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.

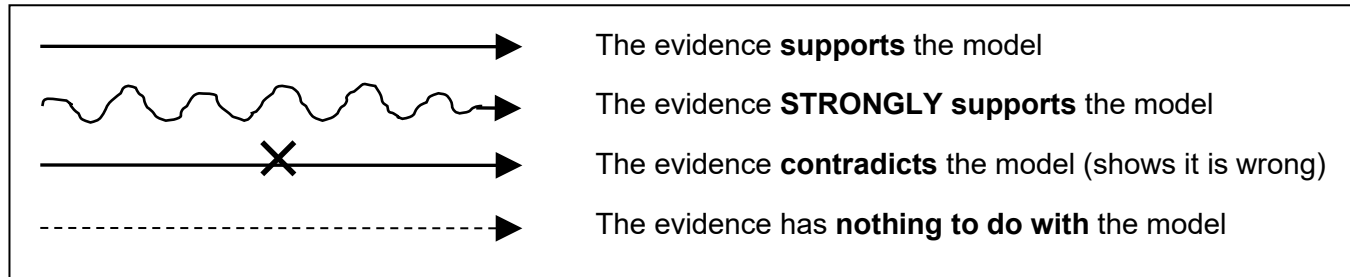☐ Accurately evaluating connections helps me identify gaps or inconsistencies in the evidence supporting the model.

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:

⟶	The evidence **supports** the model
∿⟶	The evidence **STRONGLY supports** the model
⟶✕⟶	The evidence **contradicts** the model (shows it is wrong)
---⟶	The evidence has **nothing to do with** the model

Evidence #1
Atmospheric greenhouse gas concentrations have been rising for the past 50 years. Human activities have led to greater releases of greenhouse gases. Temperatures have also been rising during these past 50 years.

Model A
Climate change is caused by humans who are releasing gases into the atmosphere.

Evidence #3
Satellites are measuring that more of Earth's energy is being absorbed by greenhouse gases.

Evidence #2
Solar activity has decreased since 1970. Lower activity means that Earth has received less of the Sun's energy. But, Earth's temperature has continued to rise.

Model B
Climate change is caused by increasing amounts of energy released from the Sun.

Evidence #4
Increases and decreases in global temperatures closely matched increases and decreases in solar activity before the industrial revolution.