

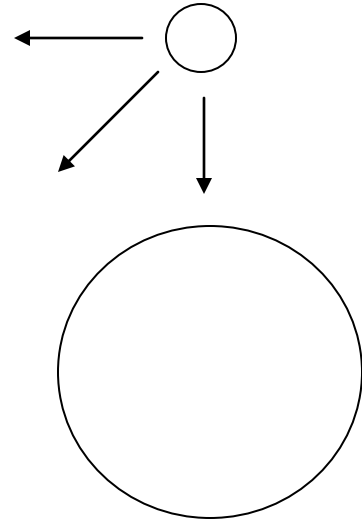
Earth-Sun Relationships

Answer all questions in **properly-written sentences and paragraphs**.

When a diagram is required, be sure to label its parts clearly.

Most questions will be graded on **3 (completely correct)—2 (mostly correct, with minor errors)—1 (somewhat correct, but major errors)—0 (all wrong or no answer.)** Some will be worth more.

1. Describe the two forces that keep Earth in orbit around the Sun, using the diagram at the right to illustrate these forces.



2. Compare Earth's "rotation" with Earth's "revolution," in terms of definition and length of time.

3. A friend tells you that summer occurs because Earth is closest to Sun. Explain whether you agree with your friend or, if you disagree, what you would explain to your friend to convince her/him. Include a diagram. (4 pt.)
4. Here in Englewood, when are the longest and shortest days of the year? Explain why.
5. Compare the daily pattern of change in location of where the Sun is overhead at solar noon from December to June with the location from June to December.

6. Explain how we know that it takes about 8-1/3 minutes from light from the Sun to reach Earth.
7. What creates light and other forms of energy within the Sun? Be as specific as you can.
8. Compare the percentages of how much of the Sun's energy reaching the Earth's atmosphere is immediately reflected back to space, absorbed by clouds and air molecules, and reaches the surface. For an extra 1 point, what term means the amount reflected back to space.