

## ASTR1: Part II: The Solar System

- What makes up the S.S.
- Size of S.S. 1:10 billion scale
- Explain nebular theory (Hint: elaborate on Contraction, Center heating & concentration, Shrinks&Flattens, Condensation&Accretion, Clearing)
- What caused the orderly patterns of motion? (Hint: elaborate on heating, spinning and flattening)
- Why are there two major types of planets
- What are planetesimals?
- What is accretion?
- How is condensation affected on each side of the frost line?
- Where did asteroids and comets come from?
- What three distinct regions in the S.S. are Asteroids and comets concentrated in?
- How do we think our moon formed?
- How old is the S.S. and how do we know the age?
- What is half life?
- What drives geological activity?
- What are the 4 major geological processes?
- What are 2 crucial effects of our atmosphere?
- What type of geological activity did mercury and the moon have? What features confirm this.
- Why is the moon and mercury geologically dead?
- What geological activity did mars have? What features confirm this?
- What caused mars geological activity to change?
- What geological activity does Venus have?
- What is the temperature on Venus? What contributes to it's temperature?
- How do Saturn and Jupiter differ in composition from Uranus and Neptune?
- What is the density of Saturn?
- What are weather conditions like on the jovian planets?
- What is the great red spot? Great dark spot?
- How did the jovian planets get most of their small moons?
- What is the geological activity on medium moons? Why?

- Match the following large moons. Io, Europa, Ganymede, Callisto, Titan & Triton.
  - Most volcanically active object is S.S.?
  - Largest moon in S.S.
  - Which moon is a water world with a liquid ocean below the surface?
  - Which moon has an old surface with large magnetic field?
  - Thick atmosphere with liqued methane lakes
  - Orbits backwards and was captured
- Describe tidal heating
- Describe orbital resonance
- Why are Jovian moons easily heated?
- What are Saturn's rings made of? And why do they have gaps?
- Why do the jovian planets have rings?
- What are asteroids made of?
- Why is there an asteroid belt?
- What are meteorites?
- Why do meteor make trails?
- What are comets made of?
- Why do comets have tails?
- What 2 places do comets come from?
- Pluto and other dwarf planets are most likely very large \_\_\_\_\_ rather than planets.
- This object is larger and beyond the orbit of Pluto.
- What killed the dinosaurs? What evidence do we have for this?
- How do the Jovian planets affect the rate of great impacts.

## Specifications of planets

### (Look at power point)

- Know all 8 planets
- Know order near to far from the Sun
- Know distance (AU)
- Know temperatures
  - Mercury, Hot/day & Cold/night
  - Venus 900F
- Composition rock&metal vs gas
- Saturn density
- Venus slow rotation (why)
- Venus, Uranus axis tilt (why)
- Rings yes/no