

Chapter 13, Lesson 1 – How Does Earth's Orbit Affect the Seasons?

Define Vocabulary

Sun – the star at the center of our solar system

Rotate – to spin on an axis

Axis – an imaginary line that passes through Earth's center and its north and south poles

Revolve – to travel in a closed path around another object

Orbit – the path one body takes in space as it revolves around another body

Equator – an imaginary line around Earth equally distant from the North and South Poles

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1. Explain why officials needed to set up time zones in the late 1800's.

People needed standard times to avoid confusion after they began to travel long distances on trains.

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2. Use the terms revolve and rotate correctly in sentences.

The Earth rotates on its axis once every 24 hours. The Earth revolves around the sun once every 365 days.

3. Why does the Earth have seasons?

The Earth has seasons because it is tilted 23.5 degrees on its axis.

4. Is the North Pole or the South Pole in the sunlight during summer solstice?

The North Pole is tilted toward the sun during the summer solstice.

5. Which hemisphere is pointed toward the sun during our winter?

The southern hemisphere is tilted toward the sun during our winter.

6. Why is it warmer in the summer than in the winter?

During the summer, the number of hours of daylight is longer and the sun's rays strike much of the hemisphere directly.

7. What are the days called that have the most and least days of sunlight?

The longest amount of sunlight falls on the summer solstice. The least amount of sunlight falls on the winter solstice.

8. About when do these days occur each year?

The summer solstice occurs on June 20 or 21. The winter solstice falls on December 21 or 22.

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9. What is the path of the sun through the sky at the North Pole in summer?

The sun travels close to the horizon in a big circle around the sky.

10. In Antarctica, why is the weather cold even in the summer?

Antarctica's summers are cold because the rays of the sun are more spread out there.