

# Astronomy Study Guide

Use this as a guide to help you study. Review all of your class notes.

1. The Force of Gravity:
  - Describe the Gravitational Attraction between objects.
  - (Ex. As the distance between two objects increase the Gravitational Attraction decreases.
2. Gravity and the Planets:
  - Gravity is the force that holds the planets and other objects in the solar system in their orbits.
  - What is Inertia?
3. Angular Diameter of Celestial Objects / Angular Size and Shape of Orbit:
  - The angular diameter of an object appears larger when the object is closer to you.
  - The angular diameter of an object appears smaller when the object is further away from you.
    - Summary: The closer an object is, the larger it looks and the further an object is, the smaller it looks when comparing objects that are very far away.
  - The Gravitational pull of a planet is stronger when the planet is closer to the sun.
  - The velocity of a planet is faster when the planet is closer to the sun.
  - Describe the velocity and gravitational pull of the planet "A" orbiting the sun (star) in the following diagram.
4. Phases of the Moon:
  - Know how to label a diagram with the eight phases of the moon.
  - Know the shape and name of each phase of the moon.
  - What causes the Phases of the Moon? (Rotation or Revolution)
  - How can we graph the phases of the moon?
5. Eclipses of the Moon and Sun:
  - When does a Solar Eclipse occur?
  - When does a Lunar Eclipse occur?
  - What is a Solar Eclipse?
  - What is a Lunar Eclipse?
6. The Tides:
  - What is a Spring Tide?
  - When does a Spring Tide occur?
  - What is a Neap Tide?
  - When does a Neap Tide occur?
7. The Solar System:
  - Know how to find information about each planet by using the Earth Science Reference Table "Solar System Data."
  - What are the two groups of Planets?
  - The average temperature of the planets decreases with greater distances from the sun. Why?
  - Which planet's day is longer than its year?
  - Which planet has the most eccentric orbit?

8. Asteroids, Meteors, and Comets:

- Where is the Asteroid Belt located?
- Explain what happens to the small asteroids, meteors, and comets that enter into Earth's atmosphere?
  - They burn up (A shooting star)
- Impact craters are more common on Mars because of the thin atmosphere.

9. Sun:

- The sun is a star.
- By what process does the sun emit (give off) energy?
- Explain what is Nuclear Fusion?
- Know how to read information about the sun and other stars from the Earth Science Reference Table "Luminosity and Temperature of Stars."
- The most observable phenomena in the "Solar Cycle" is the appearance of sun spots.

10. Galaxies of Stars:

- What is a galaxy?
- Know where the sun is located in a diagram of our galaxy "The Milky Way."

11. Evolution of the Universe:

- What is the Big Bang?
- What are the pieces of evidence of the Big Bang?