

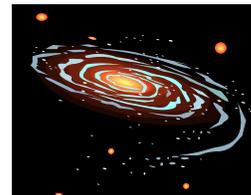
My Place in Space

There are billions of galaxies in the universe. Our **Galaxy**, the Milky Way, contains over 200 billion stars. Galaxies are organized into clusters. Our Milky Way Galaxy is part of a **Local Group**, a cluster of about 35 galaxies, including the larger Andromeda Galaxy, which is about 3 million light years away. There are other clusters of galaxies, and the clusters can be grouped into clusters of clusters called **superclusters**. The Local Supercluster is about 100 million light years across, and contains our Local Group and the Virgo cluster.

In this activity, your child will gain an understanding that they are part of a galaxy – The Milky Way - and how immense it truly is. They will explore how smaller systems exist within larger systems as they build a collage of their place in space!

What You Need:

- My Place in Space Guide
- Pictures of Earth, the solar system, galaxies, and groups of galaxies
- White poster board
- Clear tape or glue sticks
- Crayons and markers
- Construction paper
- Craft items
- 1 small container of phosphorescent paint (with Q-tip for brush)
- Q-tip



What to Do:

- Ask the children what the parts of their family are. (Their answers may vary, but they probably will name brothers and sisters, pets, mothers and fathers, etc.) Are they part of their family system?
- Mention to them that their family is part of the community, and the community is part of the city, which is part of the state. Can they name other, bigger systems?
- Invite them to draw a few of these different systems on construction paper (themselves, their family, their community etc...).
- What is Earth a part of? What are other parts of the solar system? Are there other solar systems? What are they parts of? What is the biggest system they can think of? In nature, a system is a group of things that are related and influence each other.
- Provide each child with a poster board. We have provided a finished model for the children to observe.

What to Do (Cont'd):

- Let them pick and choose a set of images of Earth, the solar system, galaxies, and groups of galaxies. Ask them to place them in order of increasing system size.

What are the different components in one of their systems? (For example, the solar system contains planets and our Sun. The Milky Way Galaxy contains many stars and planets, including our solar system. Our Local Group includes our galaxy and other "close-by" galaxies like the Andromeda Galaxy.)

- Once they have placed their images in order (including the ones they drew!), have them glue or tape them onto the poster board starting with their picture and ending with the cluster of galaxies. Invite them to make a title for their collage.
- Have the children label each section with the component name (for example, 'family' or 'galaxy').
- Invite the children to further decorate their collage and to paint some of the stars and formations in their galaxies to make them glow in the dark!

Parent Prompts:

Ask the children to reflect on their place in space and think about these questions.

How many galaxies are in our universe?

How many stars are in our galaxy?

How many stars are in our solar system?

How many Earths are there?

Our Earth is an amazing place in the vastness of our galaxy. . . and universe — and we are unique individuals on our unique, tiny Earth!



My Place in Space

Child

What types of systems does the child belong to? (Family system, school system, athletic club, boys or girls club)



Family

What types of system does the family belong to? (Larger family system, community pool or club, church or synagogue)



Earth

What are some of Earth's systems? What systems does Earth belong to?



Solar System

If there are other suns and planets in the universe, why would *these* nine planets be considered a system? (they all revolve around the same star — our Sun!)



Milky Way Galaxy

What makes the *Milky Way* a "system"? (there are billions of stars — and perhaps other solar systems — grouped together, connected by their gravitational pull on each other)



Universe

Clusters of galaxies are observed in space. Andromeda is one of the galaxies in our **Local Group**. And there are clusters of clusters of galaxies (**Superclusters**). How many galaxies are there? Scientists estimate that there are billions of galaxies in our **universe**; our Milky Way Galaxy is only one of many!