

At-Home Investigation: Moon Phases

In this investigation you will take note of the Moon every day for a month. Record your findings in the log below.

The goal of this activity is for you to experience two things that are commonly done in science:

- 1) Notice your surroundings by being observant. (In our case, that means: look up at the sky more often!)
- 2) Look for patterns and cycles in nature.

Here are some guidelines on how to make your observations:

- 1) Look for the Moon both *at night* AND *during the day*! Good times to look are:
 1. Noon (plus or minus an hour)
 2. Shortly before sunset
 3. Shortly after sunset
 4. Later at night when it is fully dark.On most non-cloudy days you should be able to find the Moon at one of those times. Log what time you observe the moon each day.
- 2) There will be plenty of days where you can't see the Moon because of clouds, or because you just happened to miss it. So there will be some blanks in your observations. Go ahead and date and leave blank one line in the log on the days that you didn't see the Moon so that every day has its own line and no days are skipped.
- 3) To record the Moon phase, just make a rough sketch of the shape of the Moon. Take care to get up, down, left, and right correct (i.e., a "left-opening" crescent vs a "right-opening" crescent).
- 4) Only draw the **lit portion** of the Moon! This will avoid a lot of confusion later.
- 5) On the days where the Moon is visible during the day, this means that both the Moon and the Sun will be in the sky at the same time. On those days, record the angle between the Sun and the Moon. To do this, follow this procedure:
 1. Point one hand at the Sun (use this hand to shade your eyes so that you do not look directly at the Sun).
 2. Point the other hand at the Moon.
 3. Look at the angle between your arms. Is it 90 degrees? More? Less? Draw a rough sketch of this angle in your log.

Day #	Date	Time	Moon Phase (sketch)	Angle between Sun and Moon (sketch)
Day 1				
Day 2				
Day 3				
Day 4				
Day 5				
Day 6				
Day 7				
Day 8				

Day #	Date	Time	Moon Phase (sketch)	Angle between Sun and Moon (sketch)
Day 9				
Day 10				
Day 11				
Day 12				
Day 13				
Day 14				
Day 15				
Day 16				

Day #	Date	Time	Moon Phase (sketch)	Angle between Sun and Moon (sketch)
Day 17				
Day 18				
Day 19				
Day 20				
Day 21				
Day 22				
Day 23				
Day 24				

Day #	Date	Time	Moon Phase (sketch)	Angle between Sun and Moon (sketch)
Day 25				
Day 26				
Day 27				
Day 28				
Day 29				
Day 30				
Day 31				
Day 32				