

# Galaxies

# What is a galaxy?

- A galaxy is a large grouping of stars, gas, and dust in space that are held together by gravity.
- The largest galaxies contain more than a trillion stars. Smaller galaxies may have only a few million.
- Scientists estimate the number of stars from the size and brightness of the galaxy.

# Main Types of Galaxies

Spiral



Elliptical



Irregular



# Properties of Spiral Galaxies

- Shaped like flattened disks with one or more spiral arms.



Our galaxy, Milky Way, is a spiral galaxy.

Our solar system is located in one of the spiral arms.

# Properties of Elliptical Galaxies

About 1/3 of all galaxies.  
Simply massive blobs of stars.



- Round or elliptical in shape.
- Contain very little gas or dust.
- Because of little gas, no new stars are forming.
- The largest and smallest galaxies are elliptical galaxies.



# Properties of Irregular Galaxies

- Do not fit into any other category.
- Chaotic mix of stars, gas and dust
- Usually found near large spiral galaxies who may be distorting their shape.



# Contents of Galaxies

Galaxies are made of stars, planetary systems, gas clouds, and star clusters. Nebulas are giant clouds of gas and dust where stars may be forming.



Nebula are found in spiral galaxies but not elliptical galaxies.

# Galaxy Quiz





# Galaxy Quiz

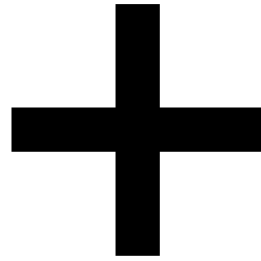




# Galaxy Quiz



What is the name of our  
galaxy?

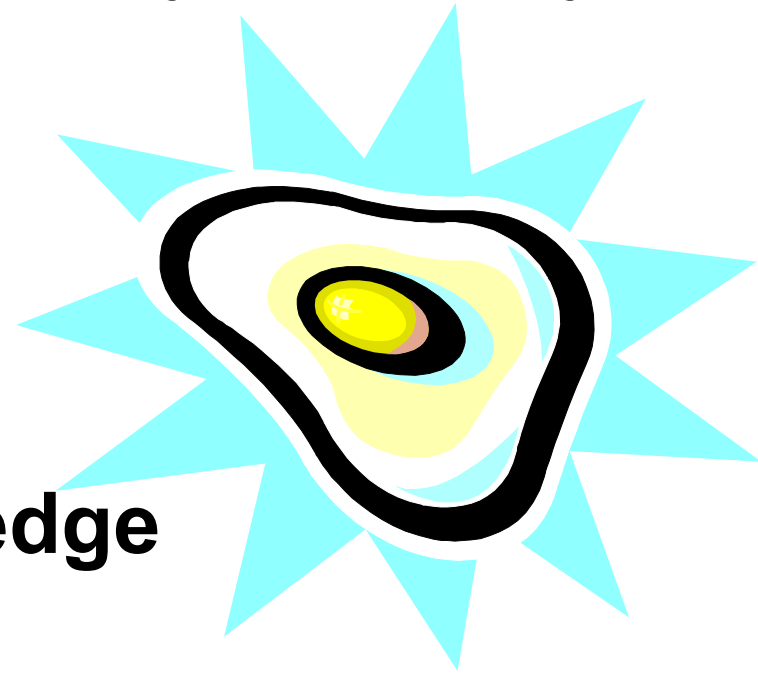


# Describe the Milky Way Galaxy



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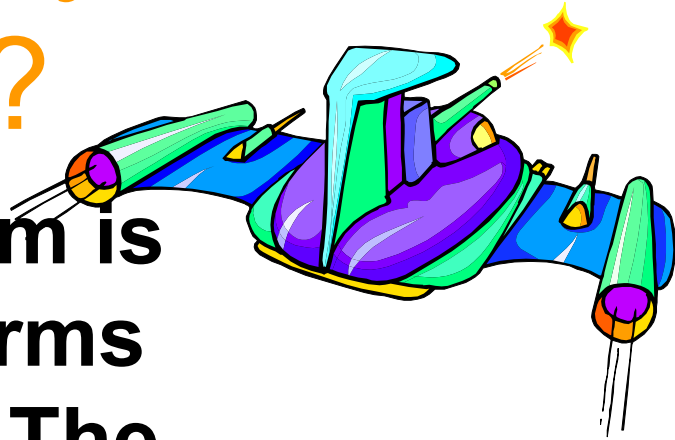
- **Flattened Disk**
- **Bulge in Middle**
- **Fried Egg**
- **Not solid from edge to edge**
- **Huge**
- **1000-3000 Light Years Thick**
- **100,000 Light Years across (Diameter)**







# Where is our solar system in our galaxy?



- The Sun and our solar system is located in one of the outer arms (Orion's Arm) of the galaxy. The distance from the Sun to the center of the galaxy is about 30,000 light years.
- All objects in the galaxy revolve around its center.
- The sun and our solar system take about 240 million years to make one trip around the center of our galaxy.

Centaurus Arm

*Norma Arm*

*Sagittarius Arm*

Perseus Arm

