

# WHY DOES EARTH EXPERIENCE SEASONS?

## ASK

We will use multiple sources to learn **why Earth has seasons**.

The sources are:

1. Video Clip
2. Informational Text
3. Interactive Diagram
4. Q&A (Question & Answer)
5. Video Clip

As you collect information from each source, be sure to record the information in the table on page 7.

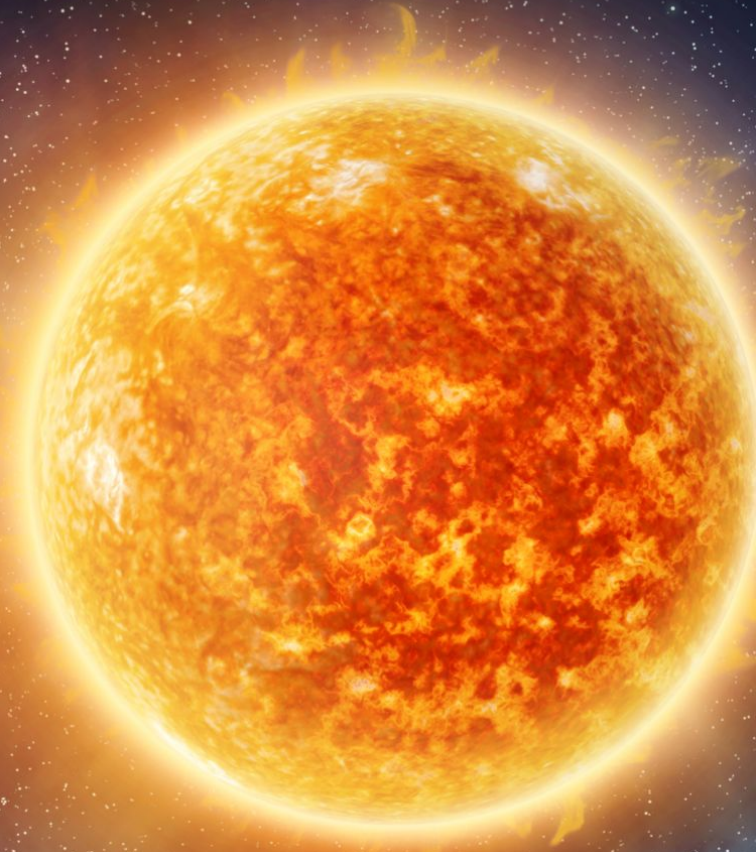
This information will help you answer the question.

# VIDEO: ROTATION AND REVOLUTION

## WATCH

Click the link to watch an 8-minute video about Earth's movements.

<https://www.turtlediary.com/video/rotation-and-revolution.html>



**FILL IN THE TABLE!**

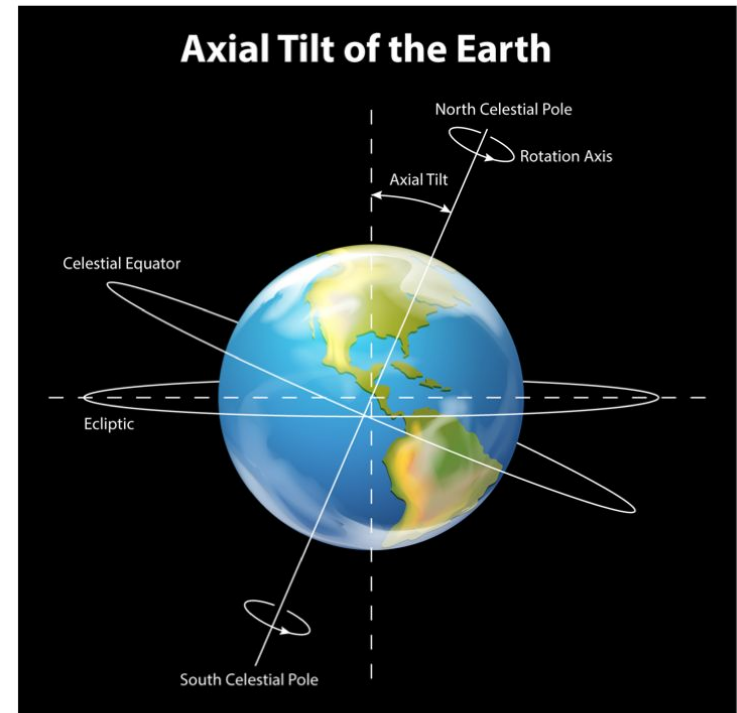
# TEXT: REASON FOR THE SEASONS

## READ

Seasons change throughout the year because Earth **orbits** (circles) the Sun. We can model Earth's orbit easily.

Hold up your left and right fists in front of you. The left fist is the Sun. The right fist is the Earth. Now hold a pencil in your right fist, point down. The imaginary line that the Earth spins on is called the **axis**. The eraser of your pencil-axis is the North Pole, and the point is the South pole.

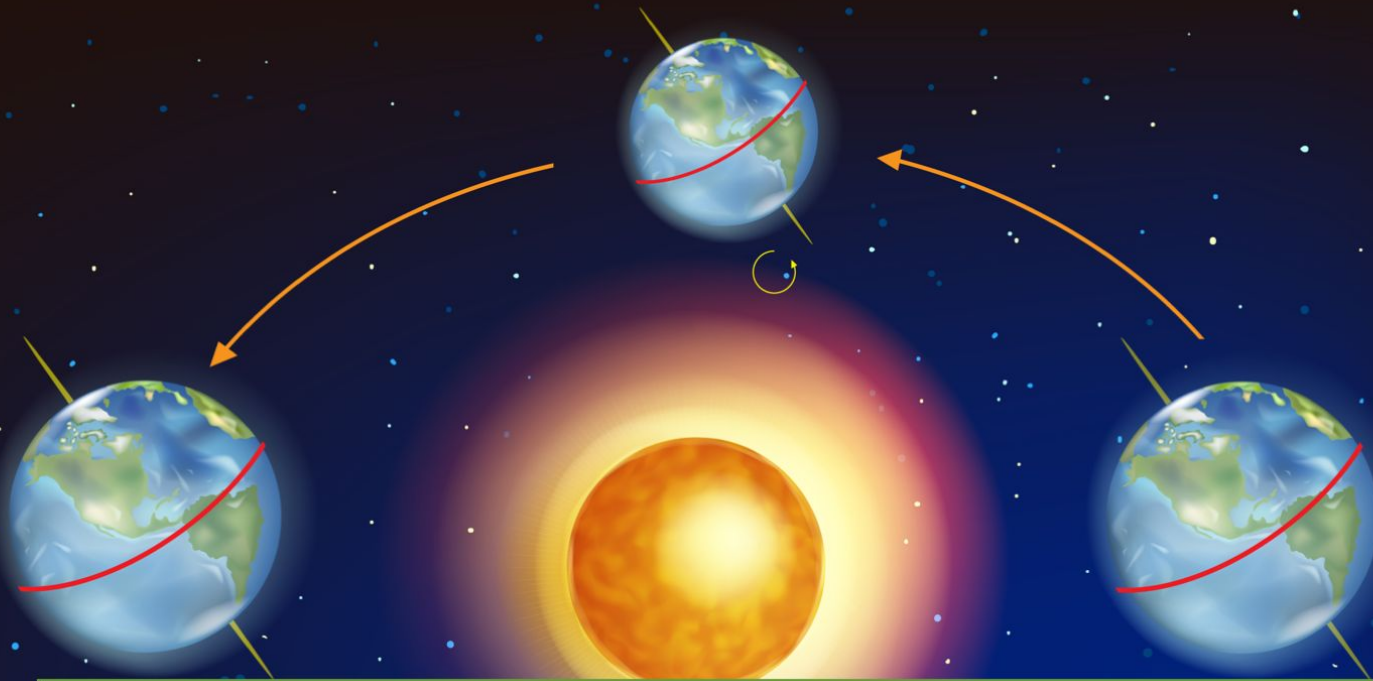
The Earth's axis is a little tilted. Tilt the eraser-North Pole toward your left fist-Sun. The axis is tilted in the same direction (to your left for your model) all the time. When it's Summer in the Northern Hemisphere, the North Pole points toward the Sun. Sunlight and its warmth are more directly hitting the Northern Hemisphere.



You can move your *fist-Earth* around your *fist-Sun* to orbit (circle), but only so far because you have arms. Still, you can see that after the Earth completes half of its orbit around the Sun – half a year – the *South Pole-pencil point* is toward the Sun and the Southern Hemisphere has Summer while the North is in Winter.

FILL IN THE TABLE!

# INTERACTIVE: WHAT CAUSES SEASONS?



## INTERACT

Earth's tilt on its axis as it orbits the sun causes the seasons.

The link will take you to an interactive diagram. Read the short text and study the diagram. Click each blinking dot in the diagram to learn more about how the tilt of Earth on its axis causes seasons.

<https://www.dkfindout.com/us/earth/seasons/what-causes-seasons/>

FILL IN  
THE TABLE!

# Q&A: WHAT CAUSES THE SEASONS?



## READ

Click the link to read an answer written by scientists at NASA explaining what causes seasons.

<https://spaceplace.nasa.gov/seasons/en/>

FILL IN THE TABLE!

# VIDEO: EARTH IN ORBIT



## WATCH

Click the link to watch the 3-minute video.

<https://www.pbslearningmedia.org/resource/buac18-35-sci-ess-earthinorbit/earth-in-orbit/>

**FILL IN THE TABLE!**

# Collecting Information

As you complete the task on each slide, explain what you learned about why Earth experiences seasons.

Source	Why does Earth experience seasons?
Video: Earth's Rotation and Revolution	<b>What does Earth revolve around?</b> <b>What is it tilted on?</b>
Text: Reason for the Seasons	<b>How does Earth's tilted axis affect our seasons?</b>
Interactive: What Causes Seasons?	<b>When the Northern hemisphere is tilted toward the Sun, is it experiencing summer or winter?</b>
Q&A: What Causes Seasons?	<b>What causes seasons?</b>
Video: Earth in Orbit	<b>How does sunlight affect seasons?</b>

# Integrating Information

Use the information you collected from multiple sources to thoroughly explain why Earth experiences seasons.

Earth orbits the \_\_\_\_\_ once every 365 days. As Earth \_\_\_\_\_ around the Sun, it rotates on its \_\_\_\_\_ axis.

When the North Pole is pointed toward the Sun, the Northern hemisphere experiences the season of \_\_\_\_\_. The Northern hemisphere receives more \_\_\_\_\_.

When the South Pole is pointed toward the Sun, the Northern hemisphere has \_\_\_\_\_. It is \_\_\_\_\_.

Because of Earth's \_\_\_\_\_ as it \_\_\_\_\_ the Sun, Earth experiences seasons.

## Term Bank- Drag and Drop

tilt on its axis

summer

sunlight

Sun

winter

tilted

revolves

orbits

colder