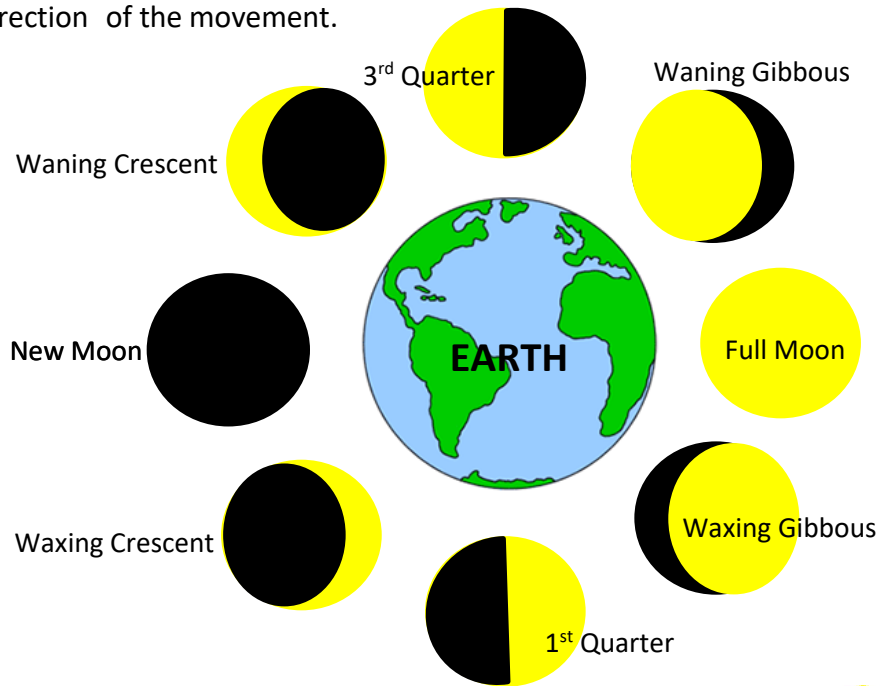
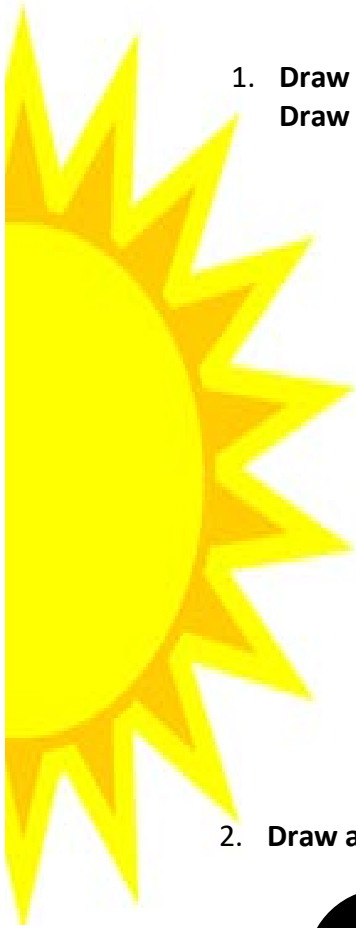
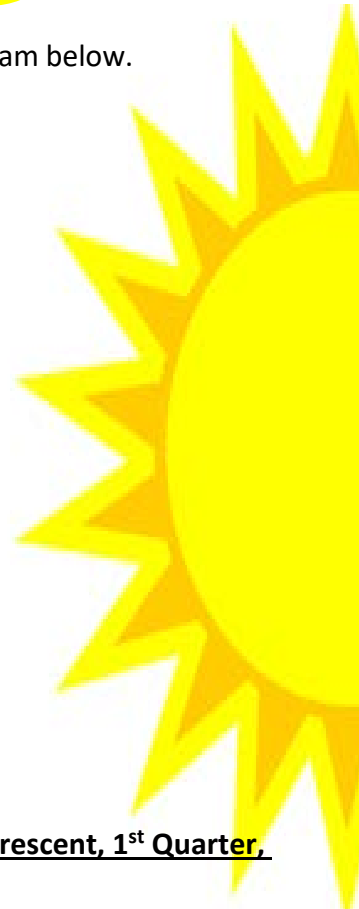
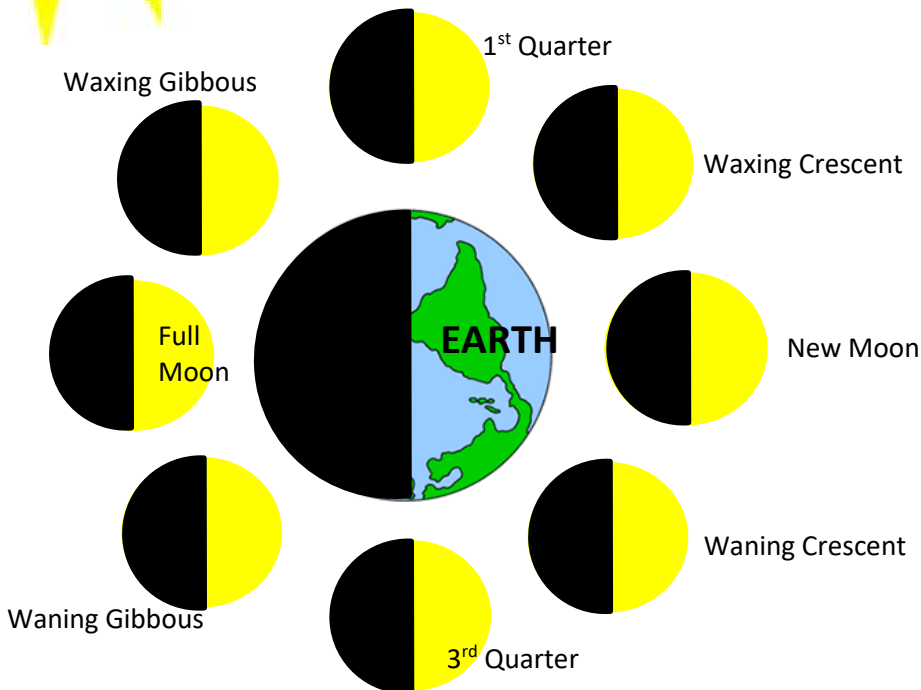


Moon Phases/Eclipses Study Guide

1. **Draw and label** the phases of the moon as seen from Earth in the diagram below. **Draw an arrow showing the direction** of the movement.



2. **Draw and label** the phases of the moon as seen from space in the diagram below.



3. List all eight moon phases in order, starting with the first phase. **New Moon, Waxing Crescent, 1st Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, 3rd Quarter, Waning Crescent.**
4. What phase begins the moon phases? Where is it located? **New Moon starts the lunar cycle. The moon is located directly between Earth and the Sun.**
5. Describe waxing. **When the light is on the RIGHT side and is "increasing" meaning more light is seen**
6. Describe waning. **When the light is on the LEFT side and is "decreasing" meaning less light is seen**
7. Describe crescent. **Less than half is covered in light. Looks like a crescent roll or your thumb nail base.**

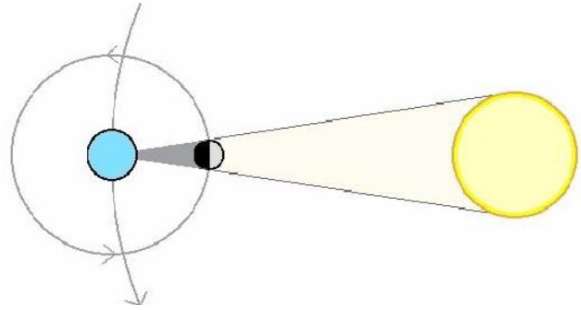
8. Describe gibbous. **More than half is covered in light. Hint: "Gibb me more"**
9. If you were looking at the moon, Earth, and sun from **space** and you see the sun on the left-hand side, what side of the moon and Earth is going to be illuminated? **The left side will have light while the right side is dark**

10. Which eclipse is in the diagram below? **Solar Eclipse**

11. How do you know that what eclipse is shown?

You know it is a Solar Eclipse because the moon is in between the Sun and Earth in the New Moon Position. In a Solar Eclipse, the Moon casts a shadow on the Earth's surface.

S – M – E = Sun – Moon – Earth

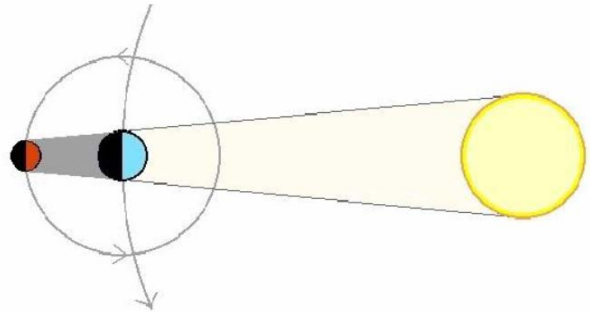


12. Which eclipse is in the diagram below? **Lunar Eclipse**

13. How do you know that what eclipse is shown?

You know it is a Lunar Eclipse because the Moon is behind the Earth in the Full Moon Position. In a Lunar Eclipse, the Earth casts a Shadow on the Moon's Surface completely.

S – E – M = Sun – Earth – Moon



14. What moon phase is a solar eclipse associated with? **New Moon**

15. What moon phase is a lunar eclipse associated with? **Full Moon**

16. What direction does the moon revolve around the Earth? **Counterclockwise (opposite of the clock)**

17. Define Rotation. **to turn on or around an axis.**

18. How long is one complete rotation of the Earth? **A complete rotation is a day or 24 hours.**

19. Define Revolution. **To move in a circle around a fixed point outside of the object**

20. How long is one complete revolution around the sun? **A complete revolution is a year or 365 ¼ day or 52 weeks or 12 months.**