

NAME: _____



Activity One



Wind Direction

A weather vane tells which way the wind is blowing. Some are very fancy. You can make a simple one.

This is what you need:

- a straw
- a sheet of thick paper
- a pin
- a pencil
- some clay

This is what you do:

1. Cut a slit in each end of the straw.
2. Cut shapes out of the paper that look like the ends of an arrow. The tail end should be bigger than the pointy end.
3. Put the pieces of paper in the slits in the straw.
4. Make a ball of clay and stick the pointy end of the pencil in it. You could also stick the pencil in the ground or in the dirt of a flower pot.
5. Push the pin half way through the middle of the straw.
6. Push the pin into the eraser on the end of the pencil.



This is what a weather vane looks like.

When there is wind, the weather vane will point to the direction the wind is blowing from.

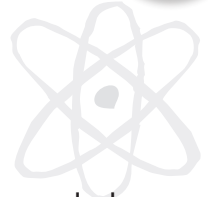
What direction is the wind blowing?

How many times does the direction change?

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Activity Two



Take a Close Look at the Moon

The Moon looks a lot different when you look at it more closely. The picture below shows what it looks like through binoculars or a telescope. These are things that make things look closer. You can see these here:



Get some binoculars or a telescope. Your school or your parents might have them. Look at the moon. Try to make sure it is a full moon.

What do you see?
Is the Moon smooth or bumpy?
Does it look like big things have been hitting the Moon?

Did you know that you can only see one side of the Moon? You will never see the other side unless you go there. Why is the same side of the Moon always facing Earth?



This is what the Moon looks like through binoculars or a telescope.



Activity Three



Look at Fossils in a Museum

Visit a museum that has a lot of fossils. The fossils of the big animals are the most exciting. There will also be fossils of small things, like plants, fish and bugs. They are all interesting. The ones in the picture are called dinosaurs. They all died many years ago. They are like the lizards we see today, but they were much bigger. Most of the fossils in the museum will be of things that no longer live on Earth.



These are fossils. They are from dinosaurs.

While at the museum, find all the different fossils you can find. For each fossil, answer the following questions:

1. What is the fossil of? _____
2. Where was it found? _____
3. How old is it? _____
4. Does it still live today? _____
5. If it's no longer on Earth, how did it disappear? _____
6. What is 1 interesting fact about it? _____



Activity Four

Life “Down Under”

You know that the Earth is tilted to one side. This makes the seasons change. When the north half of the Earth is tilted toward the Sun, it is summer in that part. Six months later it is winter. This is because the north half is tilted away from the Sun.

But what about the southern half of the Earth? They have their summer when we have our winter. Australia is a big country in the southern half of the Earth. They have the same holidays as people in the northern half. They have them at the same time. In Australia, Christmas is in their summer. This is because it is summer in December for them.

They change a few things. On the day after Christmas, they like to go to the beach. They build sandmen instead of snowmen. They sing the same holiday songs but they change some of the words. They don't sing about snow.



A sandman—instead of a snowman—on an Australian beach in December.

Read about the holiday season in Australia. You will learn some interesting things. Try to find the answers to these questions:

- When do students have their summer vacation?
- What kind of trees do Australians use to decorate their houses?
- What kind of holiday food do people eat?
- What pulls Santa's sleigh?

Here is another interesting thing to think about. Australia is called “Down Under.” But is it? If you look at a map, you will see that America is on top and Australia is on the bottom. This is because the first people to make maps lived in the northern part. They thought they lived on the top. Earth really has no top or bottom, though. Earth just floats through space, and there is no up or down in space. Think about it.



Activity Five



Study a Tilted Earth

In this activity, you will study how the light of the Sun falls on Earth and the Moon. You will learn what makes day, night, sunrise, and sunset. You will learn how the light of the Sun falling on the Moon makes it seem to change shape.

This is what you will need:

- a bright flashlight
- a baseball, a softball or a grapefruit
- a dark room
- a globe

A globe is a map of the Earth in the shape of a ball. A globe looks more like the real Earth than a flat map does. It should be the kind of globe that is on a stand and can spin. It will be tilted the way Earth is tilted.



This is what you do:

- 1.** Get into groups. One person is in charge of the Sun (flashlight). One person is in charge of the Earth (globe). One person is in charge of the Moon (ball or grapefruit).
- 2.** See day and night. In a dark room, place the flashlight so that it shines on the globe. The flashlight is the Sun. Slowly turn the globe. As you face it, turn it so it spins toward your right hand. See how the part of Earth in sunlight changes.
- 3.** Can you find where you live on the globe? If not, just pick a spot. Slowly spin the globe. Watch how the Sun rises on that spot. Spin it more and watch how the Sun sets.
- 4.** Turn the globe stand so that the top is tipped toward the flashlight. This is summer in the north and winter in the south. Spin the globe. Can you find a place that is never dark? Can you find a place that is always dark? Can you change the globe so that it is winter in the north and summer in the south?
- 5.** The ball or grapefruit is the Moon. The Moon circles the Earth about where the middle (equator) is. Carry the ball (the Moon) around the globe with the flashlight shining. Watch how the lit and shaded parts of the Moon change. Where is the Moon when it looks full? Where is the moon when it is all dark? Where is the Moon when it is half lit?











Activity Six



Looking for Rocks

In this activity, you will look for different kinds of rocks. Eight kinds of rocks are shown below. Get a notebook and tell about the rocks you find. Tell where you found them and what they look like. Tell how hard they are.

Limestone 	White in color. Comes in all sizes. Sometimes a whole mountain is made of it. This layer formed from the bones and shells of dead sea animals.
Sandstone 	Sand in color. Look for it in cliffs. These cliffs often have pretty stripes of red, yellow, and orange. Formed mostly from Sand.
Coal 	Black in color. Sometimes shiny. It is a layer that settled. Forms from a layer of dead plants. You won't see it lying around on the ground.
Quartz 	Clear like glass. Looks something like diamond. Pieces can be found in most other kinds of rock. When it isn't pure, it can have different colors. Pure quartz is clear and is in pieces with six sides.
Granite 	Usually gray in color. It has little bits of other things in it. Look for black dots and bits that sparkle.
Basalt 	Dark gray in color. Formed when melted rock cools very slowly. It can take the form of tall towers with six sides.
Obsidian 	Black in color, shiny and smooth. A kind of glass. Formed in volcanoes. Sometimes you can see through it a little. Native Americans used it to make arrowheads and other tools.
Lava rock 	Black or red in color. It is what melted rock turns into after it flows out of a volcano and then cools. It is lighter than most rocks because it has air bubbles in it.