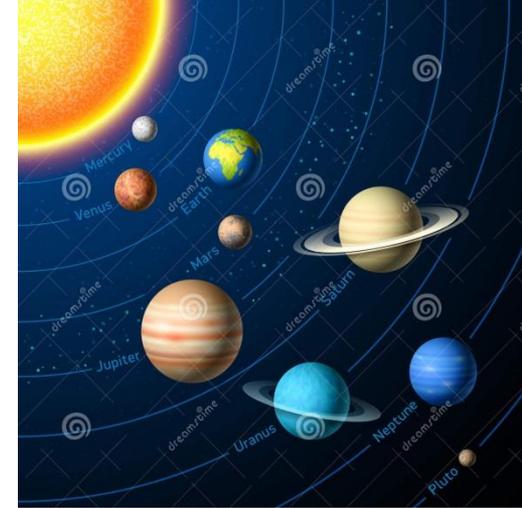


# Our Solar System



By the end of this lesson, YOU will be able to:

- Identify the 8 phases of the moon.
- Explain how the movements of the Earth and moon create different moon phases observed by humans on Earth.

## Lesson

### Vocabulary

Orbit    Illuminate

lunar eclipse

Waxing    Waning

Crescent    Gibbous

New moon

Full moon

## The Learning Plan

1. BrainPop Video: Moon Phases
2. Ms. Artis Teaches About Moon Phases
3. Song: Phases of the Moon Rap
4. Moon Phases Demonstration
5. Group & Partner Activities

# Essential Question

How do the movements of the Sun, Earth and moon affect the patterns observed by humans on Earth?

**MARCH 5, 2019 DO NOW**

Why does the moon look like  
it changes?



# Why does the moon have phases?

- The revolution of the Moon around the Earth causes the Moon to appear to have phases.
- It takes 29.5 days for the moon to make a complete circuit around the Earth.

# 8 Phases of the Moon



• **New Moon**

• **Full Moon**

• **Waxing Crescent**

• **Waning Gibbous**

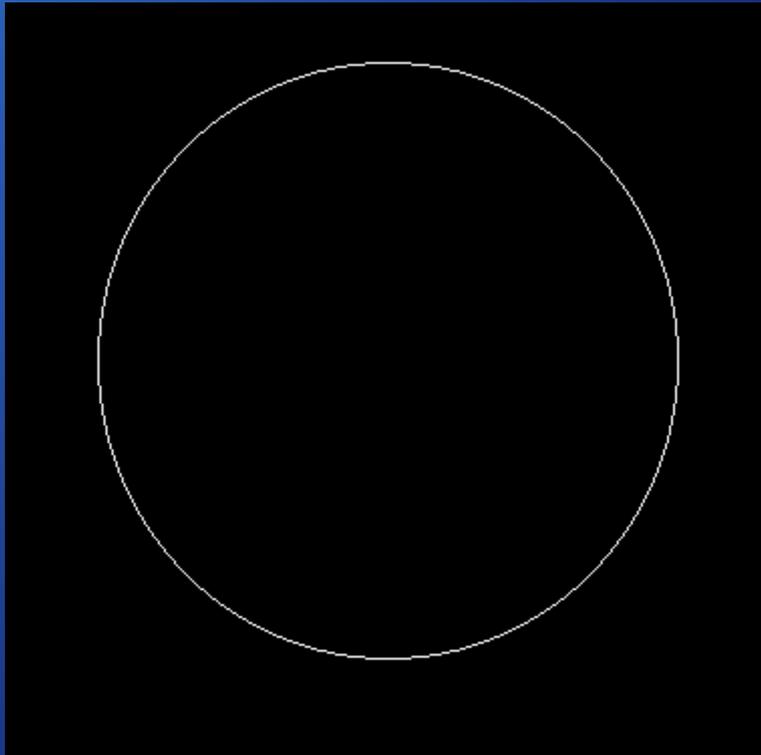
• **First Quarter**

• **Last Quarter**

• **Waxing Gibbous**

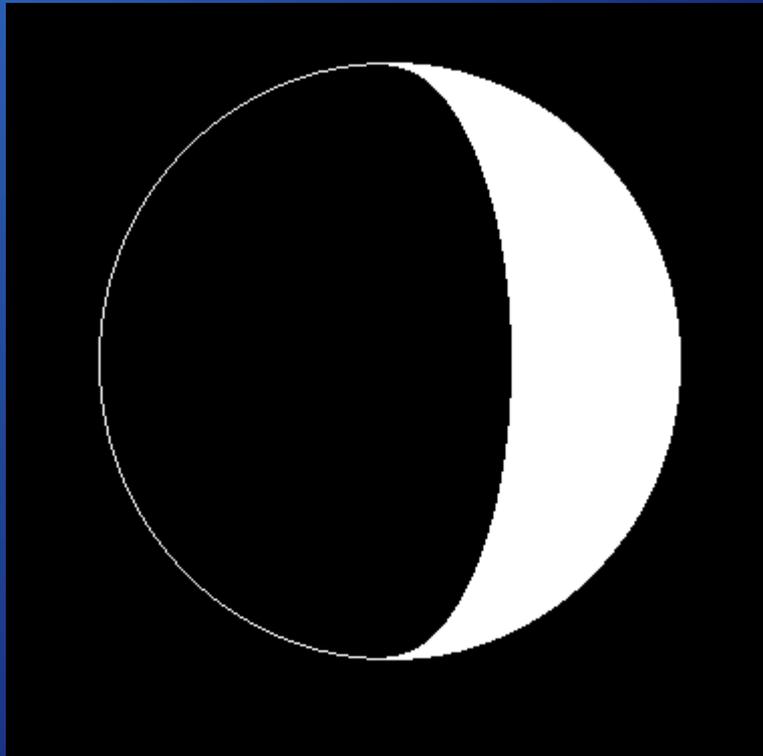
• **Waning Crescent**

# New Moon



- **The moon is not visible from Earth.** The moon is between the Sun and the Earth.
- **The dark side is facing us.**
- **This phase lasts one night.**

# Waxing Crescent

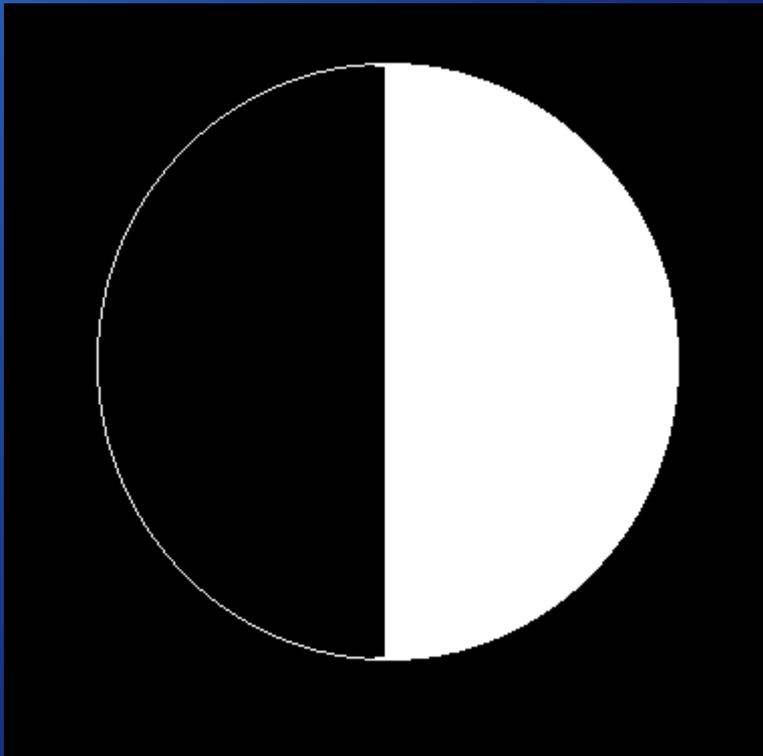


- **Waxing means that the bright side is increasing. The right side is the bright side.**
- **Less than one half of the moon is illuminated.**
- **This phase includes any visible moon from a small sliver to almost half.**

# First Quarter or Half Moon



- The entire right side of the moon is illuminated.

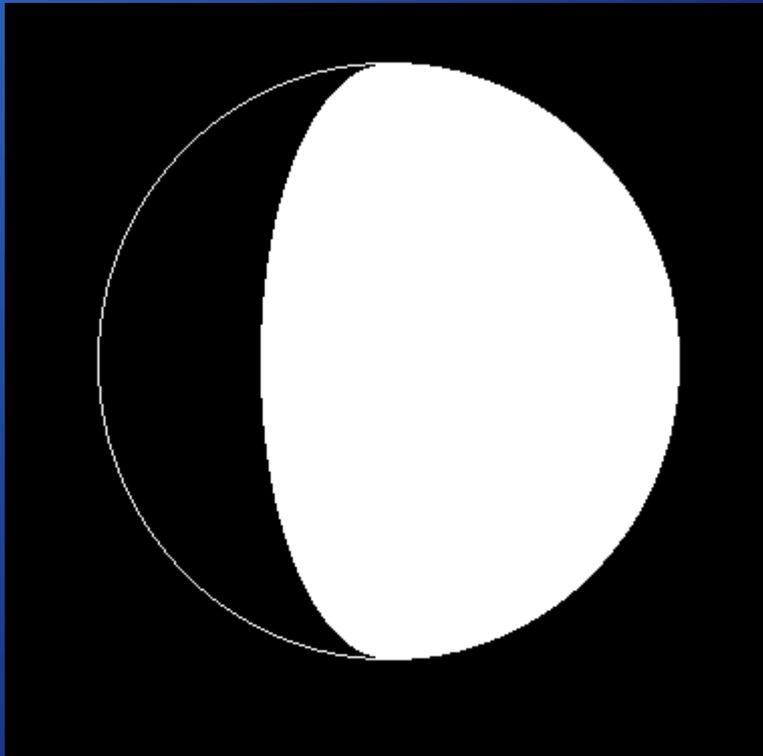


- The moon looks like a half circle.

- The illuminated side is increasing.

- This phase only lasts one night.

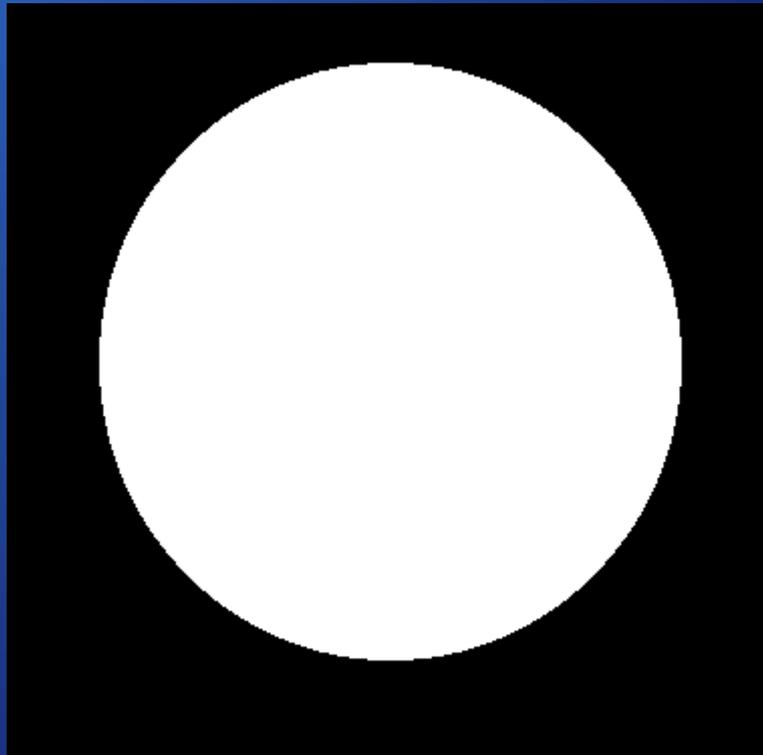
# Waxing Gibbous



- **Gibbous means that more than one half is visible, but it is not quite full.**

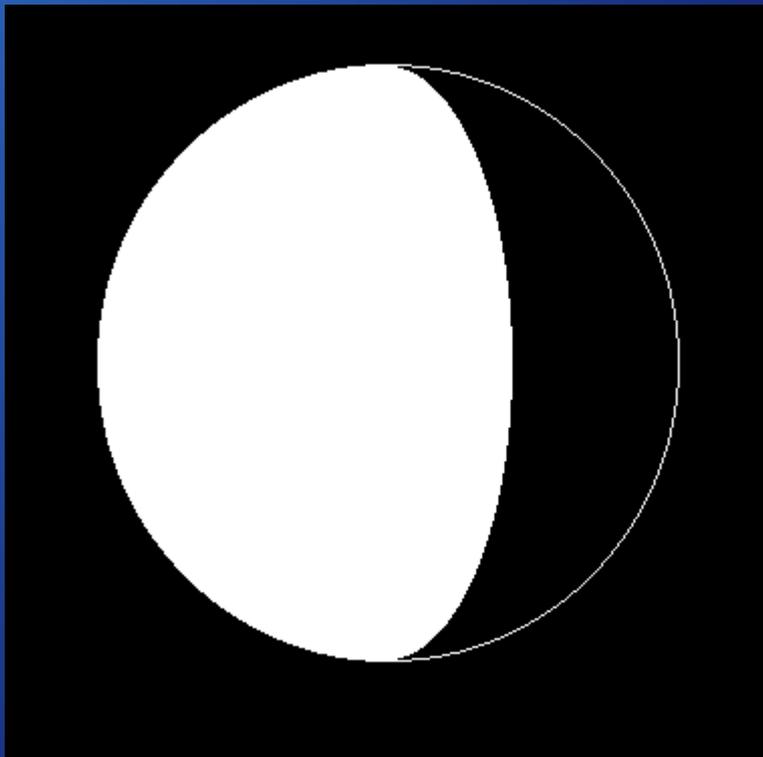
- **This phase includes the night after the first quarter to the night before the full moon.**

# Full Moon



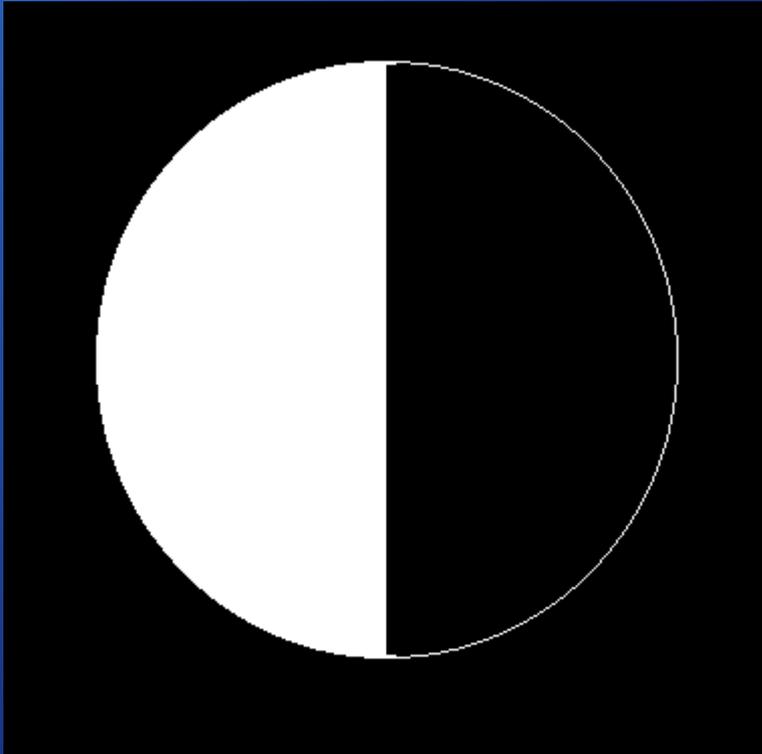
- **The moon is full and bright. It looks like a large circle.**
- **The illuminated side is facing us.**
- **Only happens one night per lunar phase cycle.**

# Waning Gibbous



- The moon appears more than half but not quite full.
- Waning means that the illuminated side is decreasing.
- The left side is the bright side.

# Last Quarter/ Half Moon

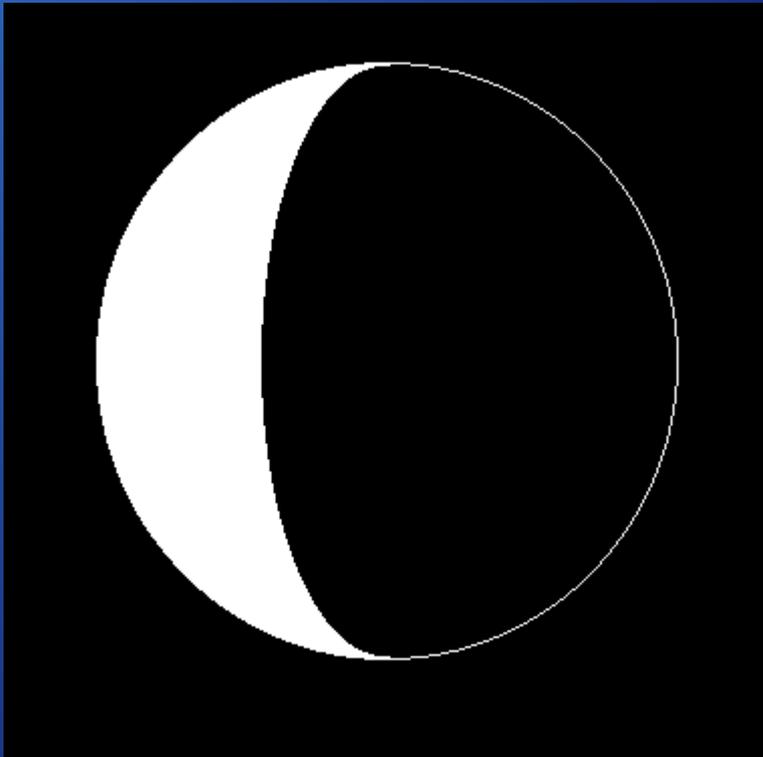


- **Left Half of the moon is illuminated.**

- **The illuminated side is decreasing.**

- **This phase also only lasts for one night.**

# Waning Crescent



- **Less than one half of the moon is illuminated.**
- **The moon will continue to become smaller and smaller.**

# Homework

A 3<sup>rd</sup> grader has sent you a letter asking you to explain why the moon looks different almost every night.

Write a letter to the 3<sup>rd</sup> grader thoroughly explain this phenomenon.