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.

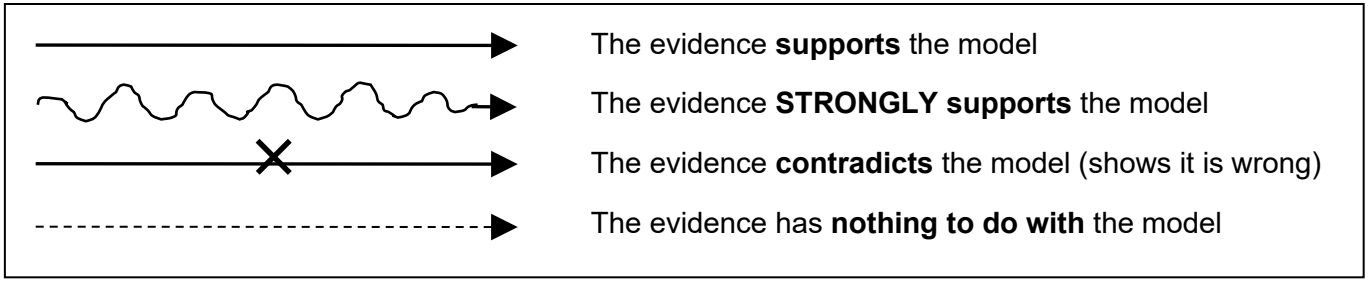
Explain why you selected your choices above. What was your reasoning for the selections you chose?

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
Since 2012, there have been more intense, extreme weather events around the world. Europe had the second-highest yearly temperature on record. The South Central United States had the costliest cold wave on record. The decade from 2013 to 2023 was the warmest ever since pre-industrial times.

Evidence #2
Since 1983, the number of fires each year in the U.S. has not changed. The number of acres burned by those fires has increased. Also, since 1983, the average annual temperature in the U.S. has increased.

Model A
Increases in extreme weather events are linked to climate change. Current climate change is mainly caused by human activities, such as fossil fuel use.

Model B
Over time, increases and decreases in extreme weather events are mainly caused by changes in Earth's orbit around the Sun.

Evidence #3
In the last 100 years, global temperatures have increased. In that same time period, heavy precipitation events have also increased.

Evidence #4
Earth's orbit is elliptical. But, the shape of the ellipse is almost a perfect circle. In the Northern Hemisphere, Earth is slightly closer to the Sun in winter than in summer. Earth's surface receives more sunlight in summer than in winter.