

# Winter Solstice

The winter solstice occurs annually between 20<sup>th</sup> and 23<sup>rd</sup> December in the northern hemisphere. It is the day when there is the shortest amount of daylight.

## What Is a Solstice?

The word 'solstice' comes from Latin and means 'Sun stands still'. This is because the Sun appears to stand still in the sky during the solstice.

A solstice, just like the seasons of the year, only happens because the Earth is tilted on its axis at an angle of 23.5°. This means that as the Earth orbits the Sun, sometimes the North Pole is tilted towards the Sun, getting more light and heat and sometimes the North Pole is tilted away from the Sun, making it darker and colder.

When the northern hemisphere is tilted towards the Sun, it is summer. When it is tilted away, it is our winter. A solstice signifies the peaks in this orbit; the summer solstice is the point of most light and the winter solstice is the point of least light before the days begin to get longer again.



## Solstice Facts:

- Some countries near the North Pole experience 24-hour darkness during midwinter.
- Have you worked out that the winter solstice in the southern hemisphere would be around the 21<sup>st</sup> of June when the northern hemisphere is having its summer solstice?

## ◆◆◆◆◆ How Do People Celebrate? ◆◆◆◆◆

For thousands of years, people have celebrated the winter solstice. In ancient times, it was very important to keep track of the days and seasons, especially in the winter when stored food had to last until the following spring. People celebrated the winter solstice because it meant that the light was returning and the days were once again getting longer.

Celebrations in Europe have names such as 'midwinter', 'Yuletide' or 'Yule'. In historic celebrations, a huge log called a Yule log was burned in a fire that lasted the twelve days of Christmas. The popular Yule log cake eaten today was inspired by this ancient tradition.

Celebrations often include lights to brighten up the dark months as well as singing, dancing and, of course, good food. Traditional midwinter foods would be those that had been preserved and saved at harvest time such as meats, dried fruits, cheeses and pickles. These foods are still familiar in modern times during Christmas celebrations.

Many winter solstice celebrations revolve around the Sun and include themes of light returning, light winning over darkness or good conquering evil.

# Questions

1. What is the reason that we have seasons on Earth?

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2. How much light does the North Pole get during the winter solstice?

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3. Summarise what you have learned about winter solstice celebrations in 25 words or fewer.

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4. Explain the two different types of 'Yule logs'.

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5. Tick 'true' or 'false' for each statement.

**True**   **False**

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The northern hemisphere is tilted towards the Sun in summer.

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The winter solstice is when there is the most light from the Sun.

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The northern hemisphere is tilted away from the Sun during winter.

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In midwinter, it is very sunny at the North Pole.

6. Traditional midwinter foods were often summer or autumn foods that were dried and pickled. Why do you think they had to be dried or pickled?

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7. Which of these words is closest in meaning to the word 'signifies'? Tick one.

- ☐ hides
- ☐ copies
- ☐ marks
- ☐ moves

8. Compare what a person in the UK and a person in Australia might be wearing on 21<sup>st</sup> December. Explain the scientific reasons for your answer.

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