional charges apply for distances over 100 miles round trip (\$15 for each additional ten miles)

**A minimum of two hours should be scheduled per visit.

***Time between classes should not exceed 45 minutes; for each 45-minute gap an addition \$25 will be charged for each gap. **Maximum class size is 30 participants**

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| Program Name | Description | Available lengths | | Grades | | |
|--------------|-------------|-------------------|-------|--------|-----|-----|
| | | 1 hr. | 2 hr. | K-2 | 3-5 | 6-8 |



| BIOLOGY | | | | | | |
|--|---|---|---|---|---|---|
| <p>My Body & Me</p>  | <p>Students will learn about the different body systems and how to take care of them. Hands on activities include a life-sized intestine, X-ray photos, listening to body sounds using a stethoscope and anatomy puzzle.</p> | ✓ | ✓ | ✓ | ✓ | ✓ |
| <p>Our Microscopic World</p>  | <p>Students will learn about bacterial and animal cells, their parts, functions, and cellular reproduction. Hands on activities include observation of freshwater organisms through microscopes.</p> | | ✓ | | ✓ | ✓ |
| <p>You Are What You Eat</p>  | <p>Students will learn about the digestive system with a 26 ft. long intestine! The food and exercise pyramid, vitamins, minerals, fat, and sugar content in foods will be discussed. Students will make their own choices with artificial foods.</p> | ✓ | ✓ | ✓ | ✓ | ✓ |
| CHEMISTRY | | | | | | |
| <p>Chemistry: It's Elemental</p>  | <p>Through hands on modeling techniques, students will learn about matter, atoms, elements, mixtures, and compounds.</p> | ✓ | ✓ | | ✓ | ✓ |

| Program Name | Description | Available lengths | | Grades | | |
|--------------|-------------|-------------------|-------|--------|-----|-----|
| | | 1 hr. | 2 hr. | K-2 | 3-5 | 6-8 |

ENERGY



| | | | | | | |
|--|---|---|---|---|---|---|
| <p>Electricity</p>  | <p>Students will learn about static and direct current electricity. Hands on activities include making simple circuits, series and parallel circuits, and learning what substances are insulators and conductors.</p> | ✓ | ✓ | | ✓ | ✓ |
| <p>Light</p>  | <p>Students will explore reflections, magnification, refraction, shadows, and how light travels.</p> | ✓ | | | ✓ | ✓ |
| <p>Magnetism</p>  | <p>This class gives students hands on experience with magnets to learn more about attraction and repulsion, magnetic versus non-magnetic materials, and how magnets are used in everyday life.</p> | ✓ | | ✓ | ✓ | |
| <p>Sound</p>  | <p>Through hands on activities, students will investigate vibrations, pitch, volume, and how sound waves travel.</p> | ✓ | | | ✓ | ✓ |

FORCES & MACHINES




| | | | | | | |
|--|---|---|---|--|---|---|
| <p>Forces and Motion</p>  | <p>Students get hands on experience with Newton's three Laws of Motion. Students will learn about different forms of energy, friction, balance, and their application to everyday life.</p> | ✓ | ✓ | | ✓ | ✓ |
| <p>Simple Machines</p>  | <p>This presentation provides hands on experimentation with inclined planes, levers, wheels, springs, and compound machines</p> | | ✓ | | ✓ | ✓ |

| Program Name | Description | Available lengths | | Grades | | |
|--------------|-------------|-------------------|-------|--------|-----|-----|
| | | 1 hr. | 2 hr. | K-2 | 3-5 | 6-8 |


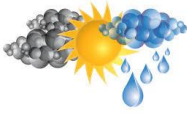
GEOLOGY

| | | | | | | |
|---|---|---|---|--|---|---|
| <p style="text-align: center;">Fun with Fossils</p>  | <p>Students will learn about the formation of fossils and their place in historical geology. Numerous fossil specimens will be displayed for observation. Fossil gravel sifting will excite students as they hunt for fossilized shark teeth, seashells, coral, and other fossils to take home.</p> | ✓ | ✓ | | ✓ | ✓ |
| <p style="text-align: center;">Geology Rocks</p>  | <p>Students will learn about the layers of the earth, their composition, depth, temperatures, and their relation to minerals. Activities include testing 9 kinds of minerals and observing 15 kinds of rocks.</p> | | ✓ | | ✓ | ✓ |

Plants & Animals

| | | | | | | |
|---|---|---|---|---|---|---|
| <p style="text-align: center;">Butterfly Bonanza</p>  | <p>Students will learn about butterfly anatomy, life cycle, habitats, and monarch migration. During spring, summer and early fall students may go outside to catch butterflies and other insects.</p> | ✓ | | ✓ | ✓ | ✓ |
| <p style="text-align: center;">Insects: Friend or Foe</p>  | <p>This program features an introduction to the common order of insects, their physical characteristics and incredible adaptability. Field activities involve the collection of insects for identification and observation.</p> | | ✓ | ✓ | ✓ | |
| <p style="text-align: center;">Skins & Skulls</p>  | <p>Students will compare animal skulls. In addition to creating a food web, they will be exploring different types of consumers, including herbivores, carnivores, omnivores, and insectivores.</p> | ✓ | ✓ | | ✓ | ✓ |

| Program Name | Description | Available lengths | | Grades | | |
|--------------|-------------|-------------------|-------|--------|-----|-----|
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| SPACE & WEATHER | | | | | | |
|---|---|---|---|--|---|---|
| <p>Spaced Out</p>  | <p>Students will discover how the Earth, Sun, and Moon cause day and night, years, tides, and eclipses. They will be astonished by the relative sizes and distances of our planets.</p> | ✓ | ✓ | | ✓ | ✓ |
| <p>What Weather</p>  | <p>Students will study cloud types, temperature, air pressure, wind speed, direction, rainfall, humidity, and the meaning of highs and lows and fronts. The two-hour program includes hurricane tracking.</p> | ✓ | ✓ | | ✓ | ✓ |