

Name _____

What Are The Different Types of Galaxies?

Open-Ended Response Answer Key

1. Answers will vary, but astronomers studying irregular galaxies might seek to gather information about their shapes, star-forming regions, interactions with other galaxies, and the presence of young and old stars. This information is significant because it helps expand our knowledge of galaxy formation and the role of irregular galaxies in the cosmos.
2. Barred spiral galaxies influence the distribution of stars and gas within galaxies through their central bars. These bars can funnel matter towards the galaxy's center, affecting star formation rates and gas dynamics. This influence can impact the galaxy's evolution by altering its structure and properties over time.
3. Answers may vary based on the classification chosen, but evidence for classifying the Milky Way as a barred spiral galaxy could include descriptions of its central bar and spiral arms, along with observational data supporting this classification.
4. Dwarf galaxies can be considered the "stepping stones" of the cosmos because they often orbit larger galaxies like the Milky Way and can be involved in interactions and mergers. Their study is crucial for understanding how larger galaxies grow and evolve over time through such interactions.

