

## Student Notes: Unit 2- The Earth in Space

### Part 2- The Solar System

#### What are nebulas?

- The universe consists of clouds called nebulas that contain dust, hydrogen and helium gases along with small amounts of other gases.
- Nebulas will begin to clump together making large masses and eventually can become large enough to create a star.

#### How was the solar system created?

- Approximately 4.6 billion years ago there was a nebula rotating on the outskirts of the Milky Way galaxy.
- An unknown disturbance caused the center of the nebula to collapse on itself creating the star known as our sun. This process is known as the nebular hypothesis .
- After the nebula collapsed on itself, the residue that is expelled from the formation begins to spin in a disk forming around the star due to the star's great gravitational pull.
- This material being continually spun around bangs into each other and forms planets and other planetary bodies. This process by where objects gradually increase in size as a result from the addition of outer materials is called accretion.
- The particles that make up these bodies consist of silicon, iron, magnesium and radioactive elements.

#### Major parts to the solar system:

- 8 full scale planets
- dwarf planets
- moons
- smaller solar system bodies (asteroids, meteors, comets, etc..)

\*Make sure to look to notes from the solar system investigation for more details on the parts of the solar system and the processes that occur there.