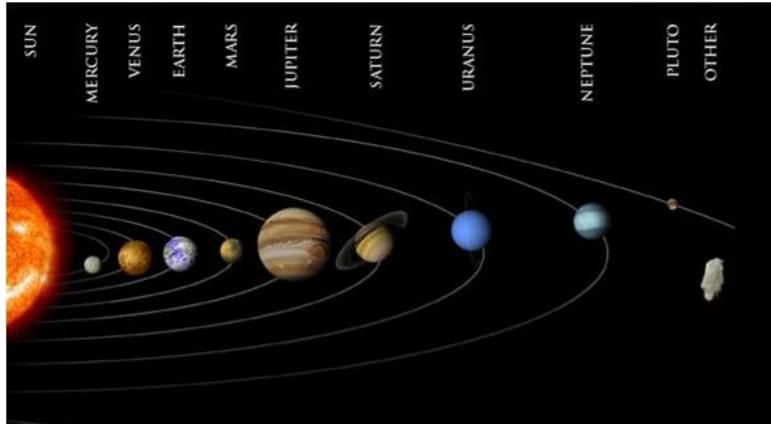


# Astronomy Study Guide

**Directions:** Study the following concepts and information in order to be successful in class and on assessments.

## Map of Universe



## Vocabulary

**Atmosphere:** blanket of gas surrounding a planet

**Orbit:** curved path a planet, spacecraft, or heavenly body takes around another object in space (it takes Earth 365 ¼ days for the Earth to orbit or revolve around the sun)

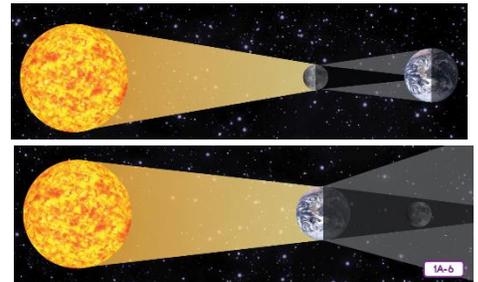
**Hemisphere:** half of the sphere of Earth

**Rotate:** to turn around an axis or a center (causes daytime and nighttime and happens every 24 hours)

**Universe:** all objects and matter in space including Earth and beyond

**Solar Eclipse:** happens when the moon comes between the sun and the earth, hiding the sun so some people on Earth can't see it.

**Lunar Eclipse:** when Earth comes between the sun and the moon; when this happens, people on Earth see Earth's shadow on the moon, making the moon appear dark.



**Asteroids:** small rocky bodies that orbit the sun and that are smaller in size than a planet

**Comets:** frozen balls of dust and ice whose orbits take them far out in the solar system

**Meteoroids:** small pieces of metal or rock that travel through the solar system and that are much smaller than an asteroid

**Satellites:** natural or human-made objects that orbit around a planet or other celestial objects

**NASA:** an acronym for the National Aeronautics and Space Administration; an organization in the United States that directs space travel and research

**Galaxy:** large collection of stars, dust, and gas, held together by a powerful force and separated from other star systems by an extensive amount of space (shapes of galaxy: Spiral-Milky Way Galaxy/Andromeda Galaxy, elliptical, irregular)

**Gravity:** the force or pull created by the mass of objects that attracts them to one another

**Stars:** celestial bodies that are hot, distant, and made of gas (Polaris: North Star)

**Big Bang Theory:** a scientific theory of how the universe began that says the universe was compressed into one tiny point and then expanded quickly

**Geocentric:** theory that the earth is the center of the universe

**Heliocentric:** theory that the sun is the center of the universe

## People

**Nicholas Copernicus:** supported a heliocentric view with the sun in the center and Earth and the other planets orbiting the sun; many people were opposed to his idea

**Mae Jemison:** The first African America woman to become an astronaut and travel into space; she graduated from school early; became a doctor; studied engineering; joined the Peace Corps; helped refugees; conducted many experiments about how weightlessness affects plants and animals in space

## Concepts

- Ways scientist study space: satellites, space expeditions, observatory, telescopes
- How was Apollo 11 mission important to astronomy
- Seasons occur because the Earth is slightly tilted