Name: $\qquad$

## The Sun's Effect on Climate Student Pre- or Posttest

## 1. The Sun and Earth

a. Draw and label circles representing Earth and the Sun.
b. Add to your drawing to show how sunlight gets from the Sun to Earth.
c. Explain your drawing. Why did you draw the sunlight the way you did?
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## 2. Temperature and Latitudes

Look at the diagram of Earth above that shows different latitudes.
a. Imagine you're sailing from the equator to latitude $\mathbf{6 0}^{\circ} \mathbf{N}$ (north). How do you predict the temperatures will change as you travel north?
b. Why do you make that prediction?
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c. Imagine you're sailing from the equator to latitude $\mathbf{6 0} \mathbf{S}$ (south). How do you predict the temperatures will change as you travel south?
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d. Why do you make that prediction?
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## 3. Latitudes and the Sun's Energy

Look at the diagram of Earth above that shows different latitudes.
a. Which latitude receives the most energy from the Sun overall?
b. Which latitudes receive the least energy from the Sun overall?
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c. Why do you think the poles get less direct sunlight than the equator? (Explain your answer.)
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## 4. Summer in South America

Notice the location of South America in the diagram of Earth in question 3.
a. Draw a picture below that shows why it's hot (like summer) in January in South America.
b. Explain your drawing.
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