

Earth's Two Motions

Read how rotation and revolution measure a day and a year.

SC.4.E.5.3 "Recognize that Earth revolves around the Sun in a year and rotates on its axis in a 24-hour day."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the sentences that explain Earth's rotation and circle the sentences that explain Earth's revolution. Use your marks to compare the motion that makes a day with the motion that makes a year.

Moving Earth

- ① Earth is always moving. It spins like a top around an invisible line called its axis. One complete spin takes about 24 hours. As Earth turns, the half facing the Sun has daylight. The half turned away has night. This spinning motion is called rotation. People in different places can have day or night at the same time.
- ② Earth also travels around the Sun. This path is called an orbit, and the motion is called revolution. One trip around the Sun takes about 365 days, or one year. While Earth is making this long trip, it continues to rotate. Rotation and revolution happen at the same time, but they take very different amounts of time.
- ③ Imagine watching a playground from space. During one day, Earth rotates, so the playground moves from the Sun-facing side to the side facing away from the Sun. Over many days, Earth keeps moving along its orbit. After about 365 days, it has completed one revolution around the Sun. A day comes from rotation, while a year comes from revolution.

2 ANSWER WITH EVIDENCE Use the passage

1 What is the invisible line that Earth spins around called?

2 Which motion causes day and night, and about how long does one complete motion take?

3 What is Earth's revolution, and what path does Earth follow during this motion?

4 After about 365 days, what motion has Earth completed?

3 YOUR TURN Your own words

In Panel 1, draw Earth, its axis, the Sun, and an arrow to show rotation that leads to day and night. In Panel 2, draw the Sun and Earth's path around it, then label the motion and the time for one trip.



PART 1 • READ AND MARK

Underline the sentences that explain Earth's rotation and circle the sentences that explain Earth's revolution. Use your marks to compare the motion that makes a day with the motion that makes a year. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What is the invisible line that Earth spins around called?	Earth's axis.
2	Which motion causes day and night, and about how long does one complete motion take?	Rotation causes day and night. One complete rotation takes about 24 hours.
3	What is Earth's revolution, and what path does Earth follow during this motion?	Revolution is Earth's travel around the Sun. Earth follows a path called an orbit.
4	After about 365 days, what motion has Earth completed?	Earth has completed one revolution around the Sun.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Panel 1: Earth spins on its axis. A place facing the Sun is labeled day, and the side away from the Sun is labeled night. Label: rotation, about 24 hours. Panel 2: Earth travels around the Sun on an orbit. Label: revolution, about 365 days or one year.

Accept answers that identify rotation as Earth's spin on its axis, lasting about 24 hours, and revolution as Earth's trip around the Sun, lasting about 365 days or one year. In the panels, accept clear arrows, labels, and accurate day-night and orbit models.