



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences --particularly students of color and girls -- by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at [www.projectexploration.org/stemathome](http://www.projectexploration.org/stemathome).

### In this activity, you will:

Learn about the phases of the moon.



### Supplies Required:

- Lamp, flashlight, or light
- Writing utensil
- Small foam ball
- Journal or notebook
- Camera \*optional

### Video

What is the moon? <https://tinyurl.com/3fcd5j3k>

### Overview

The moon reflects the light of the sun. On the moon there is no air, no water, or life. The moon orbits around the Earth every 29.5 days. An orbit is the curved path a planet takes as it revolves around another body. The moon appears to look differently each night because the angle between the moon, the earth, and the sun changes as the moon revolves around earth. The amount of light reflected off of the moon changes, and this is what we see as the phases. When the moon is in waxing phases that means the amount of reflected light is increasing. When the moon is in waning phases that means the amount of reflected light is decreasing.



## Instructions

1. Stand near the light source
2. Carefully, push the pencil into the middle of the foam ball (the moon)
3. Turn on the light source (the sun) and turn off the room lights
4. Hold the pencil with the ball out at arm's length
5. With your arm held out straight, turn your whole body slowly to the left
6. Take a photo of what you see each 1/8th of a turn (or draw it in your notebook)

## Additional Resources

1. What are the phases of the moon? <https://tinyurl.com/z9msh7zy>

## Share It Out

Share on social media: Record a video or take a picture of your activity and post the results online using the hashtags:

#MoonPhases  
#ProjectExploration  
#StemAtHome

Tag a friend and challenge them to do it, too!

For more activities like this one, go to [www.projectexploration.org/stemhome](http://www.projectexploration.org/stemhome). If you're interested in learning more about Project Exploration and our free events, programs, and activities, please find us on social media and be sure to follow!



Call or text us for help: 312-772-6634



[www.projectexploration.org](http://www.projectexploration.org)