Explore the

Outdoors





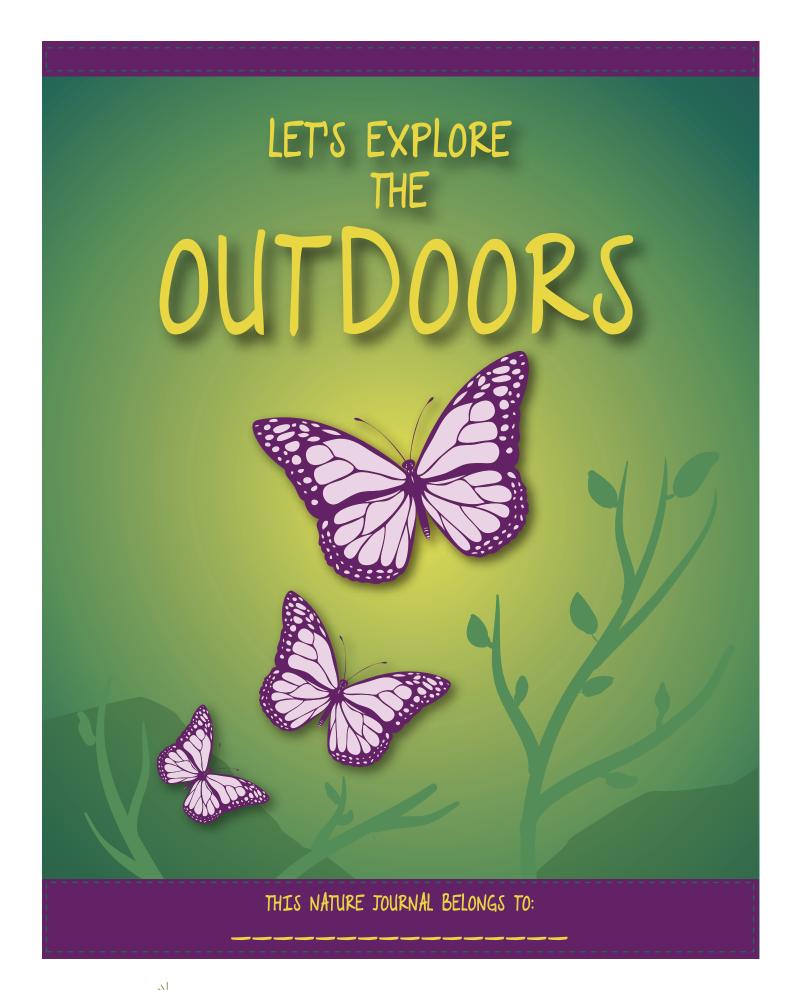


Table of Contents

Explore the Outdoors

Let's Explore the Outdoors My Goals for the Outdoors Magnifying Glass **Animal Tracks Checklist Bug Identification Chart** Flower Identification Chart Name the Parts of a Plant What is Photosynthesis? Tree Rings Petrified Forest, Arizona Yellowstone National Park Grand Canyon, Arizona **National Parks** National Parks Map Weather Forecast Label the Clouds **Cloud Gazing Shadows** Make Your Own Sundial Star Gazing

Certificate of Completion

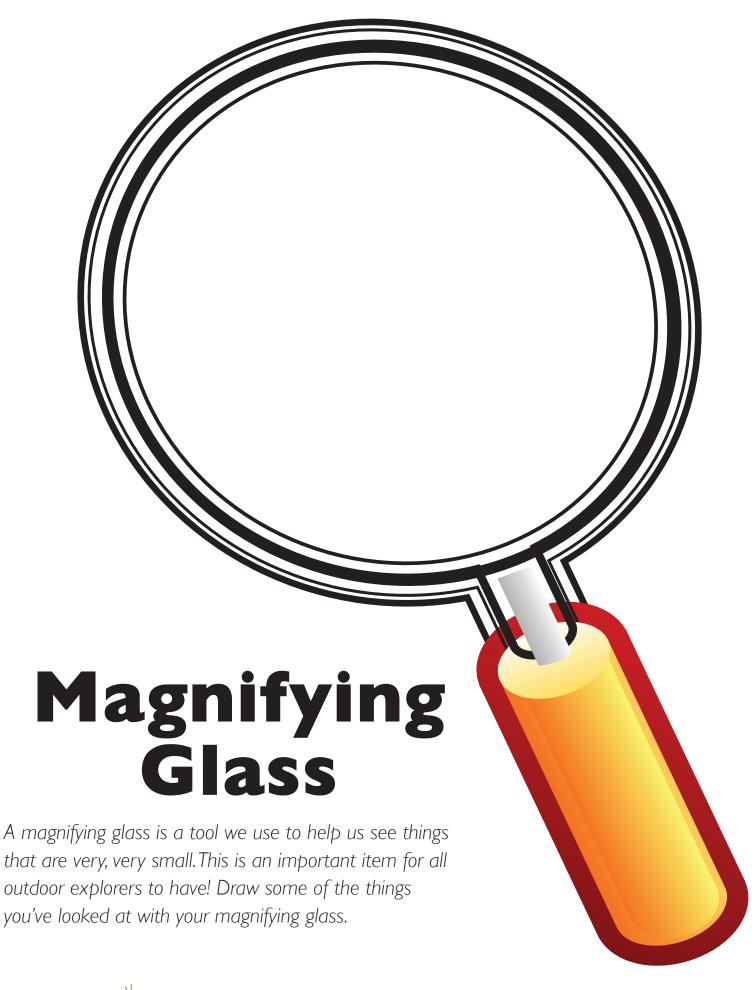


MY GOALS FOR THE OUTDOORS

A GOAL IS SOMETHING YOU WANT TO DO OR ACHIEVE. IT IS IMPORTANT TO SET GOÄLS AS A WAY TO CHALLENGE YOURSELF, AND IT IS A GREAT FEELING WHEN YOU MEET YOUR GOALS. USE THE SPACE BELOW TO WRITE SOME GOALS FOR YOUR OUTDOOR EXPLORATION!

I-WANT-TO-VISIT	NATIONAL-PARK
I-WANT-TO-SEE	
I-WANT-TO-RUN/WALKMILES	- IN MONTHS.
EVERY WEEK-I-WILL-PLAY	OUTSIDE.
EVERY DAY-I-WILL-GO	OUTSIDE.
I-WANT-TO-LEARN-HOW-TO	
I-WANT-TO-HIKE-AT	
I-WANT-TO-CAMP-AT	
I-WANT-TO	
I-WANT-TO	





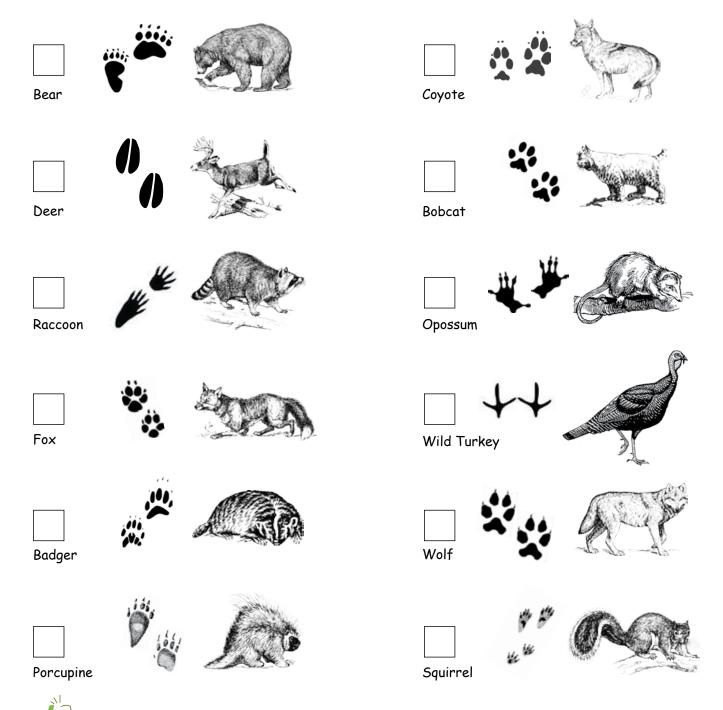
Animal Tracks Checklist

While walking through the woods, look out for signs that animals have been there before you.

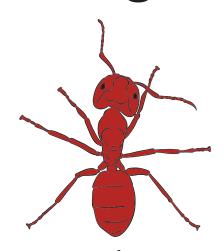
Check the soft ground like sand, mud or snow, for animal tracks. Mammals of the dog and cat families walk on four toes. You can see the claws in dog's prints, but cats retract their claws. Bears, raccoons, and rodents walk on five toes. Some animals have human-like hands, and others have hooves.

The animals pictured below are all North American Animals.

When you go on hikes, carry this checklist and check off the animal tracks you see.



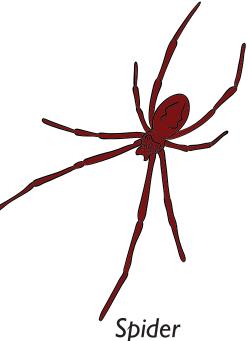
Bug Identification Chart



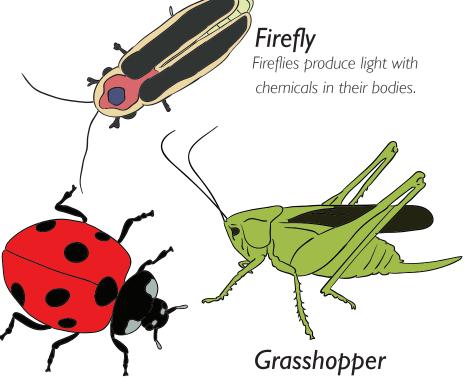
Ant colonies have one queen who lays thousands of eggs.



Bees help plants grow by spreading the pollen around to other plants.

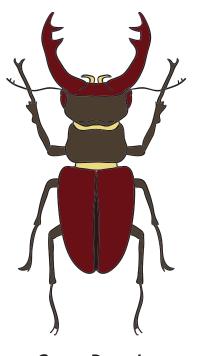


Some spider build web communities where up to 50,000 spiders may live.



Ladybug Ladybugs protect crops by eating plant-eating insects like aphids.

An adult grasshopper can leap 10 times it's length.



Stag Beetle
The large antlers on a stag
beetle are really mandibles,

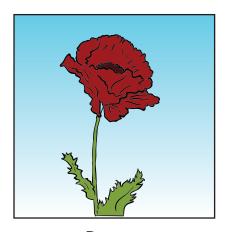
beetle are really mandibles, which are its jaws.

them in the spaces below. Then write dov	vn 1 or 2 observations about each insect!
Color:Shape:	<u>-Color: Shape:</u>
This insect is:	This insect is:
Color:Shape:	-Color: Shape:
	This insect is:

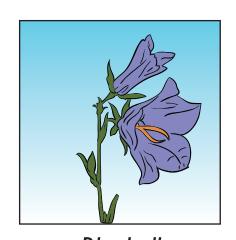
Now it's time to go outdoors for some observation. That means watching and noticing

important or interesting things about an object. Find 4 insects that you like and draw

Flower Identification Chart



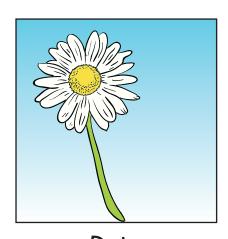
PoppyThis is the state flower of California.



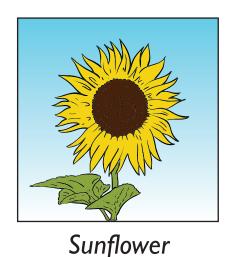
Bluebell
This purple flower hangs
like a bell.



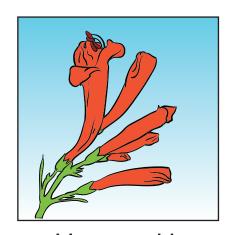
DandelionThis flower's name means lion's tooth.



Daisy
Daisy means "day's eye"
because daisies open as
soon as the day begins.



The sunflower's bloom looks like the sun.



Honeysuckle
Many honeysuckles have a
sweet smell. They are bell
shaped and make a
nectar that you can eat.

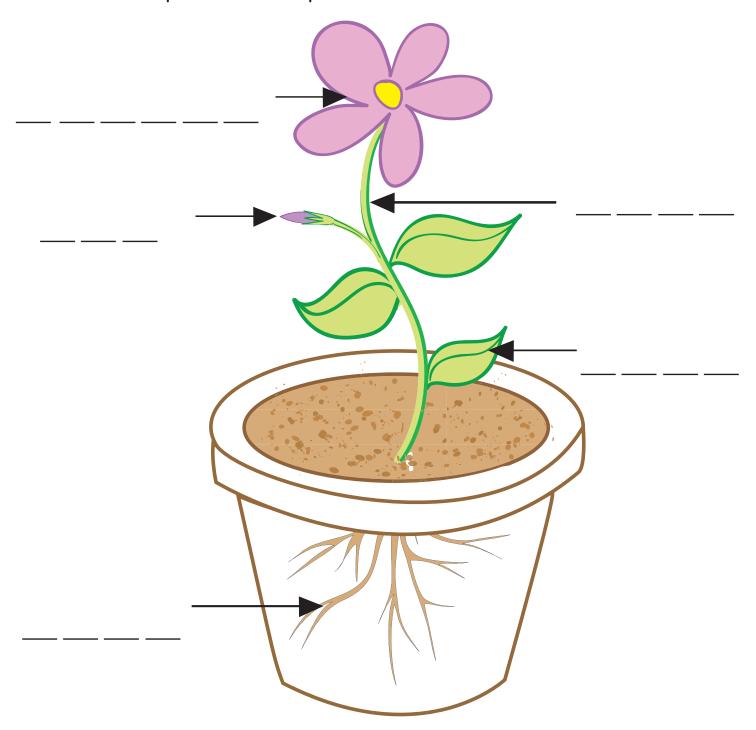
them in the spaces below. Then write dow	vn 1 or 2 observations about each flower!
Color:Shape:	-Color: Shape:
This flower is:	This flower is:
Color:Shape:	-Color: Shape:
This flower is:	This flower is:

Now it's time to go outdoors for some observation. That means watching and noticing

important or interesting things about an object. Find 4 flowers that you like and draw

Name the different parts of a plant

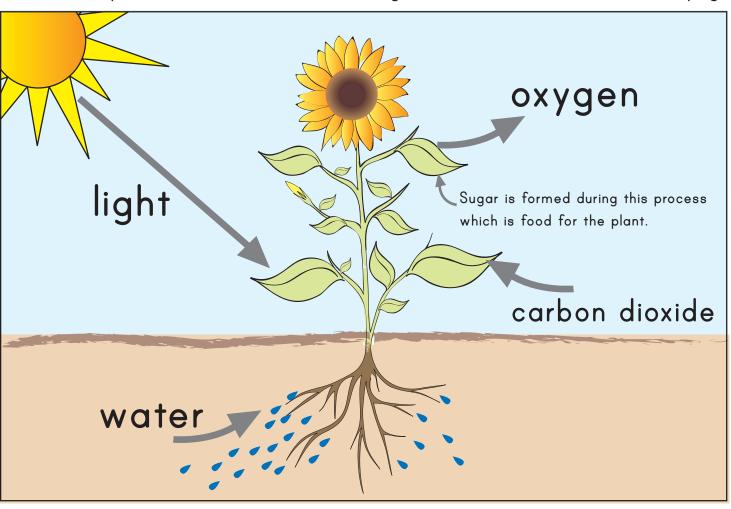
Choose the correct word from the bottom of the page to name each part of the plant.



stem flower root bud leaf

WHAT IS PHOTOSYNTHESIS

Look at the picture and fill in the blanks using the words at the bottom of the page.



Photosynthesis is a process where plants	use
from the sun to co	nvert
from the ai	r and
from the soil into	
to feed the plant and	_ is
given out in the air.	

water, sugar, carbon dioxide, light, oxygen

TREE RINGS

We can find out a lot about a tree by looking at the rings in its trunk. To see the rings, we must look at a cross section of the trunk, just like this!

First year growth

One ring usually stands for one year of the tree's life.

Rainy Season

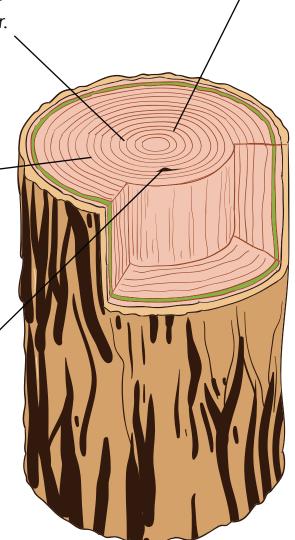
A wide ring means there was lots of rain that year.

Dry Season

A thin ring means there was no rain that year.

Fire Damage

A dark mark means the tree was damaged that year.

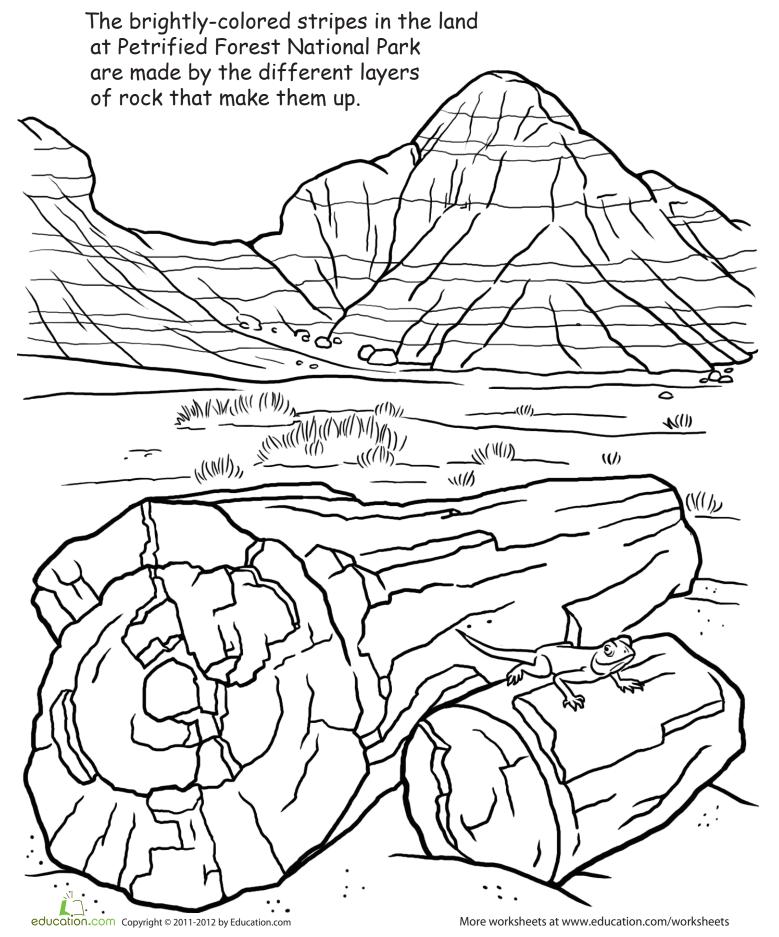




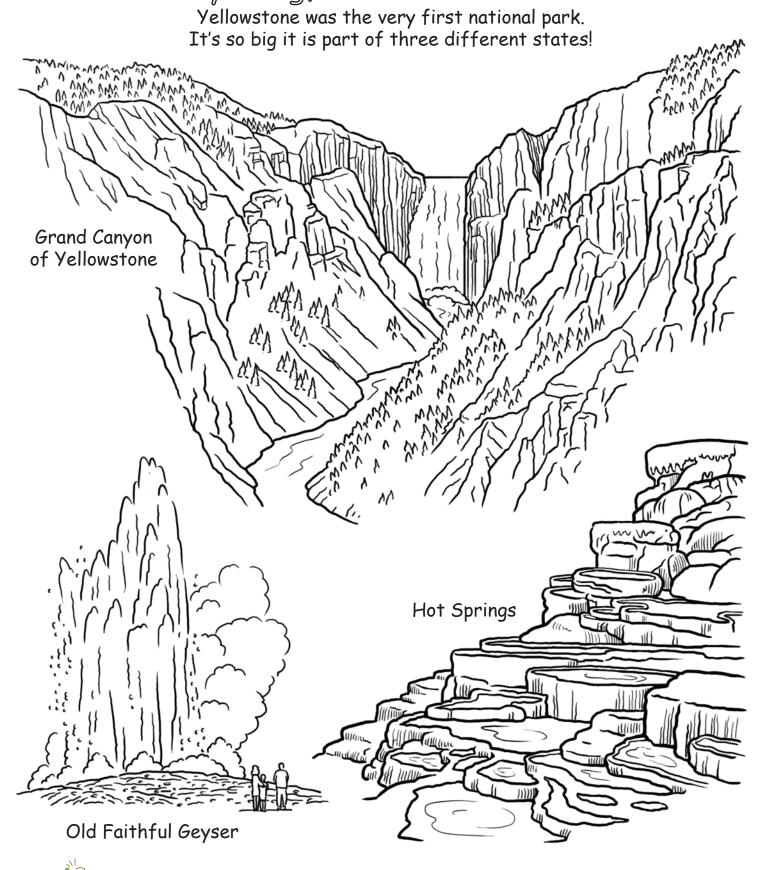
On your next outdoor adventure, if you come across a tree stump, take a look at its rings. Can you count how old the tree was? Did it have any damage?

Draw a picture of it here:

Petrified Forest, Arizona



Yellowstone National Park, Wyoming, Montana and Idaho



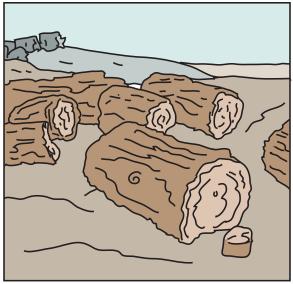
Grand Canyon, Arizona

The Grand Canyon was created over the course of two billion years. It is considered to be one of the wonders of the natural world!

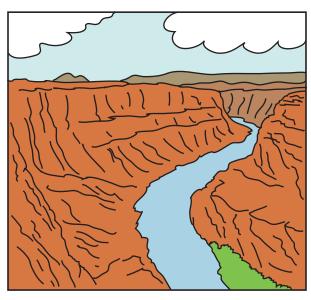


National Parks

National Parks are large areas of protected land. It is important for the United States to keep these parks safe so they can be enjoyed by everyone for a long time. There are almost 400 protected areas in the U.S.! 58 of these protected areas are officially known as national parks.



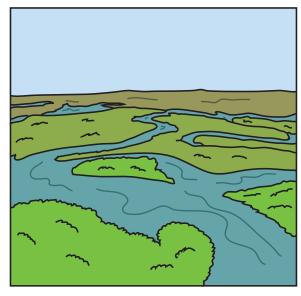




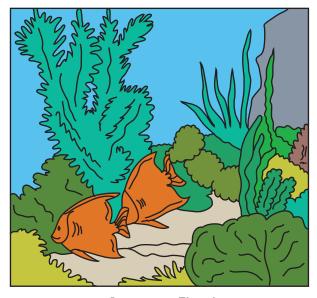
Grand Canyon, Arizona

Many places are protected because they are a special part of nature.

Other national parks exist to protect endangered animals living there.



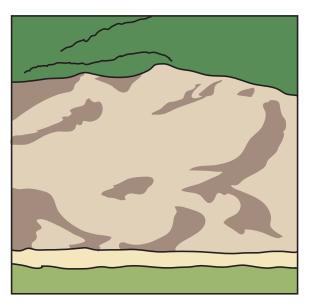
Everglades, Florida



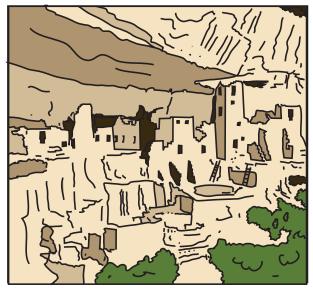
Biscayne, Florida



Other places are protected because they are an important part of our country's history.



Great Sand Dunes, Colorado



Mesa Verde, Colorado

Did You know...

The first national park was Yellowstone, in Wyoming, established in 1872.

The newest national park is the Great Sand Dunes, established in 2004.

The pools in Hot Springs National Park are known to have healing powers.

The wood in the Petrified Forest National Park is 225 million years old.

Redwoods in Redwood National Park are the tallest species of tree.

There are rocks in the Grand Canyon that are 2 billion years old.

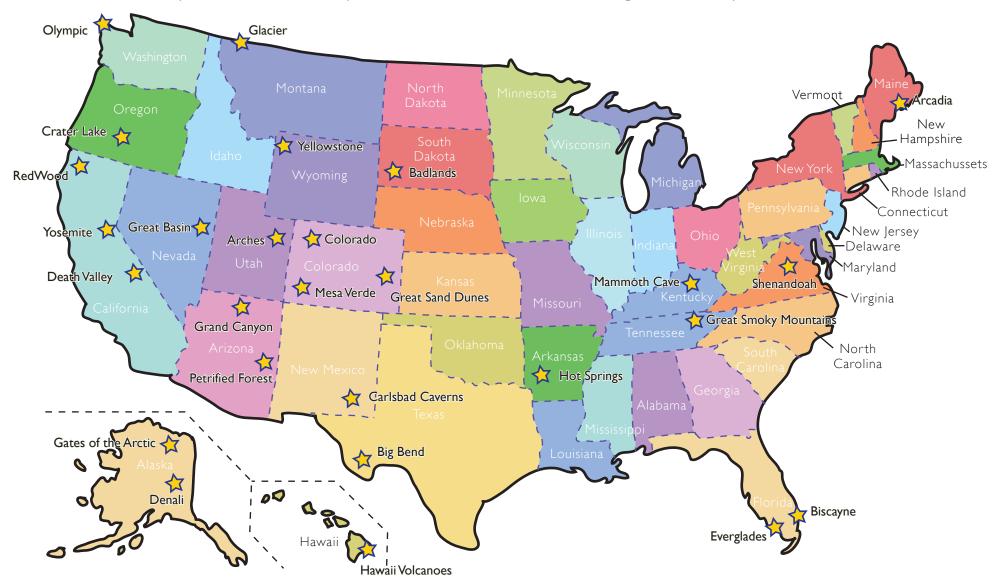
The lava in the Hawaii Volcanoes is 2,150 degrees.



Do you know any of the National Parks in your state? List the ones you know, and explain why each park is a special part of nature or U.S. history.

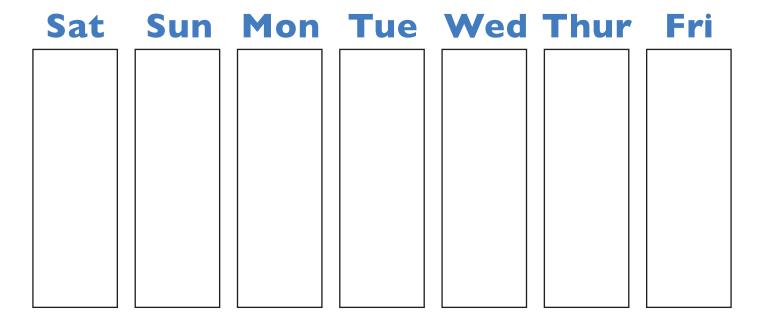
National Parks Map

The United States has 58 National Parks. Here are some of the most famous parks. If you can think of any National Parks that are missing on this map, fill them in!



Weather Forecast

Can you predict the weather? Draw a picture of what the weather looks like today, and how you think the weather will look the rest of the week. Each day, check to see how close your predictions were!



Here are some of the symbols used to write a weather forecast.

Can you guess what they mean?









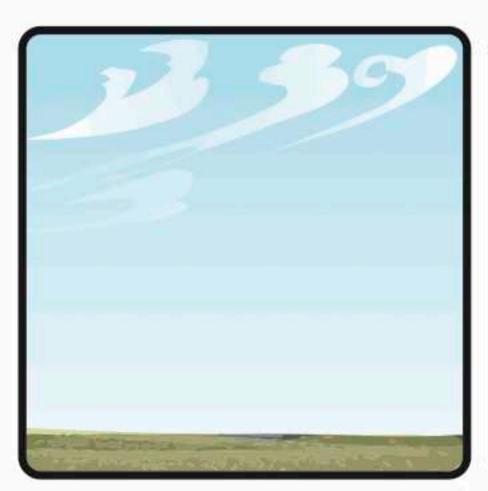
LABEL THE CLOUDS

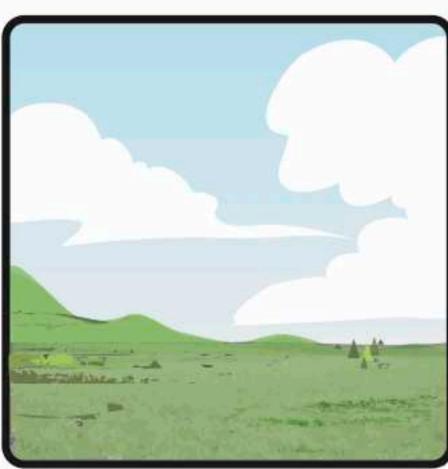
DIRECTIONS: Label the types of clouds based on the definitions below













CIRRUS - High-altitude feathery thin, white, curly shaped clouds. **CIRROCUMULUS -** High-altitude, small, wispy, patchy puffy clouds that form in rows.

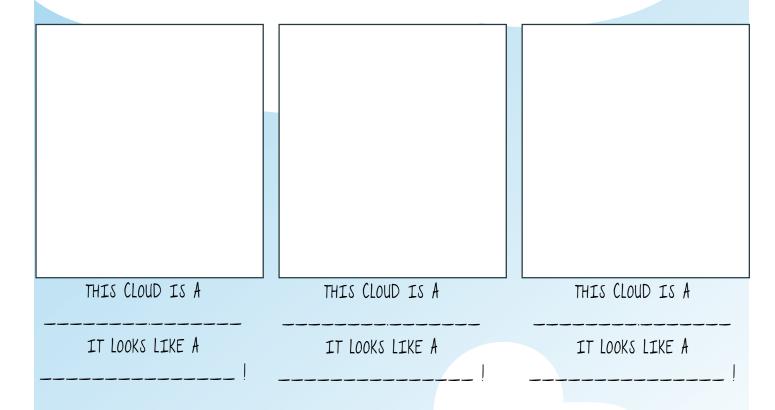
CIRROSTRATUS - High-altitude thin whispy clouds. When they cover the sky, they are so thin that it looks like a white sheet. **CUMULUS** - Low-altitude fluffy white clouds, typical of hot weather

STRATUS - Low-altitude horizontal, grey, wispy clouds NIMBOSTRATUS - Low-altitude dark rain clouds



ENJOY A SUNNY DAY BY LOOKING AT THE CLOUDS!

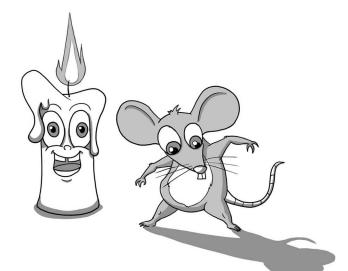
YOU'LL NEED: A GRASSY FIELD OR MEADOW, A BLANKET TO LAY ON,
AND A PARTNER TO CLOUD-GAZE WITH! BE SURE TO BRING A PENCIL
AND DRAW THE FUNNY SHAPES YOU SEE IN THE CLOUDS.



CIRRUS: HIGH UP, FEATHERY, THIN, WHITE, CURLY SHAPED
CIRROCUMULUS: HIGH UP, SMALL, WISPY, PATCHY, PUFFY, IN ROWS
CIRROSTRATUS: HIGH UP THIN, WISPY, LIKE WHITE SHEETS
CUMULUS: LOW, FLUFFY, WHITE, TYPICAL OF HOT WEATHER
STRATUS: LOW, HORIZONTAL, GREY, WISPY
NIMBOSTRATUS: LOW, DARK, RAIN CLOUDS

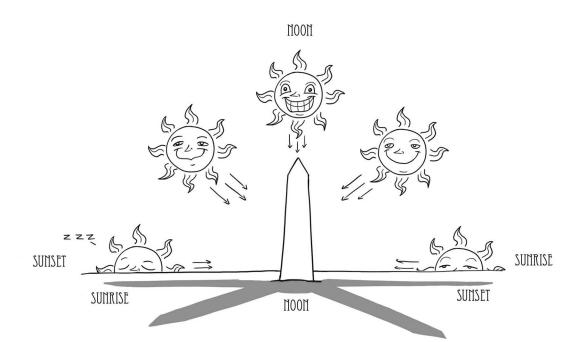
SHUDOMS

Hi everyone! My name is Dill – short for Can Dill. I'm here to teach you about shadows.



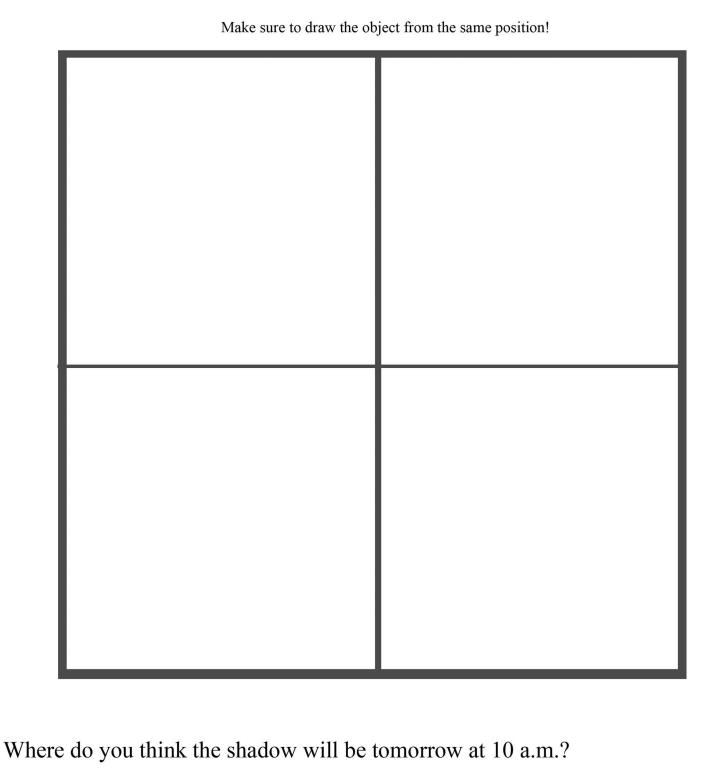
A shadow is created when an object blocks light. All solid objects have a shadow. Take a look at my friend here. The shadow on the ground is created by the light of my flame being blocked by the mouse's shape.

When you're outside, the sun casts shadows everywhere. Shadows appear in different positions based on the time of day.



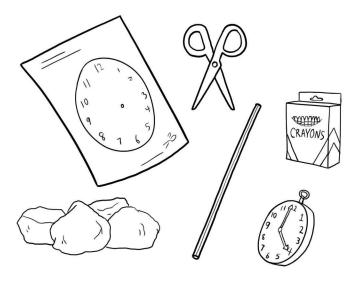


On a sunny day, place an object outdoors. Check on it every two hours. Has the shadow moved? Draw a picture of the object and its shadow in the boxes below each time you check on it.



Make Your Own Sundial

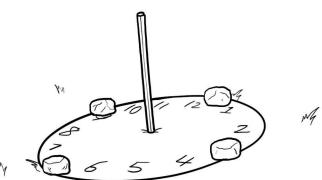
Remember: Never look directly at the sun.

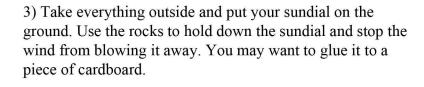


What You Need:

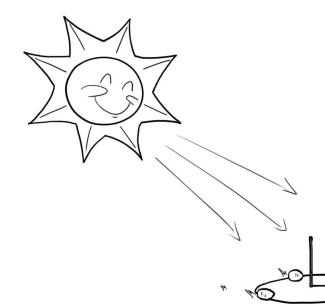
- 1) The second page
- 2) Safety scissors
- 3) 4 rocks
- 4) A straw or coffee stirrer
- 5) A clock
- 6) Crayons

- 1) Cut out the sundial on the second page.
- 2) Decorate your sundial, filling in the circles with numbers so that it looks like a clock. Feel free to use more then just crayons to decorate with!



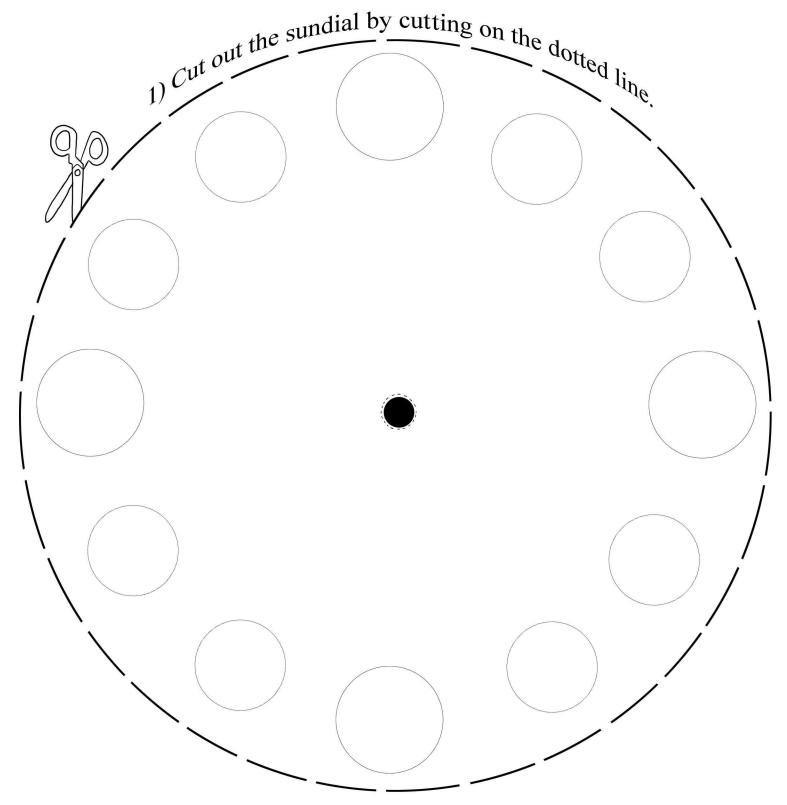


- 4) Stick the straw or coffee stirrer into the center of the sundial so that it goes into the ground.
- 5) Use a clock to see what time it is. Turn you sundial so that the shadow cast by the straw points to the correct hour on your sundial.
- 6) Observe how the shadow moves like the hands on a clock. Why does the shadow move?



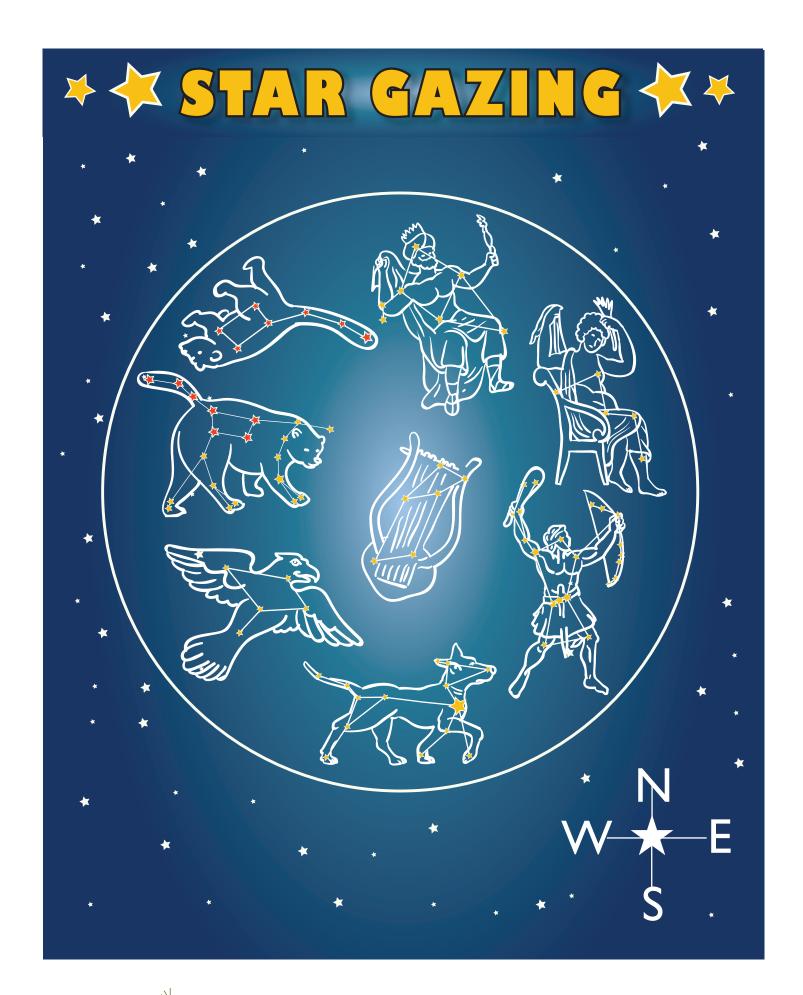
Sundial

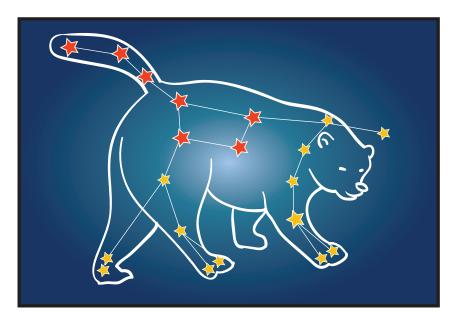
If you need help cutting, ask a grown-up for help.



- 2) Cut out the small black hole in the center of the sundial.
- 3) Use your crayons to fill in the 12 other circles with numbers like on a clock.
- 4) Decorate your sundial! Have fun and use your favorite colors!

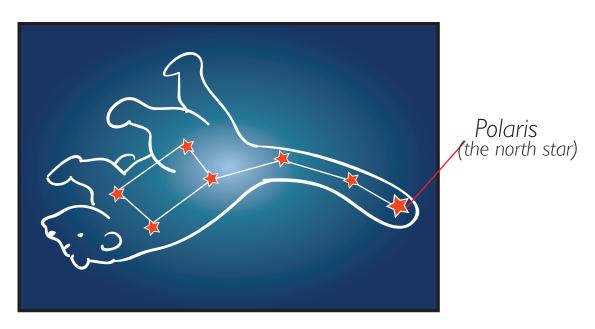






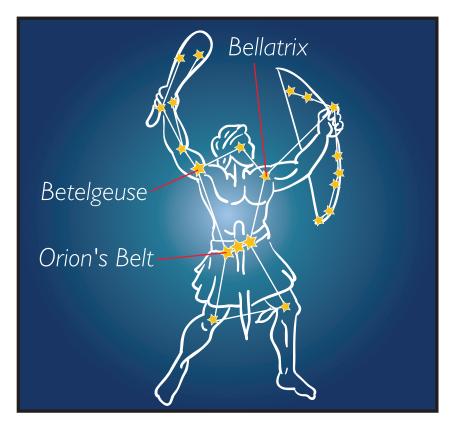
Ursa Major (big bear)

A woman named Callisto was turned into a bear by an angry goddess, Hera, and was put up in the sky, where she still lives today. The orange stars are known as the Big Dipper.



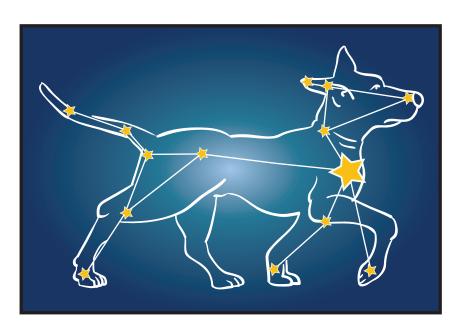
Ursa Minor (little bear)

The little bear is Arcas, Callisto's son. He was also turned into a bear and put up in the sky. The orange stars are known as the little Dipper. Polaris (the north star) is the tail of the little dipper, an important star that hunters and travelers can use as a compass to find north.



Orion

Orion was a hunter in ancient Greek mythology. After he was killed by a scorpion, the gods put him up in the sky. Orion's Belt - The three brightest stars in the Orion constellation.



Sirius (the dog star)

Orion's hunting dog Sirius is the brightest star in the sky!



Cassiopeia

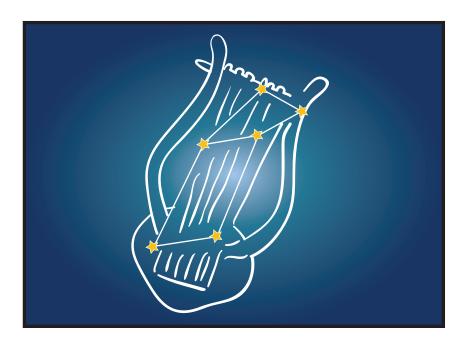
Cassiopeia was a very vain, self-centered queen. The gods hung her upsidedown in the sky as punishment.



Cepheus

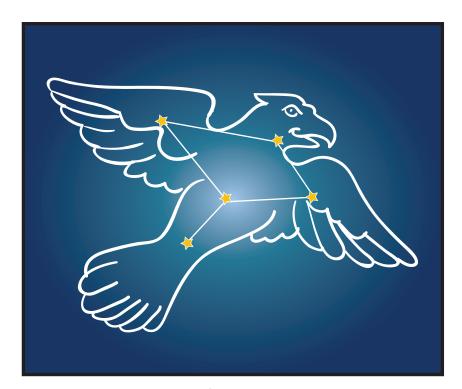
Cepheus, the king, was Cassiopeia's husband.





Lyra/Lyre

The lyra was a stringed instrument that Orpheus used to charm wild animals. When he died, the lyra was placed in the sky to honor him.



Aquila

Aquila was an eagle of the gods. He did many things for the gods, such as carry Zeus' thunderbolts.

