

F4 FOCUSED FIELD TRIPS

PLEASE NOTE: Parts of Level 1 and all of Level 4 are currently under renovation while we prepare your next scientific adventures! For up-to-date construction information, please visit azscience.org/construction_updates.

Fourth Grade Student Investigation

600 E. WASHINGTON • PHOENIX, AZ 85004 • 602-716-2000 • AZSCIENCE.ORG

ARIZONA
SCIENCE
CENTER 

Updated December 2009

Fourth Grade Investigation

The Investigation contains activities on a variety of topics found throughout the Center. Each activity directly supports the Arizona state science standard (listed in the Teacher Guide). Exhibits are also 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 You Gallery, in the Steele Gallery - Coming Soon! The W.O.N.D.E.R. Center - Coming Soon!

Coming soon! Find out just what makes you, YOU!

Level 2: Get Charged Up!

Electric Circuits

Electric current is created with electrons move along an electrical path. When the path is connected in a loop it is called a closed circuit. Current is the measure of moving electrons flowing through a circuit. A circuit must be closed in order for the moving electrons to energize or power electrical devices.

Where to go:

Get Charged Up! Gallery (level 2)

What to do:

Choose a circuit board from the rack at the “Electric Circuits” exhibit. Follow the directions to complete a circuit.

What happens when the circuit is open? _____

Try this: Use a resistor and light bulb to make a circuit. Measure the current using the voltmeter with the red and black probes. Now, add another resistor to the circuit. Measure the current again. Are there any differences? Why or why not? _____

Does It Conduct?

An electrical conductor is a material that allows electrons to flow through it, therefore letting electricity flow easily. Copper is widely used in electrical wiring because of its ability to conduct current easily.

Where to go:

Get Charged Up! Gallery (level 2)

What to do:

Make a prediction on whether the following materials are electrical conductors:

Steel nails: _____

Rubberband: _____

Magnet: _____

Smashed Pennies: _____

Now test these materials and compare your results with your predictions.

Level 3: Forces of Nature, Sybil B. Harrington Galleries *and* Level 1: Many Hands Make a Home Gallery

Here Come the Winds of Change – And Other Forces Too

Natural forces such as wind and earthquakes can shape the land we live on.

Where to go

Sculpt With Wind, Shake It Up, and Rift Zone

What to do

Activate the various forces of change in each exhibit.

What changes do you observe?

Which of the forces do we have in Arizona?

Do some forces appear to be more powerful than others? Why or why not?

Desert Water

We may live in a desert, but when the monsoons arrive Arizona can get sudden and very heavy rains! This heavy rain can create different types of river formations in the sand. Can you create and identify some river formations you might have seen in Arizona?

Where to go

Stream Table

What to do

Experiment with the sand and water and see how landforms can affect the flow of water. Now, using the paddles, try to create the following river formations in the sand:

Meander – rounded, S-shaped bend or loop in a river

River fork – a point along a river where a second river branches off from the first

Sandbar – shallow deposit of sand found on the inside of a river bend where the currents are slower.

What to do

Go downstairs to the Many Hands Make a Home Gallery, and look at the aerial photo of the Phoenix Valley. Find the Salt River as it cuts across Phoenix from northeast to southwest (N is up, W is left).

Can you find examples of the 3 river formations in this real river system?

Level 4: Solarville, in the APS Gallery

Coming soon! This new, brightly-colored, eco-friendly gallery will offer hands-on exhibits presenting solar energy in a whole new light!