Name:	**Date:**
Teacher:	**Period:**
Group members, if any:	

1. **Before you build and complete your diagram, answer the following questions:**

Why is it important to accurately evaluate connections between evidence and models? Check all the boxes that you think apply.

- ☐ Accurately evaluating connections helps me check if models are supported by strong, relevant evidence.
- ☐ Accurately evaluating connections helps me make sure that models align with popular opinions and trends.
- ☐ Accurately evaluating connections helps me make scientific judgments about model truthfulness.
- ☐ Accurately evaluating connections helps me identify gaps or inconsistencies in the evidence supporting the model.

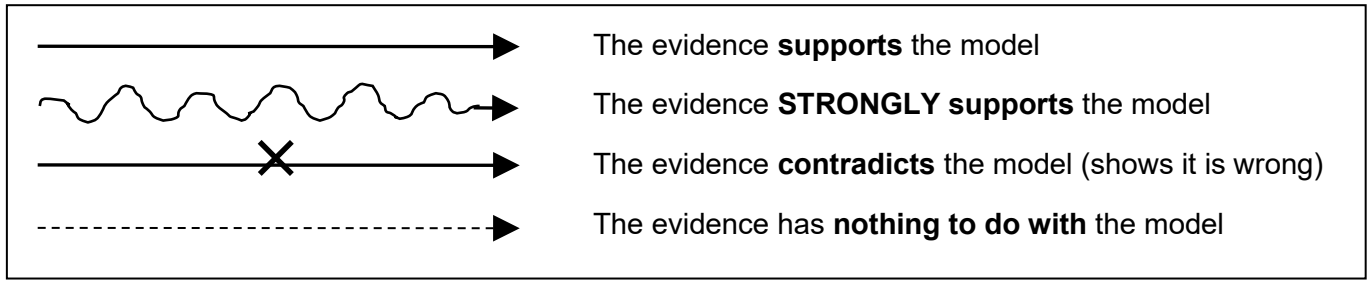
Explain why you selected your choices above. What was your reasoning for the selections you chose?

When instructed, flip over to Page 2.

2. Construct and complete your diagram

<u>Directions</u>: Draw 2 arrows from each evidence box, one to each model. You will draw a total of 8 arrows.

Key:



Evidence #1
Astronomers observe a uniform glow in the background of the sky no matter where we look.

Model A
Space, time, and matter came into existence a finite time ago in a hot dense state. It has been expanding and cooling ever since.

Evidence #3
The Universe has a predictable age based on its rate of expansion. Nothing in the Universe is older than that age.

Evidence #2
All galaxies are moving with space. Galaxies that are farther from Earth are moving faster than galaxies closer to Earth. Most galaxies are moving away from each other.

Model B
The Universe began a finite time ago when a small ball of matter exploded. The matter then spread out throughout space.

Evidence #4
The Universe was once extremely hot and allowed for matter and energy to spontaneously convert back and forth into each other. Today, the Universe is far cooler than it once was.