

Today's Equinox Marks a Turn in the Sky

The September equinox helps mark a seasonal change, even if day and night are not perfectly equal.



A school playground at sunset shows long shadows and a sky changing from orange to blue.

Today brings the September **equinox**, a sky event that helps mark the **seasons**, according to NASA's Night Sky Network. In 2026, the exact moment comes at 00:05 UTC on September 23. UTC is a time used around the world. NASA lists the West Coast time as September 22 at 5:05 p.m. PDT. PDT means Pacific **Daylight** Time.

An equinox happens twice each year, once in March and once in September. The word comes from Latin, where it means equal night. It is not magic. It is **geometry**, the math of shapes and positions. At the equinox, the center of the Sun crosses the flat plane of Earth's **equator**. A plane is like an invisible sheet stretching into space. The equator is the imaginary line around Earth's middle.

If a person stood on the equator at noon that day, the Sun would be straight overhead. In other places, people would notice smaller changes. Shadows look a little different. Sunrise and sunset creep along the **horizon** over many days. The change is slow, but it is real. It is the same sky that hangs over playgrounds, bus stops, and bedroom windows.

The equinox matters because it shows Earth moving from one season toward another. After the September equinox, the Sun's path keeps moving south in the sky, NASA says. In the Northern Hemisphere, the half of Earth that includes

the United States, days usually get shorter. Nights get longer. In the Southern Hemisphere, the half below the equator, days usually get longer.

Many people have heard that day and night are exactly equal on the equinox. NASA says that is only almost true. The Sun is a big ball, not a tiny dot of light. Also, Earth's atmosphere, the blanket of air around our planet, bends sunlight near sunrise and sunset. That bending is called refraction. Because of these things, places can get a few extra minutes of daylight.

Long before phones and calendars, people watched the Sun to learn the year's pattern. Some ancient observatories, places built to study the sky, marked equinoxes and solstices. A **solstice** is when the Sun reaches its highest or lowest path for the year. Today, no stone tower is needed. A window, a shadow, and a careful eye can still show that the season is turning.

Written from reporting by NASA.

THINK IT THROUGH

1. Should a class trust a calendar, the sky, or both for noticing a season change? Defend your answer.

A strong answer: A strong answer weighs exact information from calendars against real observations like shadows, sunset times, and weather.

2. The name equinox means equal night, but day and night are not perfectly equal. Is that name helpful or misleading? Explain.

A strong answer: A strong answer considers whether a simple name can still be useful even when the science is more exact.

3. If a family in Australia and a family in the United States talked about this equinox, how might their feelings differ?

A strong answer: A strong answer explains that the same sky event can mean opposite seasonal changes in different hemispheres.

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U H E Z S Q E R V Y P T
A E E G E U N N Q R F Y
G I T A E Q U I N O X S
E Y O A S O L S T I C E
T O T K W N M O Y S I A
I Q E M S Y A E T L O S
N D A Y L I G H T E Z O
S T I E Q U A T O R H N
F Y N S S G I N R A Y S
H I H E R A T I I U I H
U X R E Z O O I T L E O
M X O C H O R I Z O N O

DAYLIGHT

EQUATOR

EQUINOX

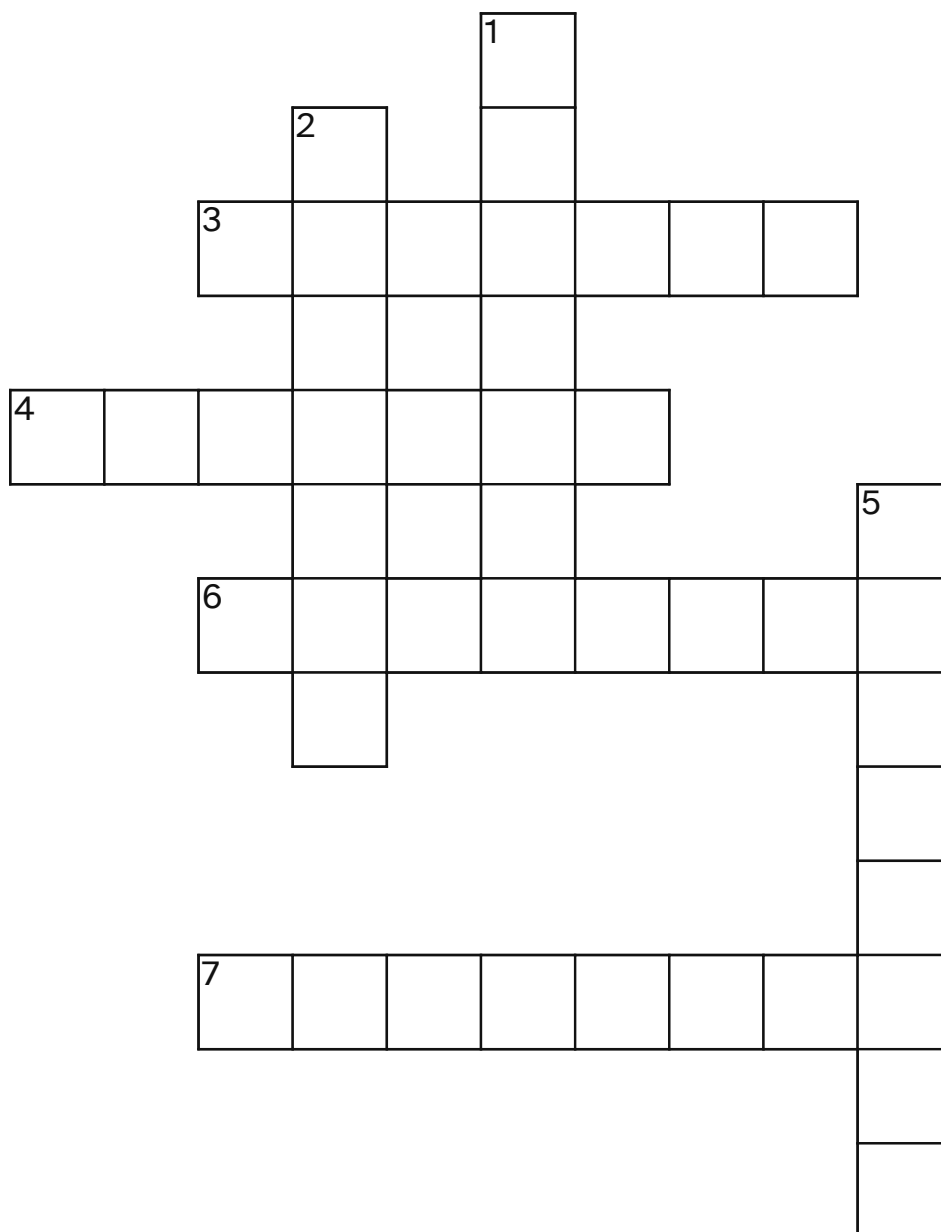
GEOMETRY

HORIZON

SEASONS

SOLSTICE

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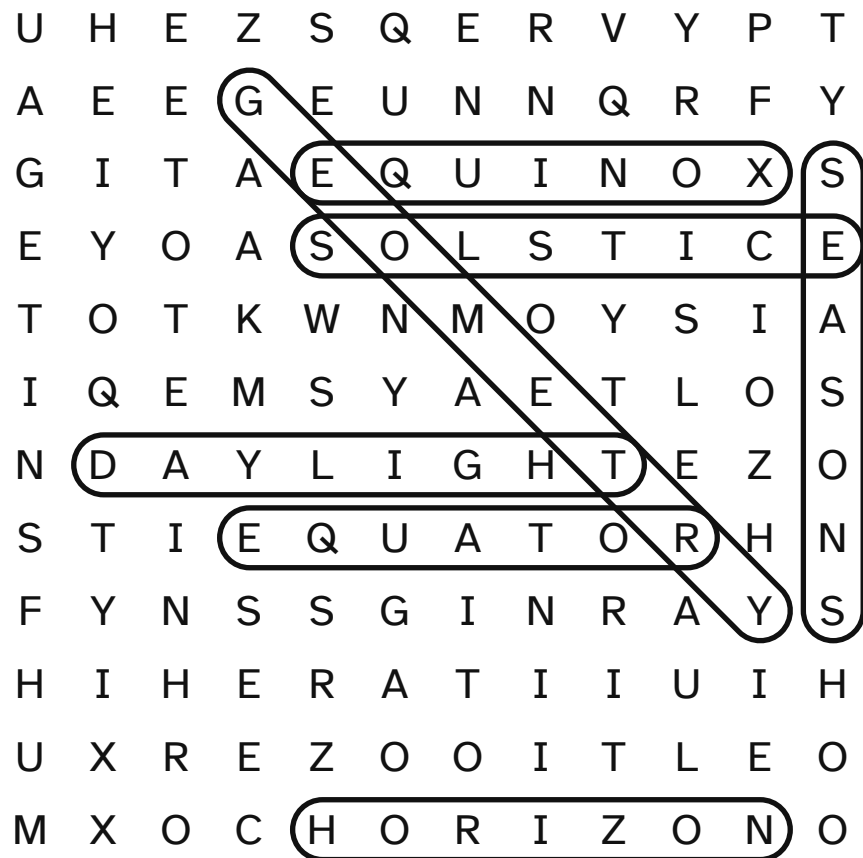
ACROSS

- 3 Imaginary line around Earth's middle
- 4 Far-off place where land or sea seems to touch the sky
- 6 Yearly time when our star takes its highest or lowest sky path
- 7 Outdoor brightness between morning and evening

DOWN

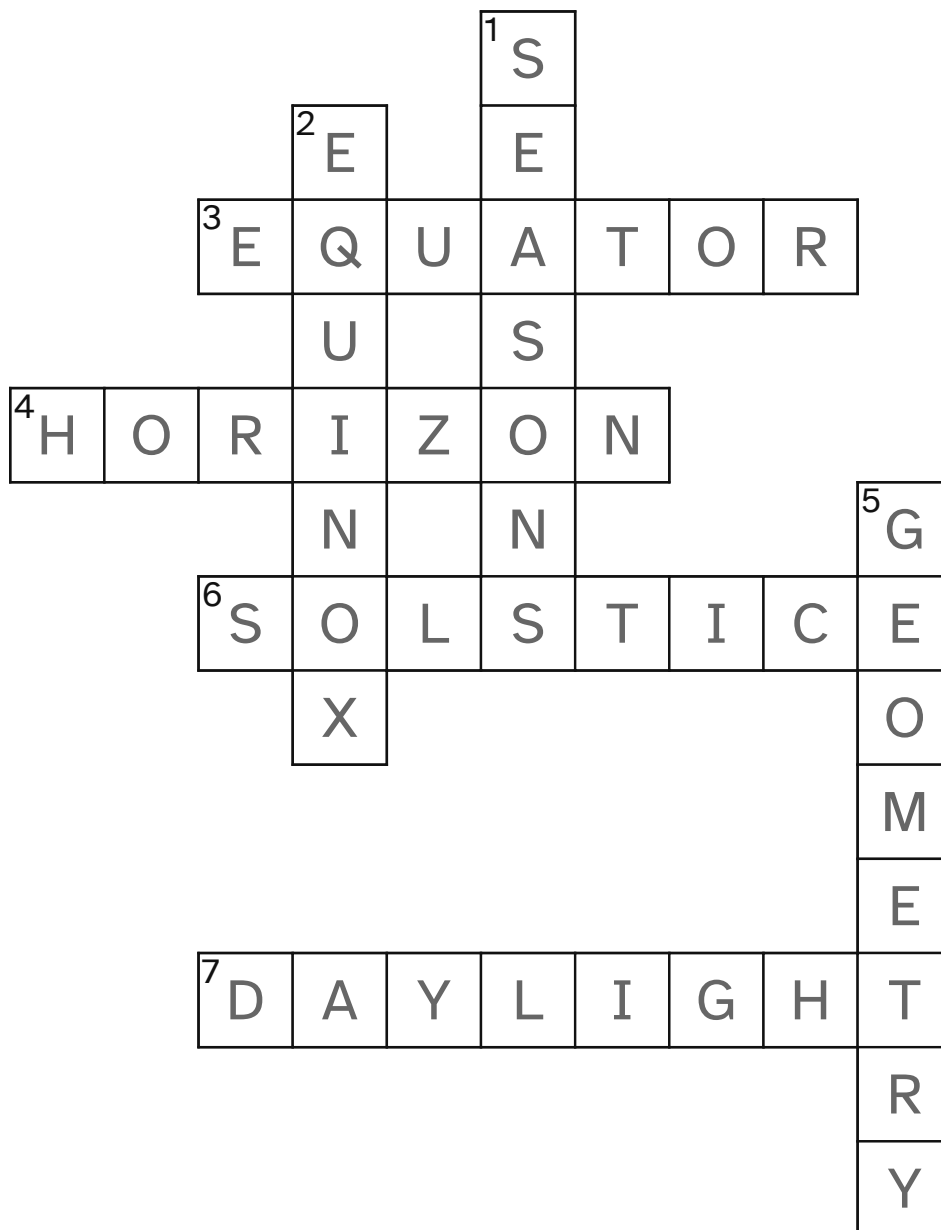
- 1 Yearly parts with different weather and hours of brightness
- 2 March or September time when day and night are nearly equal
- 5 Math about shapes, lines, and places

Today's Equinox Marks a Turn in the Sky — answer key



DAYLIGHT EQUATOR EQUINOX GEOMETRY HORIZON
SEASONS SOLSTICE

Today's Equinox Marks a Turn in the Sky — answer key



ACROSS

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DOWN

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Where this came from

This article was written for 3andB from the reporting below. It is not a reprint — the wording is ours and the facts are theirs.

NASA

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<https://science.nasa.gov/solar-system/skywatching/night-sky-network/embracing-the-equinox/>

WHAT IS IN THIS PACKET

The article with a note on each question, a word search, a crossword, and the answer key to both.

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