

## SEASONS DAY 8: EARTH'S ORBIT

### What shape is Earth's Orbit?

- Draw a diagram of Earth's orbit around the Sun from an **overhead** perspective.
- Label key parts of your diagram.
- Label where you think Earth is in September, December, March, and June.

### Distance from Earth to Sun:

Predict: At what time of year (if any) do you think Earth is closest to the Sun? \_\_\_\_\_.

<b>Date</b>	<b>Collect Data</b> distance from Earth to Sun (in kilometers)
December 21 ( <i>Boston winter</i> )	
March 21 ( <i>Boston spring</i> )	
June 21 ( <i>Boston summer</i> )	
September 21 ( <i>Boston fall</i> )	

**Compare and Analyze:**

Use the data in your table to answer these questions:

Earth is closest to the Sun in the Northern Hemisphere's \_\_\_\_\_.  
<Fall/Winter/Spring/Summer>

Earth is farthest from the Sun in the Northern Hemisphere's \_\_\_\_\_.  
<Fall/Winter/Spring/Summer>

**Reflect:**

A common explanation for why we experience Seasons is that Earth is closer to the Sun in the summer, and farther away in the winter. Do you agree or disagree with this? \_\_\_\_\_

<agree/disagree>

Explain your reasoning. If you disagree, please tell us why you think we experience Seasons:

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**Recap:**

1. What season is it for the person in the diagram to the right?

\_\_\_\_\_  
<Fall/Winter/Spring/Summer>

2. The person in the diagram will experience:

- A. A longer day and shorter night.
- B. Roughly equal day and night
- C. A longer night and shorter day

3. Sketch a side-view of the Earth and Sun when the southern hemisphere is experiencing winter:

