



THE STAR★WITNESS

Supplemental Educational Support Materials for Special Feature: “Close Encounters of the Galactic Kind”

Discussion questions

Q1.

Why do galaxies interact?

Answer:

Galaxies interact when they get close enough for the gravity of one galaxy to pull on the other one.

Q2.

Tell why it is important for astronomers to study interacting galaxies.

Answer:

Astronomers believe that galaxies grow through interactions. By studying galaxy interactions, astronomers learn how galaxies form and grow. Galaxy interactions also offer a preview to our own galaxy’s future.

Q3.

Identify an interacting galaxy that you think is unique and explain why.

Answer:

Your answers will vary. You might choose a galaxy that contains many bright blue stars, one that shows tidal tails, or one with an interesting shape. Some of the galaxies may exhibit all three characteristics. Your galaxy choice depends on what you think makes the galaxy unique.

Vocabulary words

Elliptical galaxy

A galaxy that appears spherical or football-shaped. Elliptical galaxies are comprised mostly of old stars and contain very little dust and “cool” gas that can form stars.

Galaxy

A collection of stars, gas, and dust bound together by gravity. The smallest galaxies may contain only a few hundred thousand stars, while the largest galaxies have thousands of billions of stars.

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The Milky Way galaxy contains our solar system. Galaxies are classified or grouped by their shape. Round or oval galaxies are elliptical galaxies and those showing a pinwheel structure are spiral galaxies. All others are called irregular because they do not resemble elliptical or spiral galaxies.

Gravity (Gravitational force)

The attractive force between all masses in the universe. All objects that have mass possess a gravitational force that attracts all other masses. The more massive the object, the stronger the gravitational force. The closer objects are to each other, the stronger the gravitational attraction.