

What Is a Galaxy?

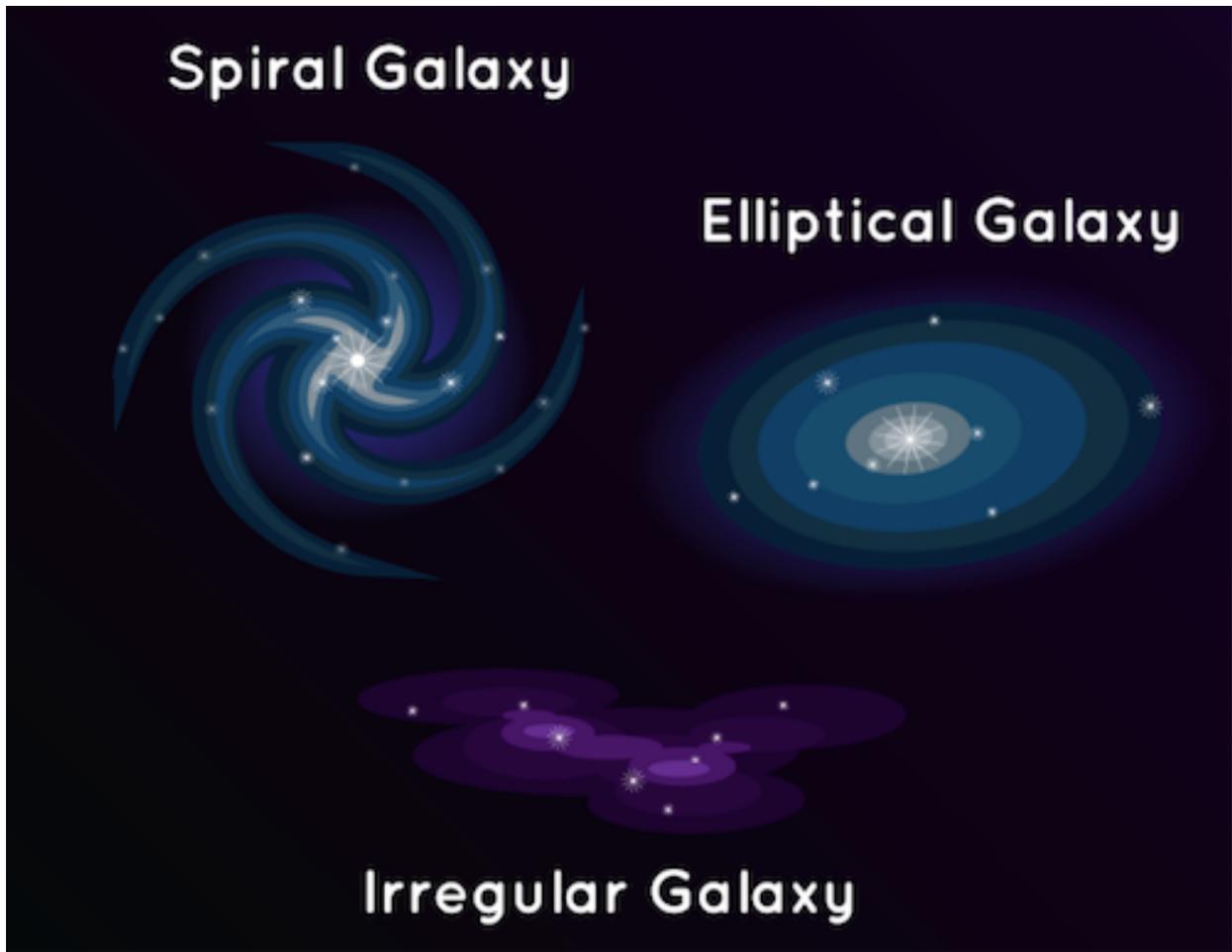
The Short Answer:

A galaxy is a huge collection of gas, dust, and billions of stars and their solar systems, all held together by gravity. We live on a planet called Earth that is part of our solar system. But where is our solar system? It's a small part of the Milky Way Galaxy.

When you look up at stars in the night sky, you're seeing other stars in the Milky Way. If it's really dark, far away from lights from cities and houses, you can even see the dusty bands of the Milky Way stretch across the sky.

There are many galaxies besides ours, though. There are so many, we can't even count them all yet! The *Hubble Space Telescope* looked at a small patch of space for 12 days and found 10,000 galaxies, of all sizes, shapes, and colors. Some scientists think there could be as many as *one hundred billion* galaxies in the universe.

Some galaxies are spiral-shaped like ours. They have curved arms that make it look like a pinwheel. Other galaxies are smooth and oval shaped. They're called elliptical galaxies. And there are also galaxies that aren't spirals or ovals. They have irregular shapes and look like blobs. The light that we see from each of these galaxies comes from the stars inside it.



Sometimes galaxies get too close and smash into each other. Our Milky Way galaxy will someday bump into Andromeda, our closest galactic neighbor. But don't worry. It won't happen for about five billion years. But even if it happened tomorrow, you might not notice. Galaxies are so big and spread out at the ends that even though galaxies bump into each other, the planets and solar systems often don't get close to colliding.

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Name _____

Fill in the blank:

1. What things make up a galaxy?

2. What holds a galaxy together?

3. We live on what planet? _____

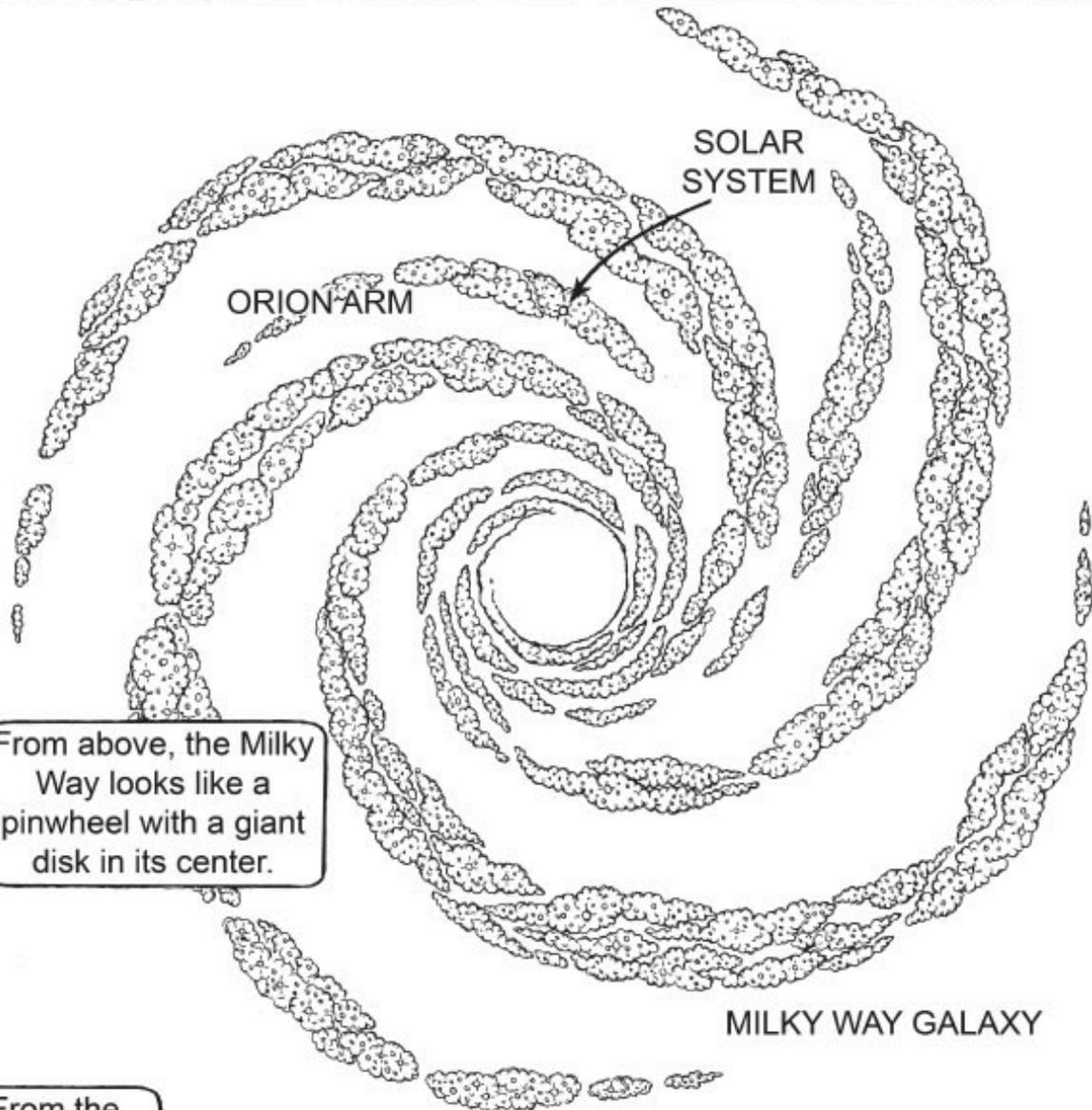
4. What is the name of our galaxy? _____

5. What are the three shapes of galaxies? Draw a small picture of each one.

6. What shape is our galaxy? _____

WHERE ARE YOU?

Do you know where you live? You know the building, the street, and the town.
And you know the country. You know you live on planet Earth.
But did you know that Earth is just a small part of the Solar System? And that
the Solar System is located on the Orion Arm of the Milky Way Galaxy? And
that the Milky Way is just one of billions of galaxies in the Universe?



From above, the Milky Way looks like a pinwheel with a giant disk in its center.

From the side, the Milky Way looks like an enormous flying saucer.

