

## IT'S ALIVE! (KINDERGARTEN)

### DESCRIPTION

Kindergartners will discover that bugs are living things, compare bugs to other animals, and use their classification skills to compare insects and arachnids. In the Collins Family My Big Backyard gallery, students will have the opportunity to match the life cycle of various insects and explore other interactive exhibits of the gallery. Program will run for two hours.

#### 30 MINUTES - INTRO IN THEATER - ALL STUDENTS

- Introduction to living things, insects and arachnids

#### 30 MINUTES - LAB

- Examine actual specimens
- Review insects and arachnids
- Make spiders

#### 30 MINUTES - GALLERY TIME

- Point out life science on the tree exterior
- Give time to explore the gallery

#### 30 MINUTES - STORE AND TREE ACTIVITY

- Compare butterflies and moths

#### TAKE HOME ITEMS

Pom Spider Pin

### GEORGIA PERFORMANCE STANDARDS

SKCS4a; SKCS5a; SKCS6c; SKL1a, b; SKL2a,c,d

## WHAT'S THE MATTER? (2ND)

### DESCRIPTION

Second graders will examine the states of matter.

"Chilling" demonstrations using liquid nitrogen allow students to experience condensation and evaporation. Students find out how molecules behave when matter changes from state to state and will take part in a tasty experiment while changing a liquid to a solid. Time will be given for exploration of the Collins Family My Big Backyard gallery. Program will run for two hours.

#### 30 MINUTES - INTRO IN THEATER - ALL STUDENTS

- Introduce the three states of matter
- Introduce concepts of condensation, evaporation, melting, freezing
- Liquid nitrogen demonstration

#### 30 MINUTES - LAB

- Experience matter changing from liquid to solid/freezing experiment

#### 30 MINUTES - GALLERY TIME

- Introduce the Collins Family My Big Backyard
- Encourage students to look for items that are solid, liquid, or gas
- Give time to explore the gallery

#### 30 MINUTES - STORE AND TREE ACTIVITY

- States of Matter "Mad Lib"
- The freezing song

#### TAKE HOME ITEMS

Bubbles

### GEORGIA PERFORMANCE STANDARDS

S2CS1a; S2CS4b, c; S2CS6a, b; S2P1a, b

## MAGNET MANIA (1ST)

### DESCRIPTION

First graders will explore magnetic attraction and repulsion through prediction and experimentation. Hands-on exploration of magnets encourages students to discover what objects are magnetic and whether magnets attract through other materials. Investigation of magnets will include exhibits in the workshop area of the Collins Family My Big Backyard gallery. Program will run for two hours.

#### 30 MINUTES – INTRO IN THEATER - ALL STUDENTS

- Introduce basic concepts of magnetism

#### 30 MINUTES - LAB

- Introduce magnetic field
- Students explore whether magnets attract through objects

#### 30 MINUTES - GALLERY TIME

- Introduce the Collins Family My Big Backyard focusing on magnet activities
- Give time to explore the gallery

#### 30 MINUTES - STORE AND TREE ACTIVITY

- Mr. Red Magnet and Mr. Yellow Magnet: poles attract and repel
- Play "Attract and Repel" game

#### TAKE HOME ITEMS

Bookworm Magnets

### GEORGIA PERFORMANCE STANDARDS

S1CS1a; S1CS5a, b; S1CS6a, b; S1P2a-c

## MAGNET MANIA (5TH)

### DESCRIPTION

Third graders will build on their magnetic knowledge as they are encouraged to find out what a magnetic field will do and how to create a magnet using electricity. Students will further their knowledge while experimenting with magnets, electromagnets, and electricity in the garage exhibit in the Collins Family My Big Backyard gallery. Program will run for two hours.

#### 30 MINUTES – INTRO IN THEATER - ALL STUDENTS

- Review basic concepts of magnetism
- Demonstration of an electromagnet

#### 30 MINUTES - LAB

- Investigate three electromagnet activities and identify variables that affect the strength of an electromagnet

#### 30 MINUTES - GALLERY TIME

- Introduce the Collins Family My Big Backyard pointing out magnet activities
- Demonstrate electromagnetic exhibits
- Give time to explore the gallery

#### 30 MINUTES - STORE AND TREE ACTIVITY

- Game review "What attracts to a magnet and what doesn't?"

#### TAKE HOME ITEMS

Magnets

### GEORGIA PERFORMANCE STANDARDS

S5P3.a. S5P2.b.

## ENERGY QUEST - LIGHT! (4TH)

### DESCRIPTION

Enhance your fourth graders' understanding of the nature of light with this "enlightening" program, which introduces light as a form of energy. Students will conduct hands-on experiments into the properties of light, how it is affected by lenses, mirrors, and prisms, and explore concepts such as refraction, reflection, absorption, opaque, translucent and transparent. Students will also get a first-hand opportunity to experience light exhibits in Collins Family Big Backyard gallery. Program will run for two hours.

#### 30 MINUTES – INTRO IN THEATER - ALL STUDENTS

- Introduce characteristics of light
- Demonstration of properties of light using a laser

#### 30 MINUTES - LAB

- Students will explore the properties of both colored and white light, and how reflections change using various types of mirrors (concave, convex and plane).
- Students will investigate the creation of white light using colored light, as well as using various lens shapes to determine their appropriate use.
- Students will also test the effects everyday objects have on light.

#### 30 MINUTES - GALLERY TIME

- The Collins Family My Big Backyard will be introduced with focus on the greenhouse and light activities.
- Students compare the changes in their image in various mirrors.
- Review reflection, refraction, absorption, transparent, translucent and opaque concepts.
- Free time in the gallery.

#### 30 MINUTES - STORE AND TREE ACTIVITY

- TBD

#### TAKE HOME ITEMS

Rainbow Glasses

### GEORGIA PERFORMANCE STANDARDS

S4P1a-c; S4CS1b-d; S4CS8a,b; MGSE4MD.5a; MGSE4MD.6; MGSE4.G.1

## ENERGY QUEST - ELECTRICITY! (5TH)

### DESCRIPTION

Highlight your fifth grade study of electrical energy with this electrifying program. This program introduces students to the "hair-raising" topic of static electricity, gives them the basics for designing their own circuit boards and allows them to explore electricity and magnetism in the garage exhibit in the Collins Family My Big Backyard gallery. Program will run for two hours.

#### 30 MINUTES – INTRO IN THEATER - ALL STUDENTS

- Introduce static and current electricity
- Demo using electrostatic generator (static)
- Demo using energy balls (current)

#### 30 MINUTES - LAB

- Explore current electricity using the circuit boards

#### 30 MINUTES - GALLERY TIME

- Introduce the Collins Family My Big Backyard focusing on electricity activities
- Give time to explore the gallery

#### 30 MINUTES - STORE AND TREE ACTIVITY

- Do electricity review using circuit quiz boards

#### TAKE HOME ITEMS

Static Bags

### GEORGIA PERFORMANCE STANDARDS

S5P3a-c; S5CS1b-d; S5CS3a,d; S5CS4a