

Activities for Exhibit Exploration

Grade 1

This worksheet is intended to help adult supervisors guide young students as you explore our exhibits together.

Rhoads Sculpture

Topic: Energy in our Lives

- Why do the balls move?
- Are there any parts of the sculpture that move without input from people? What kind of energy are these parts using?
- Lift a ball to the top of any of the tracks. What kind of energy does the ball have before you let it go?
- Let the ball go and observe what happens. What kind of energy does the ball have now? Is there any sound produced as the balls move? (*sound is energy*)

Where to go:

Outside
KidSpark

LEVEL

4



Rhoads Sculpture

Be a Builder

Topic: Materials, Objects and Everyday Structures

- Using the multi-materials table, build a structure that will support the weight of your shoe without tipping or collapsing. Test, re-design and re-build it as necessary.
- Which materials were best?
- Which part of the building is the widest?
- What kinds of shapes did you use in your design to make it stable and strong?
- If you were to create a life-size version of your building, what would you change about the materials and design?

Where to go:

KidSpark

LEVEL

4



Be a Builder

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Magnified Materials

Topic: *Materials, Objects and Everyday Structures*

- Hold some fabric under the camera and look at the screen. What is the fabric made of?
- Compare two different fabrics. Now compare them under the microscope.
- What do the different fabrics have in common? (*same colour, both fuzzy*)

Where to go:

KidSpark

LEVEL

4



Magnified Materials

Animal Blocks

Topic: *Needs and Characteristics of Living Things*

- Construct a plant or an animal. Using the adaptations that you see, can you explain which type of environment each plant or animal lives? (*e.g. webbed feet for swimming, fur for warmth*)
- Construct a different plant or animal (or combination) to meet specific needs. For example, create an organism that would survive in hot, humid, conditions, swims and eats plants.
- Create a fantasy animal of their choice and explain its adaptations.

Where to go:

KidSpark

LEVEL

4



Animal Blocks

Earth Moon Sun

Topic: *Daily and Seasonal Changes*

- Find the Earth and describe how it is moving. (*The Earth is spinning, and also circling the sun.*)
- Watch the Earth spinning in the model. How long does it take the Earth to spin once in real life? (*24 hours*)

Where to go:

Space Hall

LEVEL

4



Earth Moon Sun

- Can we feel the Earth spinning? (*No*) Ask students to think of some reasons why we cannot feel the Earth spinning. (*The Earth spins steadily and moves at a constant rate in its orbit around the sun. Humans, the atmosphere, skyscrapers and everything else spin along with the Earth at the same constant speed.*) Discuss what it feels like to ride in a car or fly in an airplane. If you keep your eyes closed, you cannot feel any motion as long as the ride is smooth.
- Watch the Earth as it orbits around the sun. How old are you? If you are 7 years old, that means the Earth has orbited around the sun 7 times since the day you were born!
- Watch closely and you will see eclipses. What happens during a solar eclipse? (*The Moon passes between the Earth and the Sun casting a shadow on the Earth.*) What happens during a lunar eclipse? (*The Moon passes into the shadow of the Earth.*)

Solar System Orrery

Topic: Daily and Seasonal Changes

- How many different objects can you count in this exhibit? (*8 planets and the sun.*)
- Where are the objects moving faster? Slower? (*The planets nearer the middle have faster cycles; the planets farther out have longer cycles.*)
- The big thing in the centre of the model is the Sun. Where is our planet Earth? (*The 3rd planet out.*) How does Earth's movement or cycle compare to some of the other planet cycles? (*e.g. in the middle – not as fast as the 2 inner planets, not as slow as the outer planets.*)
- How many things can you think of that happen in one Earth cycle around the Sun? (*e.g. my birthday, Halloween and other holidays, 12 months, 365 days, spring, summer, fall, winter, etc.*)

Where to go:

Space Hall

LEVEL

4



Solar System Orrery

Slide

(Available from Spring to Fall)

Topic: Materials, Objects and Everyday Structures

- With a friend try the slide.
- What is the slide made from? What supports or holds up the slide? (*A tree or a log; the ground*)
- Is it a living or non-living thing? (*It was made from a living thing but is no longer living. It no longer needs air, water, food etc.*)
- Describe the properties of the surface of the slide. Is it smooth or rough? Is it fast or slow? Is it hard or soft? What colour is it?
- What else could you make a slide from? (*There are a variety of answers including metal, plastic, fabric...*)
- Does someone in your group slide faster or slower than the others? Why? (*Material of their clothing is different. Some materials slide faster than others.*)
- In winter when you go tobogganing why do you slide on a toboggan instead of just your clothes?

Where to go:

Cohon Family
Nature Escape
(outside)

LEVEL

6



Slide

Race Against Resistance

Topic: Materials, Objects and Everyday Structures

- With a friend or two, choose an iron and race it down one of the slides. Which iron/slide combination is the fastest? The slowest? Why do you think this is?
- Which slides prevent some of the irons from sliding easily? What are these materials used for? Why would it be important that they aren't slippery?
- Choose your favourite iron. Based on its properties, what would this material be used for?

Where to go:

Weston Family
Innovation Centre

LEVEL

6



Race Against Resistance

The Rainforest

Topic: Needs and Characteristics of Living Things

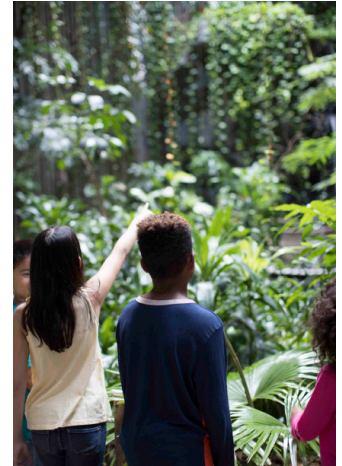
- Walk inside – how does the environment change in the Rainforest? (*warmer, humid, sounds of water*)
- Look around. What are some living things in the Rainforest? (*plants, trees, fish, frogs, snails*)
- What are some non-living things in this environment? (*water, rocks, soil*)
- Choose a living thing in the ecosystem and describe how it is adapted to this environment.
- What type of ecosystem do you live in? What characteristics of your ecosystem allow you to survive?

Where to go:

The Living Earth

LEVEL

6



The Rainforest

Pedal

Topic: Energy in our Lives

- What activities do you need a lot of energy for? Do you think you can use your energy to run a television set or light up a bank of lights?
- Pedal the bike and observe the results. What type of energy is this? Where do you get your energy from to pedal the bike?
- What type of energy usually runs a television or a set of lights?

Where to go:

Science Arcade

LEVEL

6



Pedal