

## **NOTES: Galaxies**

Galaxies - Large groups of stars, dust, and gas are called galaxies.

The earth is part of the Milky Way Galaxy.

So if you think about it your house sets on a street, which is a part of a county, which is a part of a state, which is a part of a country, which is a part of a continent, which is a part of the planet earth, which is a part of a galaxy.

Edwin Hubble - the scientist that the Hubble Telescope is names after began the process of classifying galaxies.

He mostly classified them based on their shape in the 1920's

Astronomer's still use this system today.

### **TYPES OF GALAXIES**

1. Spiral Galaxy - Have a bulge at the center and spiral arms. The spiral arms are made up on mostly gas, dust, and in the more dense regions new stars.
2. The Milky Way - Astronomer's believe that we live in a spiral galaxy.
3. Elliptical Galaxy - Look like bright spheres. Bright centers, very little dust, a gas. They contain mostly old stars. There is so little free flowing gas within them that they the new stars are unable to form. There are giant elliptically galaxies and dwarf elliptical galaxies.
4. Irregular Galaxies- They are the group of galaxies left over by Hubble that really had no shape to them and didn't really fit into a class.

### **CONTENTS OF GALAXIES**

1. Gas Clouds- in Latin NEBULA means cloud- so in space large gas clouds and dust are NEBULAS in space. Some nebulas are able to reflect starlight and produce amazing images and colors. Some spiral galaxies contain nebulas while elliptical galaxies contain very few.
2. Star Cluster -
  - A. Globular Cluster - Group of older stars that look like a ball .
  - B. Open Cluster - Groups of closely grouped stars that are usually located along the

spiral disk of a galaxy.

## **ORIGIN OF GALAXIES**

1. Looking at distant galaxies in space gives scientists an idea of how the older galaxies evolved over time.
2. Quasars are star-like sources of light that are extremely far away. They are among the most powerful energy sources in the universe. Some scientists believe that they may be caused by massive black holes in the cores of some galaxies. ion of the early solar system.