

Name [Teachers Copy]

Date _____



Module 2

AICO Stellar Scholars



Objective

Understand the Galaxy basics, show your knowledge by filling out the blanks in this worksheet. If you get stuck, go back to the AICO Stellar Scholars video!

Questions

1) What evidence supports the theory that galaxies evolve over time?

Answer: Mergers and collisions change galaxy structure, black hole growth influences star formation, and quenching stops new star creation.

2) How do astronomers classify galaxies, and why is this useful?

Answer: Galaxies are classified by shape (spiral, elliptical, irregular, lenticular) and star formation rate (alive or dead). This helps scientists understand their formation and evolution.

3) Why is studying distant galaxies like looking into the past?

Answer: Light takes time to travel across space, so when we observe distant galaxies, we see them as they were billions of years ago.

4) What role do black holes play in galaxy evolution?

Answer: Black holes regulate star formation by pulling in gas and releasing energy, which can either trigger or stop star birth.

5) Why do scientists believe the universe is structured like a “cosmic web”?

Answer: Observations show that galaxies are connected by massive filaments of gas and dark matter, forming a web-like structure with vast empty spaces in between.

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