

## Galaxies

Another type of spiral galaxies also exists; they are known as barred spirals. Barred spirals are similar, except that they have a bar of stars running through the middle of the bulge. The arms are made of shining stars and gas. These young stars give off a lot of light and lose some of their shine. Scientists believe that as spiral galaxies get older, spiral galaxies turn into elliptical galaxies. The most commonly known spiral galaxy is the Milky Way. What is it? It is a barred spiral.

## Galaxies

Consider the sky above you; when you've looked up, what have you seen there? Likely stars, clouds, the Sun, and the moon, but did you know that other things live in the sky? We use the term galaxy to represent the areas of space that contain stars, gas, dust, and black matter that exist up there. Galaxies are held together by gravity, and more than 100 million different types exist. Wow, that's a lot! We can't see galaxies with our eyes, but we could if we were to use a telescope. Astronomers are scientists who study the universe and all the things in it. How many galaxies do you think there are?

## Galaxies

- Name: \_\_\_\_\_
- What does the word astronomers mean?
    - people who enjoy looking at the stars through a telescope
    - scientists who only study galaxies
    - scientists who study galaxies, planets, stars, and the solar system
    - people who study the universe

- What is the main idea of the text?
  - more than 100 million different types of galaxies exist
  - we have a lot of galaxies
  - astronomers study the universe
  - galaxies are held together by gravity

- Which of the following is not a type of galaxy?
  - spiral
  - elliptical
  - irregular
  - The Milky Way

- What is the logical order of the following?
  - spiral galaxies
  - spiral galaxies
  - their stars
  - contain a lot of gas and dust
  - stars die

- What does the word "squishy" mean?
  - to squish
  - to cover

## Annotate the Text

1 Number the paragraphs

2 Underline important statements

3 Circle unknown words

4 Question? Confusing?

5 Interesting!

Name: \_\_\_\_\_

- Select the word or phrase from the paragraph that helps the reader understand the meaning of the word exist.
  - things
  - live
  - in the sky
  - galaxy
- What evidence does the author use to support the idea that elliptical galaxies are the main type of galaxies in the sky?
  - the largest type of elliptical galaxy is a giant elliptical
  - dwarf ellipticals are common galaxies that often produce many stars
  - elliptical galaxies can come in different sizes
  - making up one-third of the galaxies in the universe, elliptical galaxies are one of the most common
- Where in the text does the author show evidence to support the claim that the Milky Way is the most famous type of spiral galaxy?
  - Paragraph 2
  - Paragraph 3
  - Paragraph 4
  - Paragraph 5
- What is the main idea of paragraph 6?
  - irregular galaxies have some of the brightest stars
  - irregular galaxies can contain bars like barred spirals
  - irregular galaxies are shapeless galaxies that are neither spiral nor circular in shape
  - irregular galaxies look like a splatter of paint

# This resource includes:

- Teacher Tips
- Questions to Ask Students
- Student Bookmarks:
  - Close Reading Steps
  - Annotate/Mark the Text
- Informational Text: Galaxies
- 10 Multiple Choice Questions
- 7 Graphic Organizers
- Answer Key

## Galaxies

Another type of spiral galaxies also exists; they are known as barred spirals. Barred spirals are similar, except that they have a bar of stars running through the middle of the bulge. The arms are made of shining stars and gas. These young stars give off a lot of light and lose some of their shine. Scientists believe that as galaxies get older, spiral galaxies turn into elliptical galaxies. The most commonly known spiral galaxy is the Milky Way. Is it of it? It is a barred spiral as it has a bar of stars in the middle. The Milky Way is around 13.6 billion years old and is about 10,000 light-years thick. Our solar system is located in one of the arms.

### Irregular Galaxies

Have you ever had paint splatter? It may look like an irregular galaxy. Irregular galaxies look like this and are made of stars. They have no actual shape. When comparing elliptical or spiral galaxies, scientists deem irregular galaxies possess some of the brightest stars. Unlike spiral galaxies, irregular galaxies can also contain a bar in the middle and spirals of stars surrounding it.

With several different types of galaxies, astronomers are fascinated by all that the universe has to offer.

## Galaxies

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Consider the sky above you; when you've looked up, what have you seen there? Likely stars, clouds, the Sun, and the moon, but did you know that other things exist or live in the sky? We use the term galaxy to represent the areas of stars, gas, dust, and black matter that exist up there. Galaxies are held together by gravity, and more than 100 million different types exist. Wow, that's a lot! We can't see galaxies with our eyes, but we could if we were to use a telescope. Astronomers are scientists who study the galaxies and all other things in the sky and have helped us learn the information we know today.

### Types of Galaxies

Even with 100 million types existing, three main ones are best known. The three major types of galaxies are elliptical, spiral, and irregular galaxies.

### Elliptical Galaxies

Making up one-third of the galaxies in the universe, elliptical galaxies are one of the most common. Elliptical galaxies can come in different sizes, usually ranging from a few thousand light-years across to over a million light-years long. Elliptical galaxies contain less gas and dust than other galaxies. They are often found in clusters. The largest elliptical galaxy is the ESO 321-G004, which is about 1.5 million light-years long. Another type of elliptical galaxy is the dwarf elliptical galaxy, which is much smaller than giant ellipticals, which are only 2,000 or 3,000 light-years across.

### Spiral Galaxies

Spiral galaxies are the most common type of galaxy. They are flat, blue spirals twisted around a central bulge. They contain a lot of gas, dust, stars, and gas. Spiral galaxies have a bulge in the middle with a bar of stars running through it. Some spiral galaxies that look like this are known as normal spirals.

Non-Fiction  
Passage



## Galaxies

Name: \_\_\_\_\_

6. What does the word astronomers mean?
- people who enjoy looking at the stars through a telescope
  - scientists who only study galaxies
  - scientists who study galaxies, planets, stars, and the solar system
  - people who teach about

7. What is the main idea of paragraph 2?
- more than 100 million distant galaxies are visible to the naked eye
  - we have seen the Sun, stars, and planets in our solar system
  - astronomers study galaxies
  - galaxies are the areas of space that contain stars and other celestial objects

8. Which of the following galaxies do you think is the oldest?
- spirals
  - ellipticals
  - irregular spirals
  - The Milky Way

9. What is the logical reason why galaxies are old?
- they are made of gas and dust
  - they are made of stars
  - they are made of planets
  - they are made of comets

## Galaxies

Name: \_\_\_\_\_

1. Select the word or phrase from the paragraph that helps the reader understand the meaning of the word exist.
- things
  - live
  - in the sky
  - galaxy
2. What evidence does the author use to support the idea that elliptical galaxies are the main type of galaxies in the sky?
- the largest type of elliptical galaxy is a giant elliptical
  - dwarf ellipticals are common galaxies that often produce many stars
  - elliptical galaxies can come in different sizes
  - making up one-third of the galaxies in the universe, elliptical galaxies are one of the most common

Where in the text does the author show evidence to support the claim that the Milky Way is the most famous type of spiral galaxy?

- Paragraph 2
- Paragraph 3
- Paragraph 4
- Paragraph 5

4. What is the main idea of paragraph 6?
- irregular galaxies have some of the brightest stars
  - irregular galaxies can contain bars like barred spirals
  - irregular galaxies are shapeless galaxies that are neither spiral nor circular in shape
  - irregular galaxies are like a splatter of paint
5. Which of the following details is most important to the topic of what a light-year is?
- light-years are the distance light travels in one year
  - the largest type of elliptical galaxy is a giant elliptical, which is 300,000 light-years across

# 10 Multiple Choice Questions

# Close Reading

Close Reading: A reading strategy that is used to comprehend and analyze a text closely. Students will typically read the text at least twice for comprehension, details, analysis, and deep questioning of the text's purpose and meaning.

## Steps for Close Reading:

1. Read the Text
2. Mark Up the Text or Annotate the Text
3. Read the Text Again
4. Define Unknown Words
5. Read the Text Again
6. Respond to Reading

## Includes:

- Teacher Tips
- Questions to Ask Students
- Close Reading Steps - Bookmark
  - Version with "Mark the text"
  - Version with "Annotate the text"
- Steps to "Mark the Text" Bookmark
- Steps to "Annotate the Text" Bookmark
- Informational Text: The
- 10 Multiple Choice Questions
- 7 Graphic Organizers

# Teacher Tips & Suggestions

## Questions to Ask Students

- What is the text mostly about?
- Who is the audience for this text?
- What's is the writer's purpose of this text?
- What's your favorite part of the passage?
- What words are new to you? What do you think the words mean?
- What detail stands out to you?
- What questions do you now have about the topic?
- If you can ask the author 2 questions, what would you ask them?
- In this paragraph, what is the author saying?
- What is the structure of the text? How does it help

## Teacher Tips

Close reading: A reading strategy that is used to comprehend and analyze a text closely. Students will typically read the text at least twice for comprehension, details, analysis, and deep questioning of the text's purpose and meaning.

1. Read the Text: When students read the text for the first time, they are reading just to identify what the passage is mostly about. The first read is surface level and allows the students to understand the gist of the text.
2. Mark Up the Text or Annotate the Text: Encourage students to use their annotation bookmarks (provided below) to make notes directly on the text. Students can write in the margins, use sticky notes to make notes, use color coding. You can even slip the text inside a dry-erase pocket and encourage students to use dry-erase markers to mark up the text.
3. Read the Text Again: If the teacher is working with the students for this, the teacher can read the text aloud this time. Model think-alouds and use expression while you read. If students are working with partners in a station, encourage them to each read a paragraph then switch readers.
4. Define Unknown Words: During this step, invite students to circle any unknown or unfamiliar words. Use the provided graphic organizer to select 4-5 unknown words and work to identify the meaning of each word.
5. Read the Text Again: With this third time reading the text, encourage the students to read the passage independently.
6. Respond to Reading: Students will now use the text to answer the 10

# Graphic Organizers

- Main Ideas with Text Evidence
- Central Ideas with Text Evidence
- Central Ideas with Details
- Main Idea, Details, Conclusion
- KWL: What I Know, What I Want to Know, What I Learned
- Overview: Topic, Author's Purpose, Key Vocabulary, Most Important Thing, I Wonder, Important Facts, Illustration
- Context Clues (3 Versions: 3 words, 4 words, 5 words)
- Arthropods



Name: \_\_\_\_\_

Unknown Word

Context Clue

Word Meaning

Name: \_\_\_\_\_

What I Know

What I Want to Know

What I Learned

Name: \_\_\_\_\_

Topic

Author's Purpose

Key Vocabulary

Most Important Thing

I Wonder...

Important Facts

Illustration

Graphic  
Organizers



# Ideas for Use

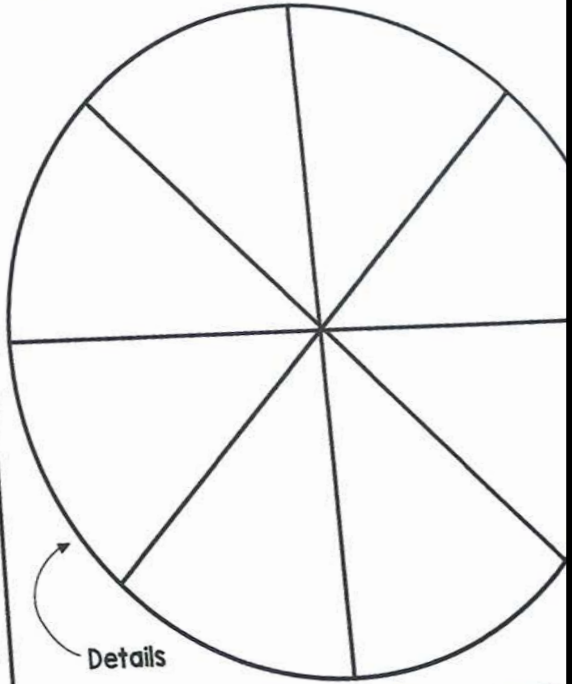


- Whole Group Instruction
- Partner Practice
- Guided Reading Groups
- Substitute Plans
- Send home to practice
- ELA Work Stations or Centers
- Assessment

Unknown Word	Context Clue

Name: \_\_\_\_\_

Central Idea



Details

Name: \_\_\_\_\_

Main Ideas

- 1
- 2
- 3

Text Evidence #1

Text Evidence #2

Text Evidence #3

Name: \_\_\_\_\_

Main Idea

Detail

# Graphic Organizers

Purchase now to  
connect science  
and literacy  
in your  
classroom!