

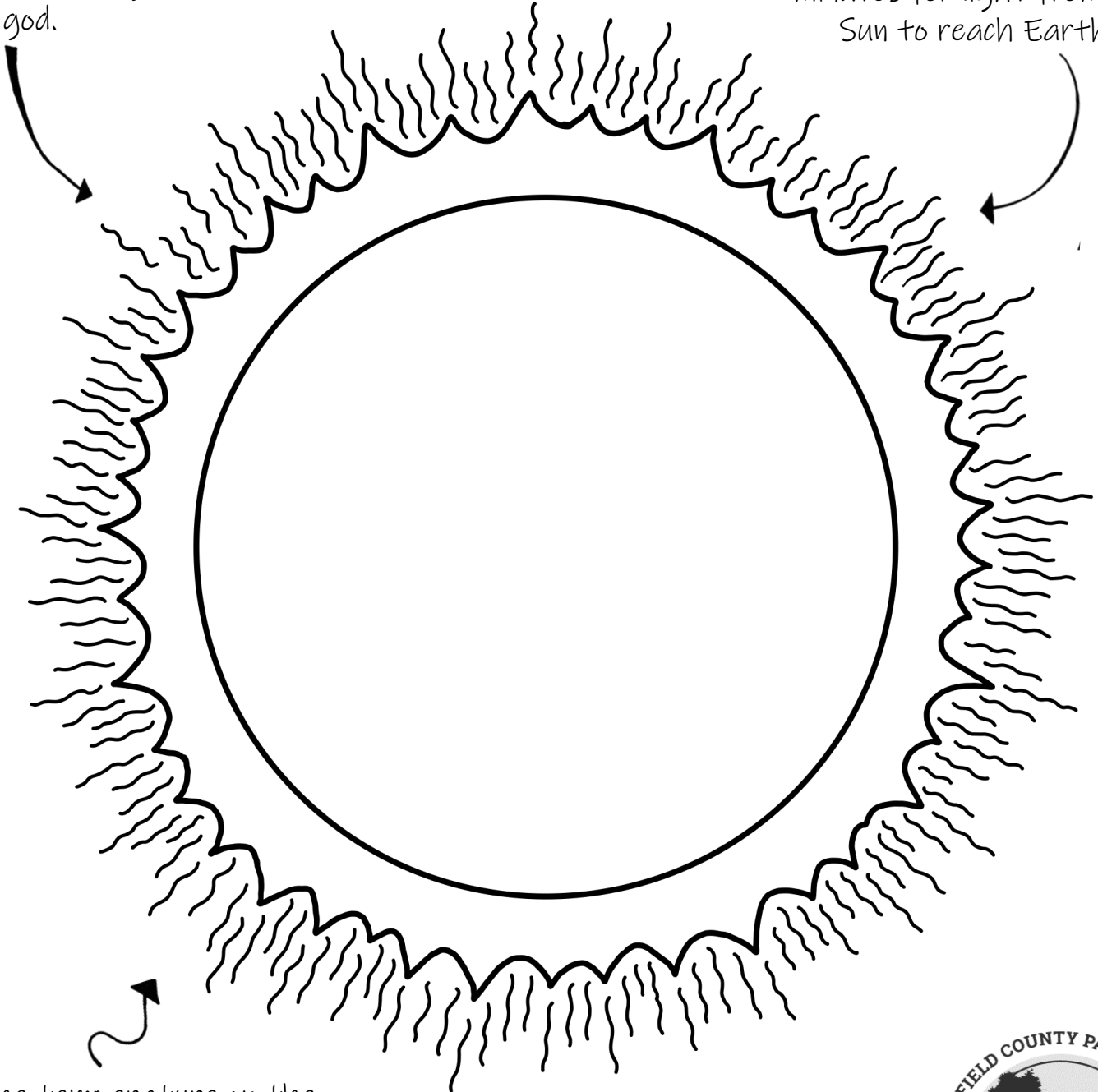
This homeschool activity is appropriate for grades: K through 2

# Get to Know: The Sun

The Sun is a star, the only one we can see during the daytime. The Sun is the most important source of energy for life on Earth.

The Sun is so important to life on Earth that many ancient civilizations, such as the Aztecs, Egyptians and Romans, saw it as a god.

It takes around 8 minutes for light from the Sun to reach Earth.



The temperature on the Sun is about 9,941 degrees Fahrenheit!

**For more visit:**  
[FairfieldCountyParks.org](http://FairfieldCountyParks.org)



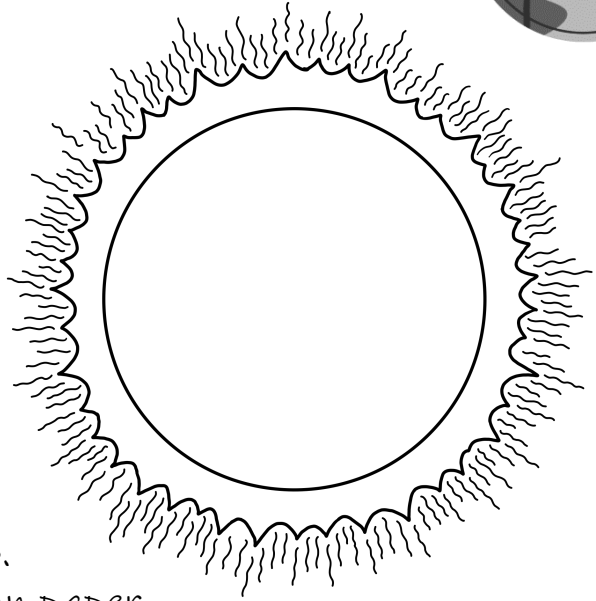
# Solar Energy Experiment

This experiment will help you understand solar energy and absorption.



## You Will Need:

- A sunny location outdoors
- ★ A helpful adult
- 6 pieces of colored construction paper
  - White
  - Yellow
  - Red
  - Black
  - Green
  - Blue
- 6 ice cubes
- Clock



## Procedure:

1. Find a sunny location outdoors to set up.
2. Set out six different colors of construction paper.  
If it is windy, tape or weigh down the paper so they don't fly away.
3. Put one equal-sized ice cube on each piece of paper.
4. Watch the clock. Make some predictions- which ice cube do you think will melt first. Which do you think will melt last? Why?
5. Use the chart below to remember which ice cubes melted first.

## Observation

Melted Fast ←

→ Melted Slow

Color:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ANSWER:** The ice cubes on the darkest colored paper should melt first, while the lighter colors last longer. Why? The color black absorbs the most light. It is the most efficient solar collector. White reflects most of the light and should melt the slowest.

# Solar Oven S'mores

Harness the energy from the sun to make a yummy snack!



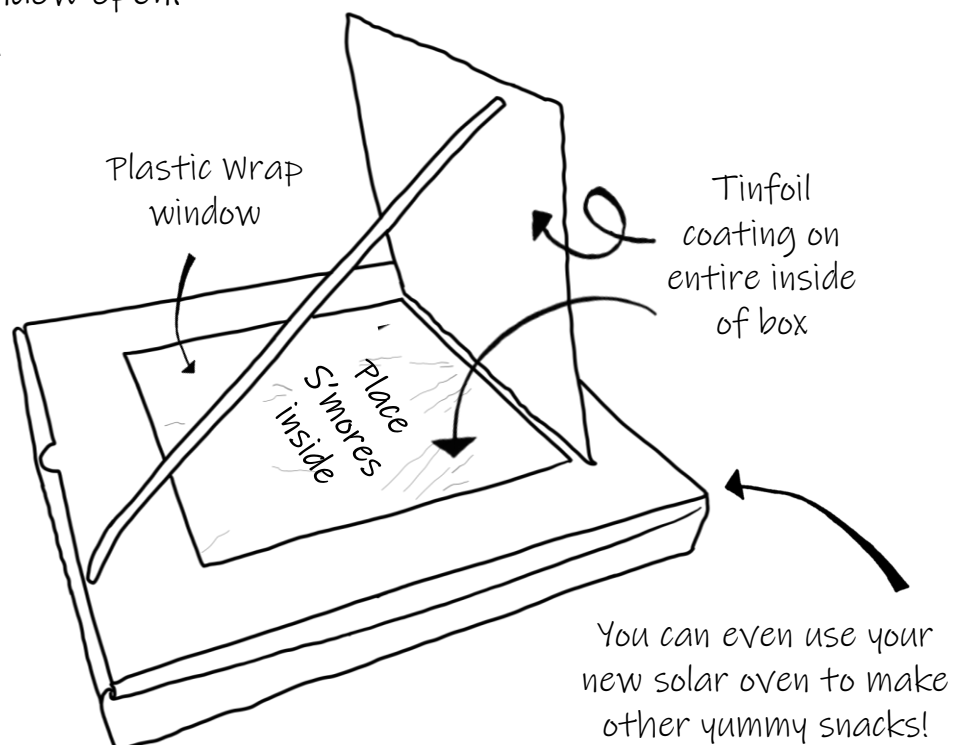
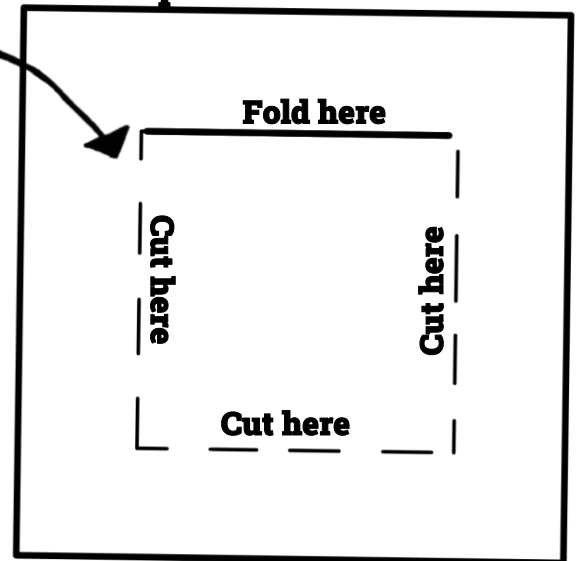
## You Will Need:

- ★ A helpful adult
- Clean and empty Pizza Box
- Tinfoil
- Tape and glue stick
- Clear plastic wrap
- Scissors or a box cutter (ask an adult)
- Stick (about 1 foot long)
- Graham crackers
- Marshmallows
- Chocolate Bar

## Instructions:

1. Cut three straight lines on the lid of your pizza box. Ask an adult for help.
2. Coat the entire inside of the box (including the inside of the flap) with glue, then cover it all with tinfoil, making it as smooth as possible.
3. Prop open the flap, and tape a large piece of plastic wrap to create a window.
4. Use a stick to keep the window open. Secure it with tape.
5. Wash your hands, then assemble the s'mores. Place them inside the solar oven, with the window open. Put oven in a sunny location.
6. Watch your s'mores to see when they're ready to eat! Depending on the amount of sunlight, they should be ready in 20 to 30 minutes!

### Top view of Pizza Box



# Make Your Own Sundial



A sundial is used to tell the time of day using sunlight and shadows. Sundials are the oldest known device used to tell time. There are many different types of sundials, but each one usually has a *gnomon*, the item that casts a shadow, and a flat platform.

## How it Works:



The Earth is always spinning on its axis. As Earth spins, the sun appears to move across the sky. Really, we are the ones who are moving! Throughout the day, as the sun's position changes, the shadow it casts aligns with markings showing the time of day. Sundials are not always completely accurate, and cloudy weather can often make them difficult to use!

## Human Sundial

This activity works best if you start in the morning (around 9am) and end in the afternoon (around 3pm). Make sure you have sunny weather in the forecast!

### You Will Need:

- A sunny day
- ★ A helpful adult or a friend
- Large concrete or sidewalk area
- Sidewalk chalk
- Yardstick
- Clock

### Instructions:

1. Find a sunny location outdoors. You will need a large area with concrete, like a playground or sidewalk.
2. With chalk, mark a big X on the area where you will stand.
3. Stand on your chosen spot. Have your helper trace your shadow with chalk.
4. Using the yardstick, draw a straight line from you, through your shadow. Write down the time above your shadow.
5. Repeat steps 3 and 4 throughout the day, marking the time above the line at the top of your shadow.

### Observations:

What did you notice about your shadow? Did it move throughout the day? What else changed about your shadow? What do you think caused these changes?

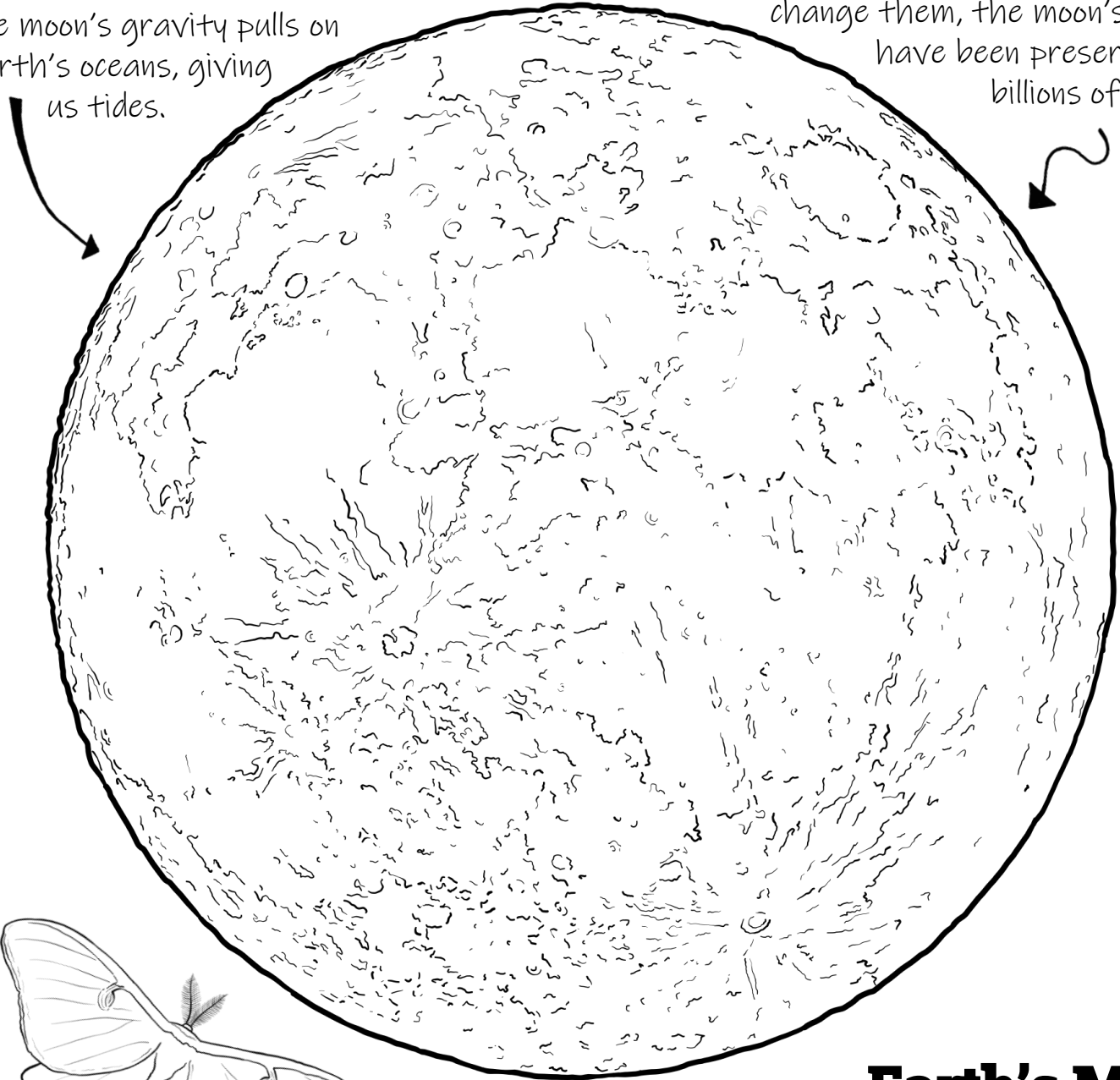
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# Get to Know: Earth's Moon

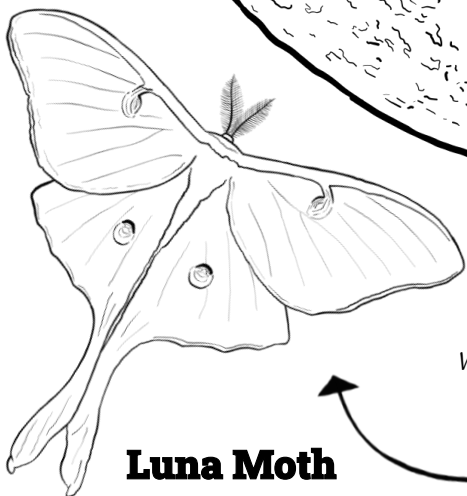
The moon is the largest and brightest object in our night sky. It is also the only place outside of Earth that humans have personally visited and set foot.

The moon's gravity pulls on Earth's oceans, giving us tides.

Since there is not any weather on the moon to change them, the moon's craters have been preserved for billions of years!



## Earth's Moon



**Luna Moth**

'Luna,' means moon, this giant silkworm received its name from the moon-like eye-spots on its wings!

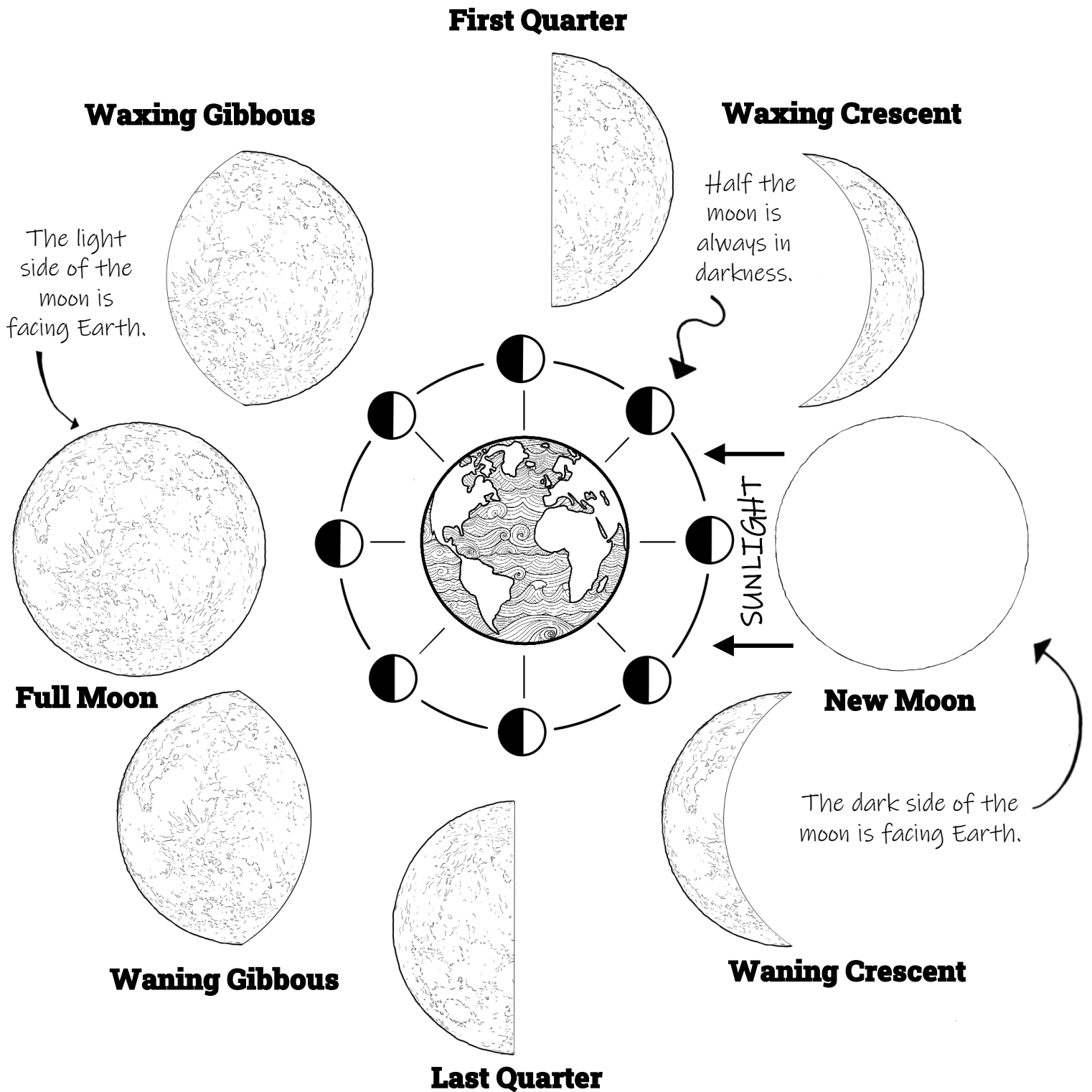
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# Moon Cycle



Here are the eight phases of the moon and why they happen. Sunlight lights up half of the moon at all times, but as it orbits around Earth sometimes the lit part cannot be fully seen. The moon can appear as full, or only a section of the sunlit part can be seen (crescent or quarter moon), and sometimes it cannot be seen at all (new moon)!



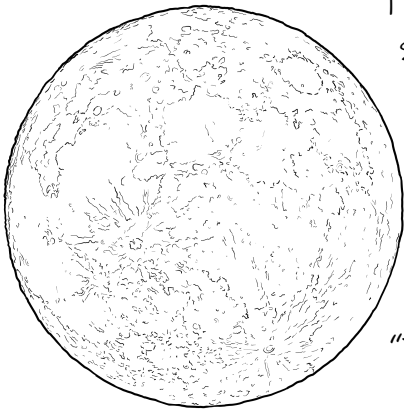


# The Fox in the Moon

This short story has been adapted from Peruvian folklore. Peru is a country in South America. The area is home to sections of the Amazon Rainforest and the Andes Mountains. Indigenous cultures in the region have a long history of storytelling, and this legend has been shared for many hundreds of generations.



A long, long time ago, Fox and Mole were the best of friends. On nights when the moon was full, they liked to sit outside in the bright moonlight.



They would often stay up late into the night talking and sharing stories. One night, Fox told Mole that his biggest wish was to travel to the Moon. Mole didn't care at all about going to the Moon, all he wanted to do was eat worms- yummy worms for breakfast, lunch and dinner.

"I'd love to go to the Moon," said Fox, "what a wonderful place it must be!"

"That's the craziest idea I've ever heard!" answered Mole, "The moon is so high up, it's just impossible."

"I have a plan," replied Fox, "I'll wait for the crescent moon, then we can tie a very long rope to the Moon and climb up. It should be easy!" Mole frowned; he didn't really want to go to the Moon. Fox lied, "did I tell you there are worms on the Moon?"

"There are?" Mole asked.

"Yes!" Fox fibbed, "Big, juicy worms, as many as you can eat!" And this is how Fox convinced Mole to journey with him to the Moon.



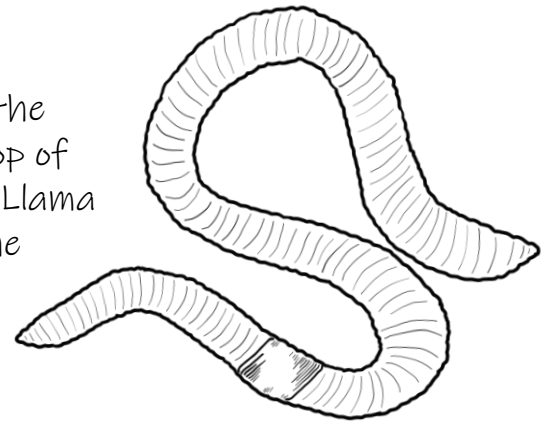
The next night the two friends collected all the dried grass they could find, and began to braid it into the longest rope in the world. They worked together night, after night, until the rope was finished. Then, they waited for a crescent moon to appear in the sky.

Finally, the Moon was the right shape, just a sliver. Fox and Mole went to visit Bear in his cave. Fox asked, "Bear, you are the best tree climber of all. Can you please climb to the top of the tallest tree, and tie this rope around the Moon?"

Bear said he would do his best.

Bear climbed to the top of the tallest tree. When he got to the top, he stood on the tips of his paws, and stretched as far as he could go, but he could not reach the Moon.

Next, Fox and Mole asked Llama for help. "Llama, you are the best mountain climber of all. Can you please climb to the top of the tallest mountain and tie this rope around the Moon?" Llama said she would do her best. Llama climbed to the top of the tallest mountain. When she got to the top, at the edge of the mountain, she stretched her neck as far as she could go, but she just could not reach the Moon.



So, Fox and Mole asked Condor, a bird, for help. Fox asked "Condor, you can fly higher than anyone else. Can you please fly high up into the sky and tie this rope around the Moon?" Condor said he would do his best.

Condor took the rope with his beak and flew high into the night sky. When he flew as high as he could, he stretched out his neck and was able to tie the rope around the Moon!

"Hurray!" Shouted Fox and Mole from the ground. "Thank you, Condor!" The two friends tied the other end of the rope to a tree, and Fox immediately began to climb. "Come on, Mole!" yelled Fox as his friend watched him climb higher and higher. Mole was a little scared, the Moon was just so far. He thought of Fox telling him about all the big, juicy worms on the Moon. Taking a deep breath, he closed his eyes, and nervously began to climb.



Up, up and up they climbed. Up past the tallest tree, and past the tallest mountain. Mole was getting worried, "Uhhh, Fox? Are we almost there?"

"Almost there- just keep thinking about the worms!" Fox replied, "And, don't look down!"

Higher they climbed, past the highest cloud. Then, Mole looked down. He got so dizzy that he fell, down, down, down, to the ground. He landed so hard that he went deep underground, into the Earth. That is why, to this day, moles still live underground.

And Fox? Fox climbed the all the way to the Moon and lived there for the rest of his life. If you go outside on a clear night with a full Moon, you can still see the shape of Fox on the surface of the Moon.

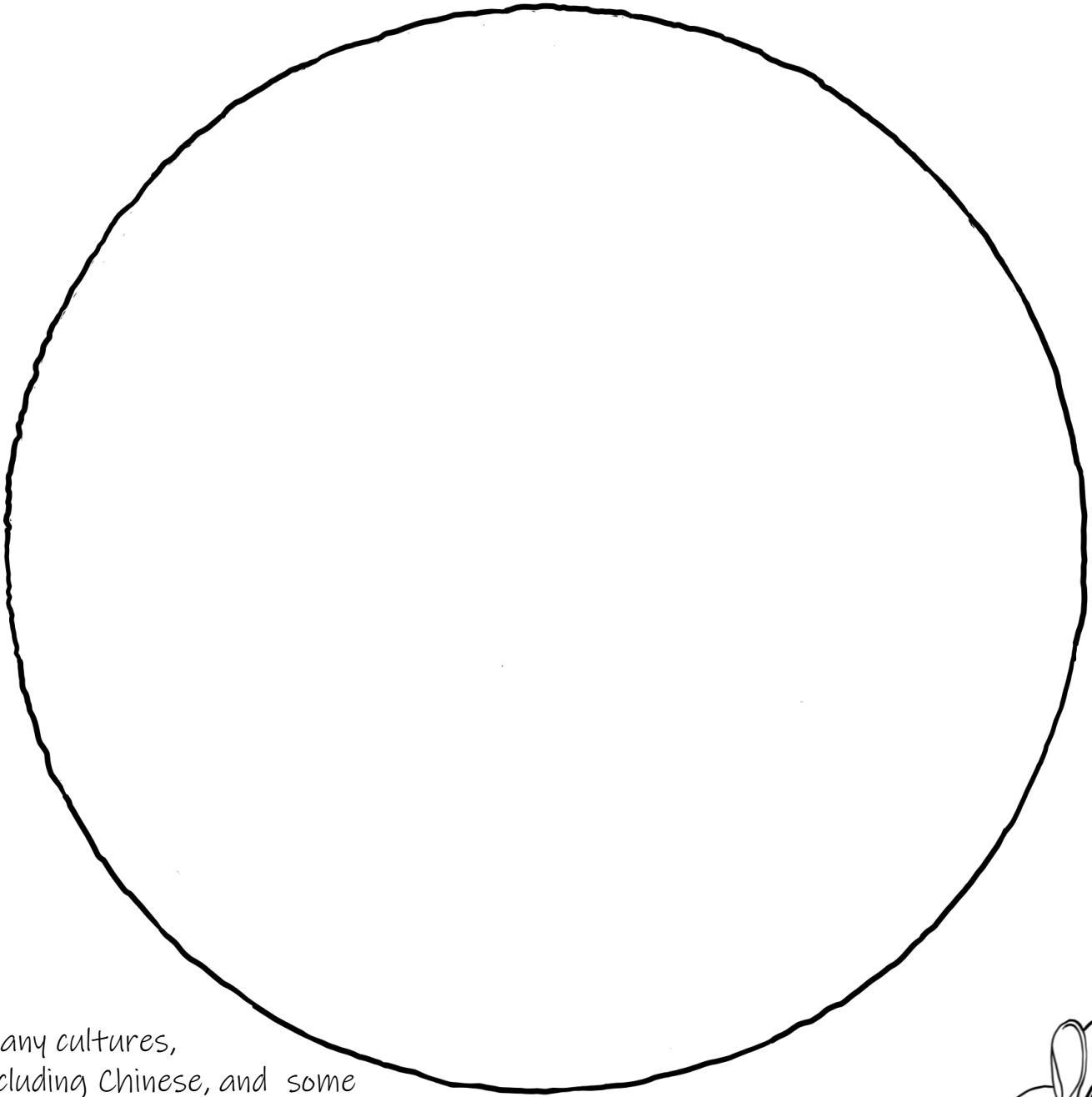




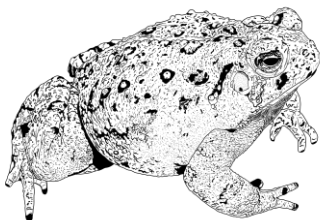
# Draw the Moon



Over the centuries, cultures across the world have different stories about the face of the moon. There is the traditional man and lady of the moon, but also legends of other creatures. Go outside on a night with a full moon and draw what you can see on the moon's surface.



Many cultures, including Chinese, and some indigenous tribes of the Pacific Northwest have legends about a toad or frog on the face of the moon!



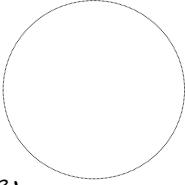
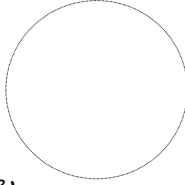
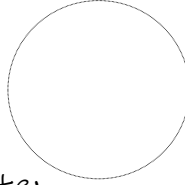
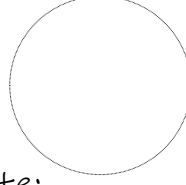
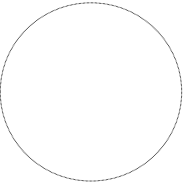
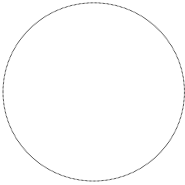
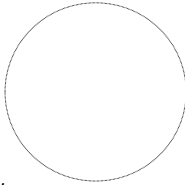
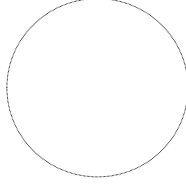
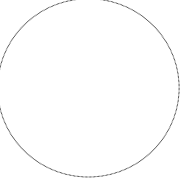
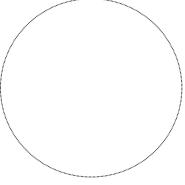
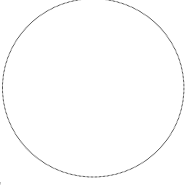
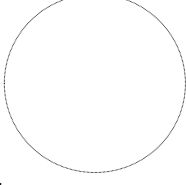
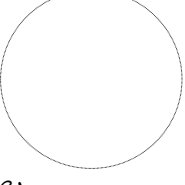
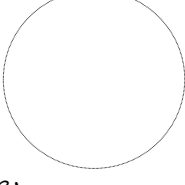
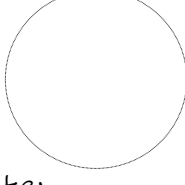
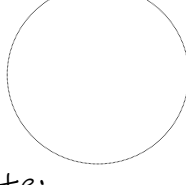
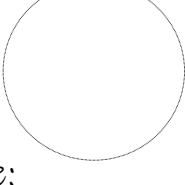
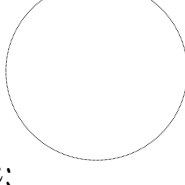
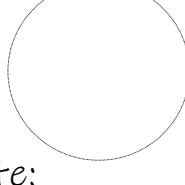
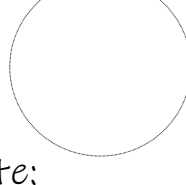
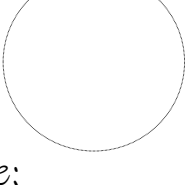
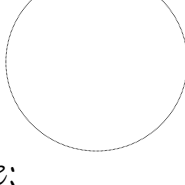
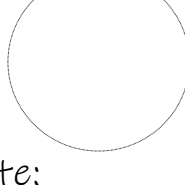
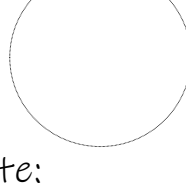
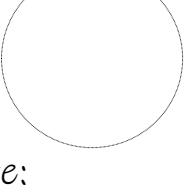
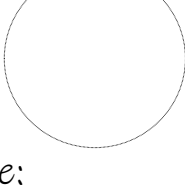
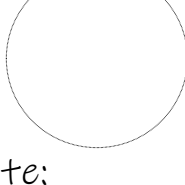
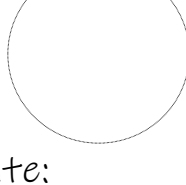
Stories of the moon rabbit originate from the ancient Aztec, Chinese, Japanese, and Korean cultures.



# Moon Diary



Use this chart to follow the moon's progress for four weeks  
Draw in clouds for any night you cannot see the moon!

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 Date:	 Date:	 Date:	 Date:
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