



# Virtual STEAM

## Science

### Moon Phase Viewer Challenge

Goal: I can observe the phases of the moon.

Science Indicator: SC.1.11.3.A Use observations of the sun, moon, and stars to describe patterns that can be predicted

#### Materials:

- 1 - 10 oz Paper cup
- 1 - Wax Paper
- 1 - Rubber band
- 1 - Paper fastener
- 1 - 6" Paper square
- 1 - Flashlight
- 1 - Glue Stick
- 1 - Moon Phase Template
- Scissors (not included)



Full  
Moon



1st  
Quarter



New  
Moon



3rd  
Quarter

#### Book Extension:

[Margaret and the Moon](#)  
by Dean Robbins

#### Instructions:

1. Watch YouTube Video for background knowledge:  
<https://www.youtube.com/watch?v=B-b4XvuQoIY>



2. On a sheet of paper, draw and label the 4 moon phases for your moon phase viewer. Your cup will have the shapes of moon phases and you'll shine a flashlight through the other end.
3. Cut out the Moon Phase Template with the 4 moon phases (New moon, First Quarter, Half Moon, Third Quarter, Full Moon)
4. Trace a circle from the top of the cup on the 6" piece of paper and cut out. (Set aside)





5. Attach the wax paper to the top of the cup with a rubber band so it fits securely.  
to shine the flashlight through.
6. Glue the Moon Phase Template to the wax paper and let dry completely.
7. Poke a hole in the bottom of the cup with a sharp pencil or pen.
8. Cut a notch out of the circle paper, so when it spins around the cup, you can only see one moon phase at a time.
9. Attach the paper to the moon phase template and wax paper with a paper fastener. (It might be easier to poke a hole through the center before you push the paper fastener through.
10. Remove the rubber band and flatten the paper fastener so it will hold the was paper, moon template and circle together.
11. Reattach the wax paper, moon phase template and circle to the cup with the rubber band.
12. Decorate the viewer with anything you have around the house.
13. When completed, go into a dark room and turn on the flashlight to shine moon phase on a dark screen (laptop, computer, tv)  
Spin the paper, so you can see the different phases.
14. Optional: You could add colored cellophane to the moon phases to show color.
15. Make sure you also view the real moon phases outside. You can even use an old calendar to track the progress of the phases.
16. Document the challenge using video, photos, drawings, etc.
17. Have fun!

### **Extension Activities:**

- Make a moon journal! Go outside and observe the moon each night if you are able. Draw a picture of what it looks like! Make predictions of what it will look like the following night.

### **Ignite Our Future Connection:**

- **Planet Earth:** Taking care of and respecting the wondrous planet we live on – Earth! Lessons illustrate ways to live and act responsibly when it comes to the Earth's climate, land and water.



