PLEASE NOTE: Parts of Level 1are currently under renovation while we prepare your next scientific adventure! For up-to-date construction information, please visit azscience.org/construction_updates.

First Grade Student Investigation

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ARIZONA SCIENCE CENTER

Updated September 2010

First Grade Investigation

This Investigation contains activities on a variety of topics found throughout the Center. Exhibits are sometimes removed temporarily for repair or refurbishment, or may be in use by other groups, so be prepared to be flexible.

Investigation Activities

Level 1: All About Me in the Steele Foundation Gallery - opens Sept. 26 to members and Sept. 27 to the public! The W.O.N.D.E.R. Center – Coming Soon!

Find out just what makes you, YOU!

Level 3: Forces of Nature in the Sybil B. Harrington Galleries

What's the Weather?

The weather is all around us. It is an important part of our lives and one that we cannot control. Instead, the weather often controls how and where we live, what we do, what we wear and what we eat. Someone who studies the weather is called a meteorologist. Forecasters who you see on television make weather predictions.

Where to go

Immersion Theater; check when the next showing will start. The show runs frequently throughout the day.

What to do

Explain that different parts of the world experience different types of weather. Ask the students:

What are some types of weather you have you experienced?
What are some other types of storms you have heard of before?

Stand on the stage and enjoy the forces of nature. After the show ask the students:

What types of weather did you experience?
What types of damage did the weather cause?
How can weather change your life and the lives of others?

What's That Rock?

Geology is the study of Earth. A geologist is a person who studies the Earth. Remember, igneous, sedimentary, and metamorphic are the three main types of rocks. Did you know there are specific features we can look for in rocks to determine which type they are?

Where to go

Earth Rocks: Take a Closer Look

What to do

Have students use the magnifying eye to look at examples of each type of rock. Ask the students:

What do you notice about the rocks?
Can you describe them?
Do all of the rocks look the same? Why or why not?
How would you sort these rocks into groups? Which ones would go together?

Dig In!

Erosion shapes the land around us. Wind and water are two types of erosion that breaks down the land around us. Wind erosion is when light objects, such as rocks and pebbles are carried by the wind and can hit landforms, eroding materials off them, which are carried off in the wind. Water erosion occurs by the force of the water flowing over rocks and soil. Over time, when rocks, pebbles or even boulders smack the riverbed, or side, further erosion occurs. Bits and pieces of rock, soil and earth are carried down river.

Where to go

Stream Table

What to do

Encourage the students to play at the stream table to see how water changes a mound of sand they build, a dam they build, and a layer of sand they spread out on the table.

Ask them to create the slow moving river, without any standing water.

Have the students predict how the water will change their sand formations. What happened at first? Later?

Level 4: Solarville in the APS Solar Gallery

We're All In This Together!

An **ecosystem** is a community of living and non-living things that work together. Ecosystems have no particular size. An ecosystem can be as large as a ocean or as small as a lake.

The water, water temperature, plants, animals, air, light and soil all work together. If there isn't enough light or water or if the soil doesn't have the right nutrients, the plants will die. If the plants die, animals that depend on them will die. Ecosystems in nature work the same way. All the parts work together to make a balanced system.

Where to go

Ecosphere

What to do

Tell the students they are looking at an ecosphere and give the students a few minutes to observe it.

Ask them to describe what they notice (this ecosystem contains green algae, a rock, water and tiny shrimp).

Have the students try to identify the living and the nonliving aspects of the ecosystem.

Ask the students why they think this ecosystem needs both living and nonliving things to survive? What would happen if one part was removed from the ecosystem?

The Answer is Blowin' in the Wind

The wind can be used to make electricity. Electricity that comes from the wind is called **wind energy**. Wind energy is known as a **renewable energy** because we can use it over and over without using it up. Old-fashioned windmills are very similar to wind turbines that are used today that collect energy from the wind and turn it into electricity.

Where to go

Do It Yourself Wind Power

What to do

Read the Do It Yourself Wind Power exhibit out loud with your students.

How many wind turbines are needed to generate power to 1,000 homes?
List two pros (advantages) for using wind energy.