

Winter in Northern Ireland

Calendar Clashes

Meteorology is a science concerned with atmosphere and the weather. If we follow the meteorological calendar, winter begins on December 1st and ends either February 28th or 29th.

Astronomy is the study of everything beyond Earth's atmosphere - the rest of the universe. If we consider astronomical winter to be the beginning of the season, the first day of winter will be the 21st or 22nd of December. This will be the date of the winter solstice, known as the shortest day of the year, when the Sun will be at its lowest point in the sky in the Northern Hemisphere.

Winter Solstice

In ancient times, the winter solstice was an extremely important event. After this date, the Sun would continue to appear to climb higher in the sky, bringing more light and warmth to Earth.

The famous Newgrange, in County Meath, is a Stone Age monument built more than 5200 years ago. At sunrise at the time of the winter solstice, a shaft of light shines down the stone passage at Newgrange, illuminating an inner chamber.

The passage tomb at Slieve Gullion in Armagh is the highest surviving one anywhere in Ireland. While Newgrange is connected to sunrise, the winter solstice event at Slieve Gullion happens at sunset. As the Sun sinks in the sky, rays shine down the stone passage there, lighting up the back of the ancient stone chamber.



Weather

Wintry weather might include frost, hail, sleet and snow. In December 2010, the temperature in Castlederg in County Tyrone hit a record low when a reading of minus 18.7°C was recorded.

Nature

We may hear robins singing early on winter mornings or in the evenings. They are warning other birds to stay away from their territory, as they need to protect their food supply. They can puff out their feathers to trap a layer of warm air beneath them.

Whooper swans arrive from Iceland to spend winter at places such as Upper Lough Erne, Lough Foyle and Lough Neagh. They graze grasslands near the water. In Northern Ireland, hedgehogs and bats are hibernating during winter.

Snowdrops are one of the first flowers that emerge each year, even blooming in frost or snow. These little white bell-shaped wildflowers are often thought of as symbols of hope.



Festivals and Celebrations

Christians celebrate the birth of Jesus on December 25th each year. Many people attend religious and carol services, decorate their homes, put up Christmas trees and open presents.

Hanukkah, also called the 'Festival of Lights' (as people remember a special lamp that burned in a holy temple for eight nights, with only enough oil for one) is a Jewish celebration that usually begins in December. Gifts are given and there are special meals, songs, stories and games.

New Year's Day is on January 1st. As a new year dawns, many people make resolutions for the future.

Saint Brigid's Day is on 1st February; she is one of the patron saints of Ireland. People may use rushes to make special crosses for her feast day. On Saint Valentine's Day, on 14th February, people often exchange cards with those that they love.



Questions

1. According to the meteorological calendar, what are the months of winter?

- ☐ February, March and April
- ☐ November, December and January
- ☐ December, January and February

2. In which of these places would you find ancient stone passages aligned to the Sun? **Tick two.**

- ☐ Slieve Gullion
- ☐ Castlederg
- ☐ Newgrange

3. Is this sentence true or false? Tick one.

In the Northern Hemisphere, the shortest day of the year occurs in December.

- ☐ True
- ☐ False

4. Draw four lines to match each living thing to what it can be found doing in winter.

bats	singing to defend their feeding territory
snowdrops	grazing in proximity to a lough
whooper swans	hibernating
robins	emerging even in wintry weather conditions

5. Why do you think whooper swans migrate to Northern Ireland?

6. How do we know that the winter solstice was important to people in ancient Ireland?

7. In what traditional way might many people mark the New Year?

8. Why do you think snowdrops are often viewed as symbols of hope?

Answers

1. According to the meteorological calendar, what are the months of winter?

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- ☒ **December, January and February**

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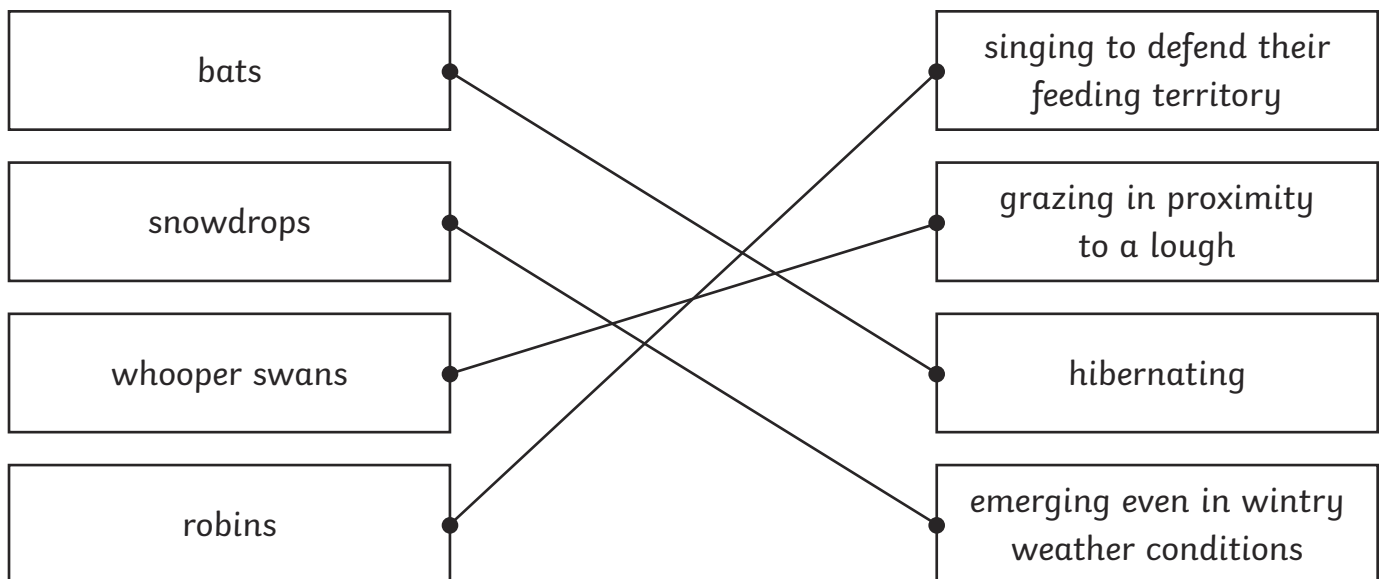
- ☒ **Slieve Gullion**
- ☐ Castlederg
- ☒ **Newgrange**

3. Is this sentence true or false? Tick one.

In the Northern Hemisphere, the shortest day of the year occurs in December.

- ☒ **True**
- ☐ False

4. Draw four lines to match each living thing to what it can be found doing in winter.



5. Why do you think whooper swans migrate to Northern Ireland?

Answers such as: I think that whooper swans migrate south to Northern Ireland because it would be too cold for them to spend the winter in Iceland, where they come from.

6. How do we know that the winter solstice was important to people in ancient Ireland?
Answers such as: We know that the winter solstice was important to people in ancient Ireland because some of the monuments they built align to the Sun's position in the sky at this time of year.
7. In what traditional way might many people mark the New Year?
Answers such as: Many people mark the New Year by making resolutions for the year ahead.
8. Why do you think snowdrops are often viewed as symbols of hope?
Answers such as: I think snowdrops might be symbols of hope because they can bloom in harsh conditions and they are a sign that spring is on the way, even if the weather is still wintry.

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Winter Solstice

In ancient times, the winter solstice was an event of great significance. After this date, the Sun would continue to appear to climb higher in the sky, bringing more light and warmth to Earth.

The famous Newgrange, in County Meath, is a Stone Age monument built more than 5200 years ago, making it older than Stonehenge in England and the Great Pyramid of Giza in Egypt. At sunrise at the time of the winter solstice, a shaft of light shines down the stone passage at Newgrange, illuminating an inner chamber.

At an altitude of 570 metres, the passage tomb at Slieve Gullion in Armagh is the highest surviving one anywhere in Ireland. While Newgrange is connected to sunrise, the winter solstice event at Slieve Gullion happens at sunset. At about 4pm, when the Sun meets the horizon, sunlight shines down the stone passage and lights up the back of the ancient stone chamber.



Weather

Wintry weather might include frost, hail, sleet and snow. The temperature in Castlederg in County Tyrone hit a record low during the 'big freeze' in December 2010, when a reading of minus 18.7°C was recorded. That December was the coldest month recorded in Northern Ireland for a century. During 2011, Katesbridge in County Down recorded the UK's lowest temperature at least thirteen times. Both Katesbridge and Castlederg are low-lying locations (also known as frost hollows) and cold air sinks to the lowest point.

Nature

Many trees are bare in winter. It can be more difficult for animals and birds to find food and keep warm. We may hear robins singing early on winter mornings or in the evenings. They are warning other birds to stay away from their territory as they need to protect their food supply. They can puff out their feathers to trap a layer of warm air beneath them.

Whooper swans arrive from Iceland to spend winter at places such as Upper Lough Erne, Lough Foyle and Lough Neagh. They graze grasslands near the water. In Northern Ireland, hedgehogs and bats are hibernating during winter.

Snowdrops are one of the first wildflowers that appear each year, even blooming in frost or snow. These little white bell-shaped wildflowers are often thought of as symbols of hope.



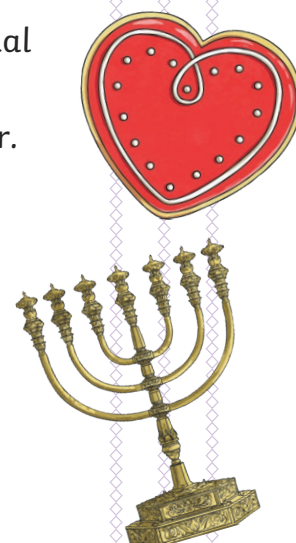
Festivals and Celebrations

Christians celebrate Jesus' Nativity (birth) on December 25th each year. Many people attend religious and carol services, decorate their homes, put up Christmas trees and open presents.

Hanukkah, also called the 'Festival of Lights' (as people remember a special lamp that burned in a holy temple for eight nights, with only enough oil for one), is an annual Jewish celebration that usually begins in December. Gifts are given and there are special meals, songs, stories and games.

New Year's Day is on January 1st. As a new year dawns, many people make resolutions about things they will try to do or avoid doing in the future.

Saint Brigid's Day is on 1st February; she is one of the patron saints of Ireland. People may use rushes to make special crosses for her feast day. On Saint Valentine's Day, on 14th February, people often exchange cards with those that they love.



Questions

1. What is meteorology? Tick one

- ☐ the study of everything beyond Earth's atmosphere
- ☐ the date when the Sun is at its lowest point in the sky
- ☐ a science concerned with atmosphere and the weather

2. According to the meteorological calendar, when does winter begin?

- ☐ 21st December
- ☐ 1st December
- ☐ 1st January

3. Is this sentence true or false? Tick one.

December 2011 was the coldest month recorded in Northern Ireland for a century.

- ☐ True
- ☐ False

4. Find and copy words that mean:

- a. lighting up _____
- b. an event that happens every year _____
- c. the height of a place in relation to sea or ground level _____

5. Given their locations, why is it not surprising that Castlederg and Katesbridge often record the lowest temperatures in Northern Ireland?

6. How do you think the early-blooming winter wildflowers got their name?

7. Why is Hanukkah a celebration associated with lights?

8. How might Christians celebrate Jesus' Nativity?

9. How is Slieve Gullion Passage Tomb connected with the winter solstice?

Answers

1. What is meteorology? Tick one

- ☐ the study of everything beyond Earth's atmosphere
- ☐ the date when the Sun is at its lowest point in the sky
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2. According to the meteorological calendar, when does winter begin?

- ☐ 21st December
- ☒ **1st December**
- ☐ 1st January

3. Is this sentence true or false? Tick one.

December 2011 was the coldest month recorded in Northern Ireland for a century.

- ☐ True
- ☒ **False**

4. Find and copy words that mean:

- a. lighting up - **illuminating**
- b. an event that happens every year - **annual**
- c. the height of a place in relation to sea or ground level - **altitude**

5. Given their locations, why is it not surprising that Castlederg and Katesbridge often record the lowest temperatures in Northern Ireland?

Answers such as: Both Castlederg and Katebridge are in low-lying locations and cold air sinks into these 'frost hollows', so it is likely that winter temperatures will be colder there than elsewhere.

6. How do you think the early-blooming winter wildflowers got their name?

Answers such as: I think snowdrops got their name because they often emerge when the weather is still wintry and there is still snow on the ground.

7. Why is Hanukkah a celebration associated with lights?

At Hanukkah, Jewish people remember the lamp that burned in the holy temple for eight nights, despite having only enough oil for one.

8. How might Christians celebrate Jesus' Nativity?

Answers such as: Christians might celebrate Jesus' Nativity by attending religious and carol services, decorating their homes, putting up Christmas trees and exchanging presents.

9. How is Slieve Gullion Passage Tomb connected with the winter solstice?

Answers such as: The stone passage in Slieve Gullion tomb is aligned to the setting sun at the time of the winter solstice and its rays illuminate an inner chamber.

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Winter Solstice

In ancient times, the winter solstice was an event of great significance. The people had observed that this time marked the beginning of the Sun's resurgence. After this date, it would continue to appear to climb higher in the sky, bringing more light and warmth to Earth.

The famous Newgrange, in County Meath, is a Stone Age monument constructed more than 5200 years ago, making it older than Stonehenge in England and the Great Pyramid of Giza in Egypt. At sunrise at the time of the winter solstice, a shaft of light shines down the stone passage at Newgrange, illuminating an inner chamber.

At an altitude of 570 metres, the passage tomb at Slieve Gullion in Armagh is the highest surviving one anywhere in Ireland. While Newgrange is connected to sunrise, the winter solstice event at Slieve Gullion happens at sunset. At about 4pm, when the sun meets the horizon, sunlight shines down the stone passage and lights up the back of the ancient stone chamber.

It is amazing to think that the ancient peoples of Ireland knew the movements of the Sun so well that they were able to work out the angle of light at the winter solstice and align their constructions to these solar events.



Weather

Wintry weather might include frost, hail, sleet and snow. The temperature in Castlederg in County Tyrone hit a record low during the 'big freeze' in December 2010, when a reading of minus 18.7°C was recorded. That December was the coldest month recorded in Northern Ireland for a century. During 2011, Katesbridge in County Down recorded the UK's lowest temperature at least thirteen times. Both Katesbridge and Castlederg are low-lying locations (also known as frost hollows).

Nature

Many trees are bare in winter. It can be more difficult for animals and birds to find food and keep warm. We may hear robins singing early on winter mornings or in the evenings. They are warning other birds to stay away from their territory, as they need to protect their food supply. When temperatures drop, robins puff up their feathers in order to trap a layer of warm air beneath.

Whooper swans arrive from Iceland to spend winter at places such as Upper Lough Erne, Lough Foyle and Lough Neagh. They graze grasslands near the water. In Northern Ireland, hedgehogs and bats are hibernating during winter.

Snowdrops are one of the first flowers that appear each year, even blooming in frost or snow. These little white bell-shaped wildflowers are often thought of as symbols of hope. Their scientific name is 'Galanthus', which is Greek and means 'milk flower'.

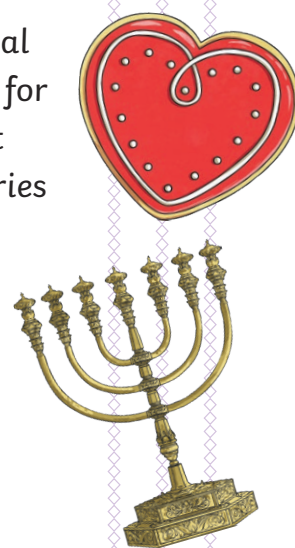
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Hanukkah, also called the 'Festival of Lights' (as people remember a special lamp that burned in a holy temple for eight nights, with only enough oil for one), is a Jewish celebration that usually begins in December. Over eight consecutive nights, gifts are given and there are special meals, songs, stories and games.

New Year's Day is on January 1st. As a new year dawns, many people make resolutions about things they will try to do or avoid doing in the future.

Saint Brigid's Day is on 1st February; she is one of the patron saints of Ireland. People may use rushes to make special crosses for her feast day. On Saint Valentine's Day, on 14th February, people often exchange cards with those that they love.



Questions

1. Stone passageways at Newgrange and Slieve Gullion are aligned to which solar event?
Tick one.

- ☐ autumn equinox
- ☐ winter solstice
- ☐ summer solstice

2. Is this sentence true or false? Tick one.

In winter, whooper swans migrate to Northern Ireland from Iceland.

- ☐ True
- ☐ False

3. Why was the winter solstice of great significance to early peoples?

4. What evidence do we have of these early peoples' knowledge of the movement and position of the Sun?

5. Why do you think Hanukkah is celebrated over eight consecutive nights?

6. What was significant about December 2010 in Northern Ireland?

7. What might explain the particularly low winter temperatures recorded in Castlederg and Katesbridge?

8. Name two behaviours that robins may display during the winter. Give reasons why they behave this way.

9. Why do you think snowdrops may have been given their Greek name?

10. Why do you think that there are two possible dates for the end of winter according to the meteorological calendar?

Answers

1. Stone passageways at Newgrange and Slieve Gullion are aligned to which solar event? Tick one.

- ☐ autumn equinox
☒ **winter solstice**
☐ summer solstice

2. Is this sentence true or false? Tick one.

In winter, whooper swans migrate to Northern Ireland from Iceland.

- ☒ **True**
☐ False

3. Why was the winter solstice of great significance to early peoples?

Answers such as: For early peoples, the winter solstice marked the beginning of the Sun's resurgence, meaning they could look forward to more light and warmth in their lives and the time of new life and growth.

4. What evidence do we have of these early peoples' knowledge of the movement and position of the Sun?

These early people were able to construct stone monuments that had passages aligned to the particular position of the Sun at the time of the winter solstice.

5. Why do you think Hanukkah is celebrated over eight consecutive nights?

Answers such as: I think Hanukkah is celebrated over eight consecutive nights because the lamp in the holy temple burned for eight days, despite only having enough oil for one.

6. What was significant about December 2010 in Northern Ireland?

December 2010 was the coldest month in Northern Ireland for a century, when a record low temperature of minus 18.7°C was recorded.

7. What might explain the particularly low winter temperatures recorded in Castlederg and Katesbridge?

Answers such as: Both Castlederg and Katesbridge are in low-lying locations (frost hollows) and as cold air sinks, these places become colder than surrounding areas.

8. Name two behaviours that robins may display during the winter. Give reasons why they behave this way.

Robins sing during winter to defend their feeding territory. To try to keep warm, they plump out their feathers to trap a layer of warm air beneath.

9. Why do you think snowdrops may have been given their Greek name?

Answers such as: I think snowdrops may have been named 'milk flowers' because of their white colour.

10. Why do you think that there are two possible dates for the end of winter according to the meteorological calendar?

Answers such as: I think there are two possible dates for the end of winter according to the meteorological calendar because there may be a leap year, meaning winter could end on 28th or 29th February.