

Struggling to find a hands-on way to teach the solar system?

GALAXIES

Galaxies are a large group of gas, dust, and of stars that are held together by gravity. Scientists classify galaxies by their shape: elliptical, spiral, and irregular. In addition to their shape, galaxies have a variety of sizes, too. Some dwarf galaxies have as few as 100 million stars while some giant galaxies have over a trillion stars.



Elliptical Galaxies

Elliptical galaxies have an oval, or elliptical, shape. Scientists think there are more elliptical galaxies in the universe than any other shape. These types of galaxies are made of gas and dust, with few young stars. They are often old, red.

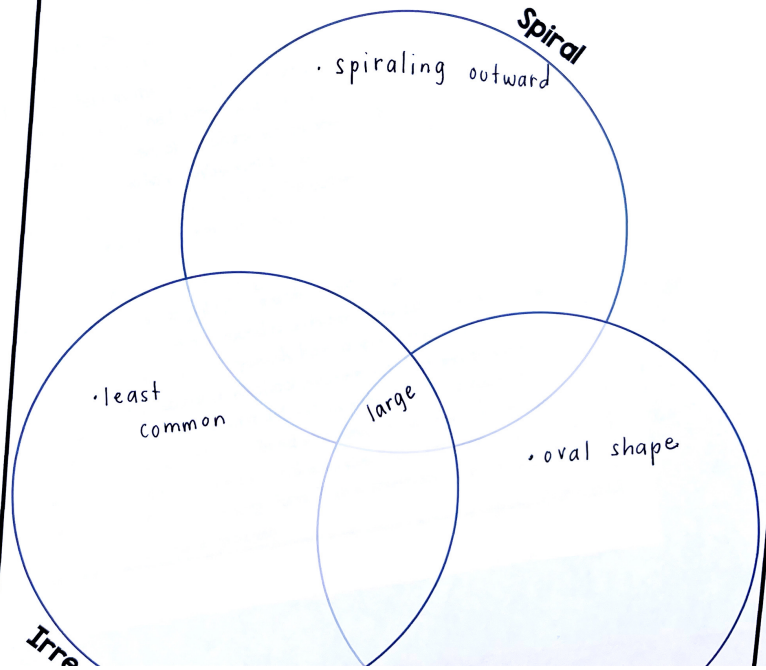
Spiral Galaxies

Some galaxies have arms. These types of galaxies are made of gas, dust, and young stars. Spiral galaxies are often the most common type of galaxy. The center of the spiral galaxy is most dense. We live in a spiral galaxy. We are approximately 200 light years from the center of the galaxy. We are approximately 200 light years from Earth.



Name: _____

GALAXIES



Don't spend any more time planning, searching, or brainstorming. Everything you need is in this easy to use download!

Space Unit Includes

- Materials List
- Standards Covered
- Teacher Directions for Every Activity
- Galaxies Informational Text
- Galaxies Triple Venn-Diagram
- Galaxies Exit Slip (3 options)
- Objects in the Solar System Informational Text
- Objects in the Solar System Foldable Notes (Sun, Comets, Moons, Planets, Asteroids, Meteors)
- Create a Post Card Activity
- Objects in Solar System Exit Slip (3 options)
- Planets Foldable Notes
- Planet Fact Cards
- Planet Comparison Chart
- Create a Comic Strip Template (4 options)
- Inner and Outer Planets Exit Slips (3 options)
- Discussion Cards
- Solar System Project (2 options)
- Solar System Unit Assessment
- Bulletin Board and Around the Room Display
- Interactive Bulletin Board Recording Sheets
- Exit Slip Tracking Pages
- Answer Keys

Teacher Directions Page

- Learning Goals
- Materials Needed
- Specific Directions for All Parts of Lesson

FLORIDA STANDARDS
 SC.5.E.5.1 Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way.
 SC.5.E.5.2 Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.
 SC.5.E.5.3 Distinguish among the following objects: comet - and identify Earth's position in it.

NEXT GENERATION
 6-MS-ESS1-2 Develop and use a model to describe the solar system. Emphasis for the model is system and Milky Way galaxy and controls.
 6-MS-ESS1-3 Analyze and interpret data. Examples of scale properties include the radius.

MATERIALS FOR SOLAR SYSTEM UNIT
 Materials Needed Per Group/Person

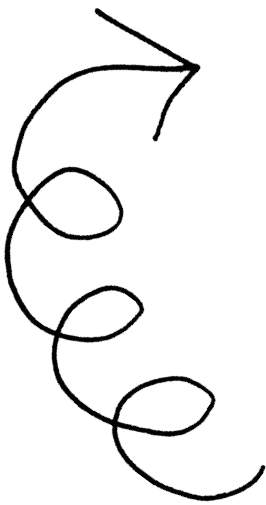
Activity	Materials Needed Per Group/Person
Galaxies	<ul style="list-style-type: none"> Galaxies Article Galaxies

SOLAR SYSTEM UNIT

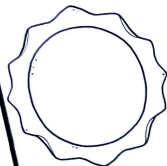
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- Exit Slips (3 Options)

Ann-Diagram (3 Options)
 Paper, Glitter, Glue,
 System Article
 em Foldable
 ons)
 Exit Slip (3

Foldable Notes



OBJECTS IN THE SOLAR SYSTEM



The Sun is the only star in our solar system. It's the center of our solar system and everything revolves around it. Because the Sun is so massive, it has the most gravity, or pull. The Sun's gravity pulls the planets and makes them orbit around the Sun. It has a diameter of 864,000 miles and is made up of small amounts of oxygen, carbon, and other elements. It's 4.6 billion years old, but it is the most important part of our solar system. It takes about 8 minutes for the light from the Sun to reach Earth.

the star. Gravity
only star in
Solar system
center

Moons orbit planets. The gravity from the planet keeps the moons in orbit. There are more than 200 moons in our solar system. Earth and Venus have moons. Even some dwarf planets have moons. Moons have many shapes, sizes, and types. Some have atmospheres beneath their surfaces.



A planet is a large body in space that orbits a star. Planets have to be big enough to be spherical and will also clear their path around the star. A planet does not clear the path around it, so it doesn't have enough gravity that will keep it in orbit.

An asteroid is made of rock, metal, and other elements. Asteroids are much smaller than planets. Asteroids can range in size from just 33 feet across to several miles across. There are a group of asteroids in the solar system called the asteroid belt.



Comets are known as dirty snowballs. They are made of rock, ice, dust, and other elements. They can be the size of a small town. As a comet approaches the Sun, it heats up and specks of dust and gas are blown away from the nucleus, forming a long tail that stretches away from the Sun.

A meteoroid is a small piece of rock or metal that orbits the Sun. If a meteoroid enters Earth's atmosphere and burns up, it is called a meteor. If any remaining parts of the meteoroid reach Earth's surface, it is called a meteorite.

Comets



Moons

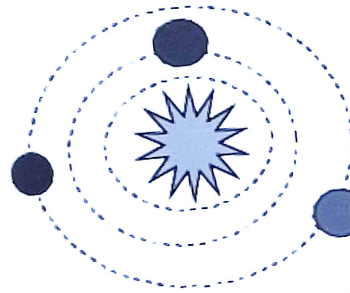
Planets



Asteroids

Bulletin Board Display

A system of planets and other bodies that orbit a star

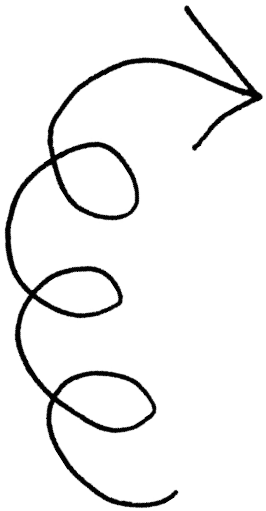


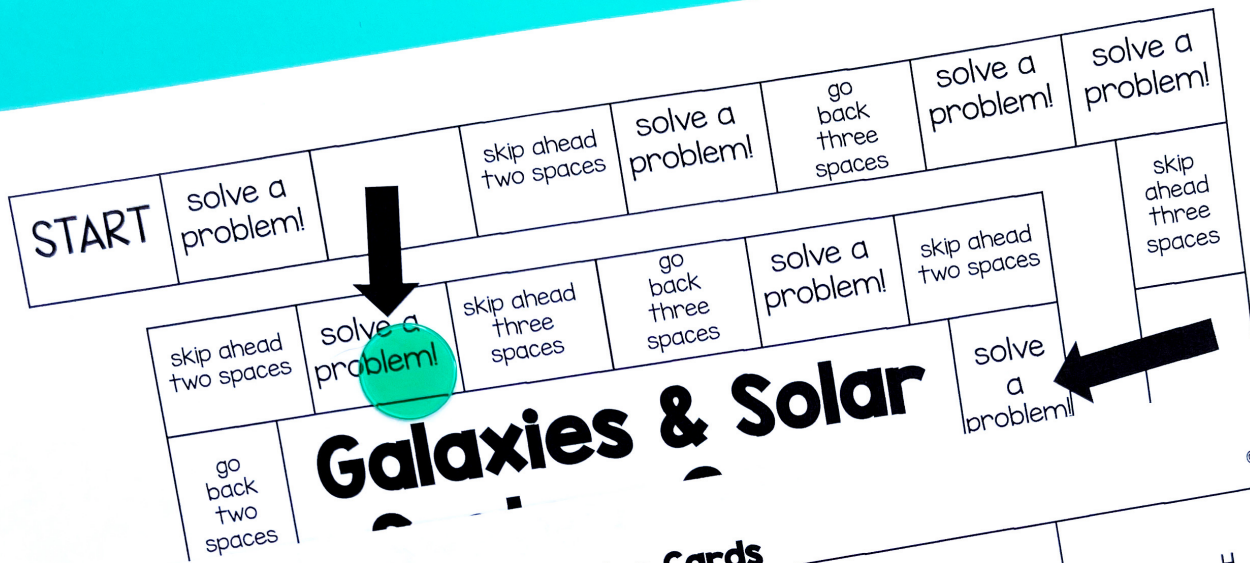
SOLAR SYSTEM

A group of gas, dust, and stars in an oval, or elliptical, shape.



ELLIPTICAL GALAXY





Galaxies & Solar

© Chloe Campbell

Galaxies & Solar System Question Cards

1 What makes up a galaxy?	2 What is the name of our home galaxy?	3 What is at the center of our solar system?	4 What orbits the sun?
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Galaxies & Solar System Recording Sheet

Name: _____

1	2	3 the sun	4 planets
5	6	7	8
			12

Board Game Included!

INNER & OUTER PLANETS

Learning Goal: Students will compare and contrast the properties of inner and outer planets.

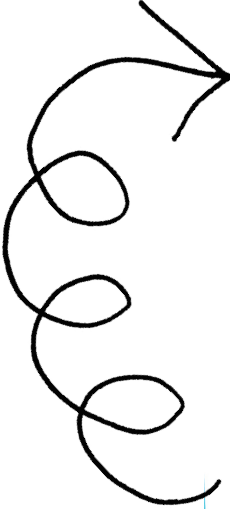

Materials Needed:

- 1 planet foldable
- Planet Fact Cards for each student or table group
- 1 Planet Comparison Chart
- Create a Comic Strip
- Exit Slips (3 options)

Name: _____

Planet Comparison Chart

	Position to the Sun	Surface Composition	Atmosphere	Size	Moons	Rings	Temperature	Length of a Year
Mercury								
Venus								
Earth								
Mars								
Jupiter								
Saturn								
Uranus								
Neptune								



Many hands on activities!

DISCUSSION CARDS TEACHER DIRECTIONS

- Students can work in groups of 3-5 for each activity.
- Have a set of cards cut in baggies for each group.
- Each student will also need two talking chips of some sort (math manipulatives, pieces of paper, crayons, paperclips, etc.). One student reaches in the bag and pulls out a question card. They read the question to the whole group.
- Everyone in the group must respond to the talking chip. Students only can't talk more than twice

What's the difference between inner and outer planets?

How are meteors different than comets?

What's your favorite object in our solar system? Why?

What's the difference between planets and moons?

**Are you tired of spending
time looking for standards
based activities for your
science class?**

Save yourself time and energy with easy to use
activities that are already aligned to your
standards and are sure to keep your students
engaged during science lessons!

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in your classroom!