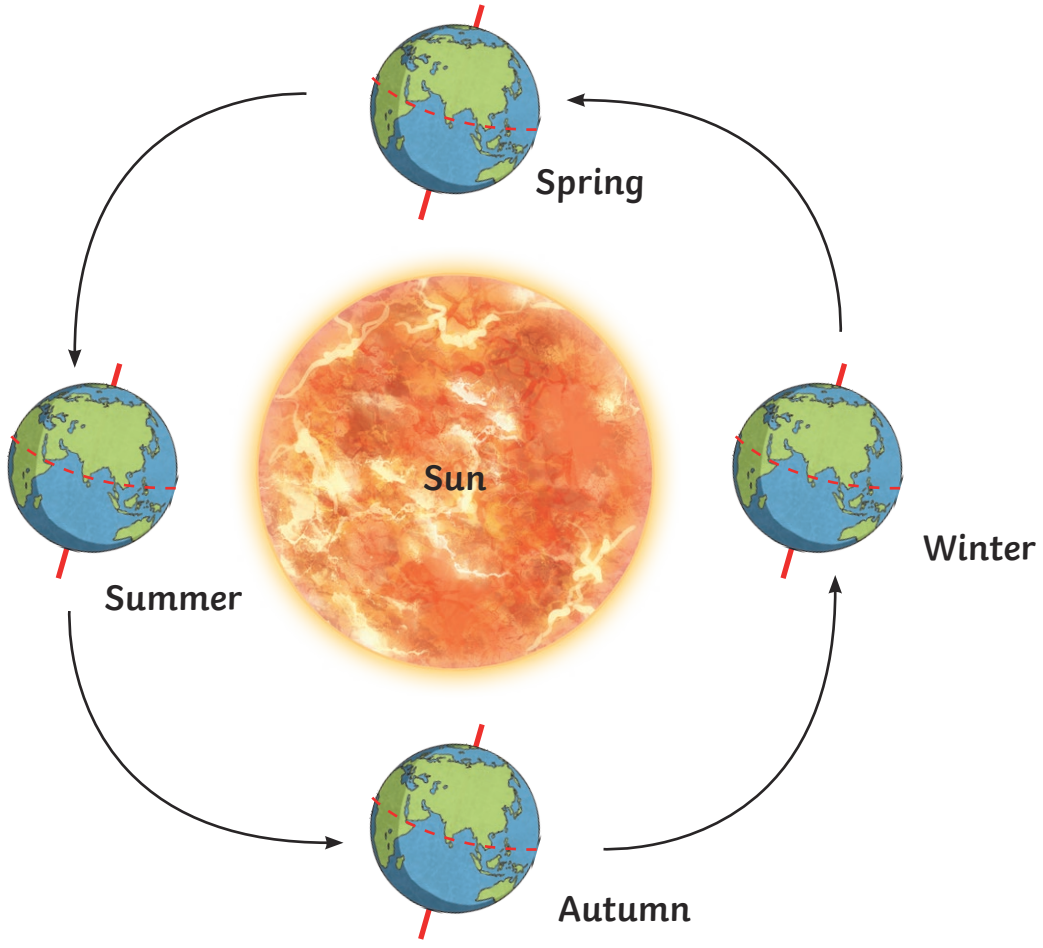
Summer Solstice

The equator is an imaginary line around the middle of the Earth. Above the equator is the northern hemisphere. Below the equator is the southern hemisphere.

Can you imagine a pole going through Earth from the North Pole to the South Pole? This pole would be the Earth's axis. The Earth spins around this axis. The axis is not vertical; it tilts the Earth over. This means the Earth appears to lean over.

The Earth orbits or moves on a path around the Sun. This takes around one year. At different times of the year, as it journeys around the Sun, some places on Earth are nearer to the Sun than others.

If you live above the equator, Earth is tilted closer to the Sun in the summer, giving more light and heat. In winter, these countries are further away from the sun and have less light and heat.



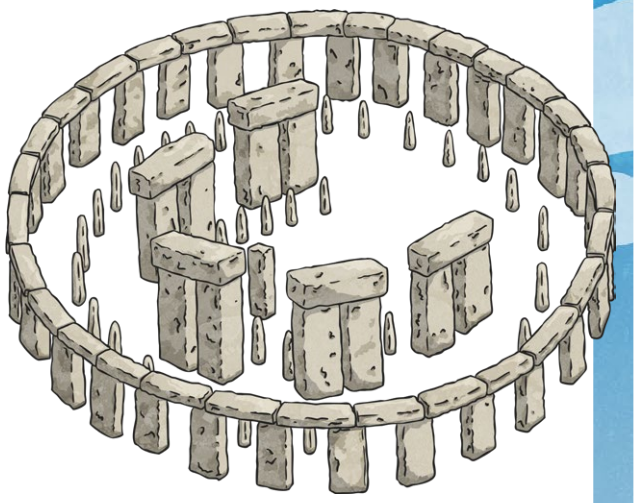
This diagram shows the seasons in the northern hemisphere, above the equator.

Can you see how the northern hemisphere is tilted towards the sun in summer?

What is the Summer Solstice?

The Summer Solstice happens when the North Pole is most tilted towards the sun. It marks the change when days in the northern hemisphere begin to grow shorter.

The Summer Solstice happens around 21st June. This is also known as midsummer and is the longest day and shortest night of the year in the northern hemisphere.



Summer Solstice in the Far North

Around the Summer Solstice, countries in the Arctic Circle, like parts of Norway, Finland, Greenland and Alaska, have daylight all day long because of the tilt of the Earth's axis.

In the UK from mid-May to mid-July, the Shetland Islands and Orkney enjoy the simmer dim or summer twilight. This is when the sun only sets for a few hours so it never gets really dark.

Solstice Celebrations

For thousands of years, there have been solstice celebrations around the world. The hours of daylight and the seasons were important to the people who lived long ago. Today, festivals, bonfires and parades mark the Summer Solstice.

In England, many people gather at Stonehenge, which is believed to have been an important religious site 4000 years ago. At the Summer Solstice, some of the stones at Stonehenge are in line with the rising sun.

On the Orkney Islands, Summer Solstice is celebrated at the ancient standing stone circle of the Ring of Brodgar.

Questions

1. What is the equator?

2. What are the areas above and below the equator called?

3. How long does the Earth's orbit around the Sun take?

4. During the Earth's orbit, why are some places closer to the Sun than others?

5. When does the Summer Solstice happen?

6. What is Summer Solstice also known as?

7. If you live in the far North, how does the time around Summer Solstice affect your day?

8. Why do you think people in ancient times celebrated the Summer Solstice?

Answers

1. What is the equator?
   The equator is an imaginary line around the middle of the Earth.

2. What are the areas above and below the equator called?
   The area above the equator is the northern hemisphere. The area below the equator is the southern hemisphere.

3. How long does the Earth's orbit around the Sun take?
   The Earth's orbit around the Sun takes around one year.

4. During the Earth's orbit, why are some places closer to the Sun than others?
   Some places are closer to the Sun than others because the Earth's axis is tilted.

5. When does the Summer Solstice happen?
   The Summer Solstice happens when the North Pole is most tilted towards the sun. The Summer Solstice happens around 21st June.

6. What is Summer Solstice also known as?
   Summer Solstice is also known as midsummer.

7. If you live in the far North, how does the time around Summer Solstice affect your day?
   If you live in the far North, there is daylight all day long or not many hours of darkness around the time of Summer Solstice.

8. Why do you think people in ancient times celebrated the Summer Solstice?
   Various answers. People in ancient times celebrated the Summer Solstice perhaps because the hours of daylight and the seasons were important to them. They could hunt, gather and grow food during the time around the solstice in preparation for winter and longer hours of darkness.

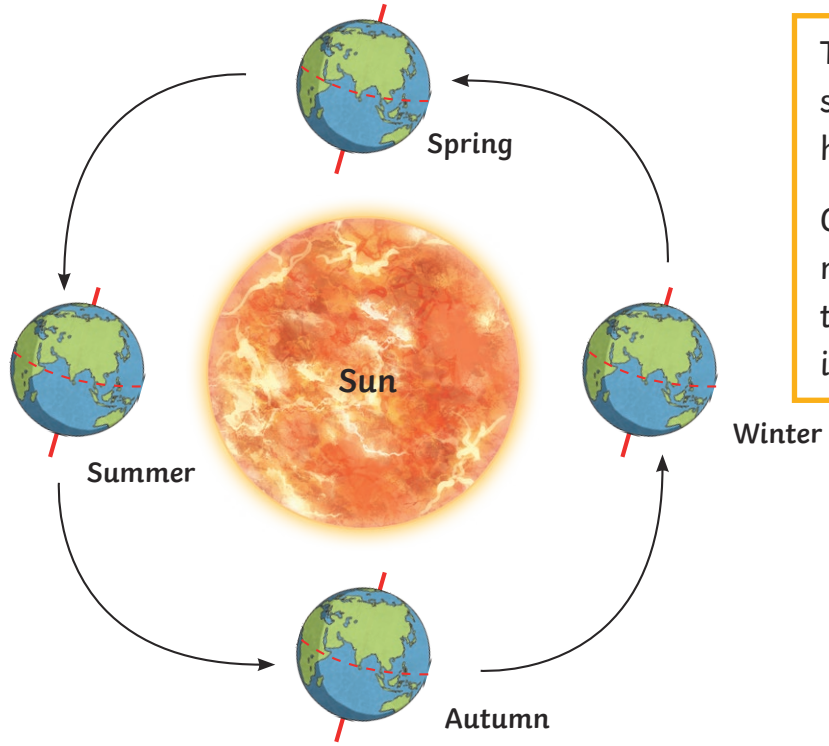
Summer Solstice

The equator is an imaginary line around the middle of the Earth. Above the equator is the northern hemisphere. Below the equator is the southern hemisphere.

Can you imagine a pole going through Earth from the North Pole to the South Pole? This pole would be the Earth's axis. The Earth spins round on this axis. The axis makes the Earth lean or tilt over.

The Earth moves around the Sun. This takes around a year. At different times of the year, as it journeys around the Sun, some places on Earth are nearer to the Sun than others.

If you live in the northern hemisphere, Earth is tilted closer to the Sun in the summer, giving more light and heat. The northern hemisphere is further away from the sun in the winter and countries receive less light and heat.



This diagram shows the seasons in the northern hemisphere.

Can you see how the northern hemisphere is tilted towards the sun in summer?

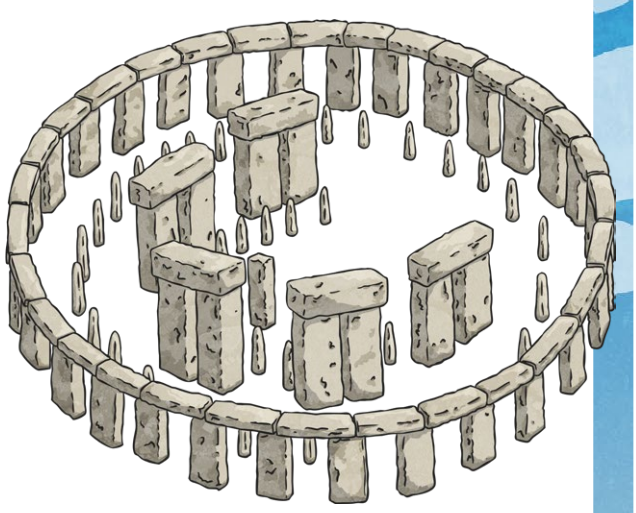
What is the Summer Solstice?

The Summer Solstice happens when the North Pole is most tilted towards the sun. It marks the change when days in the northern hemisphere begin to grow shorter.

The Summer Solstice happens around 21st June. This is also known as midsummer and is the longest day and shortest night of the year in the northern hemisphere.

Summer Solstice in the Far North

Around the Summer Solstice, countries in the Arctic Circle, like parts of Norway, Finland, Greenland and Alaska, have daylight all day long and this is all because of the tilt of the Earth's axis.



In the UK from mid-May to mid-July, the Shetland Islands and Orkney enjoy the simmer dim or summer twilight. This is when the sun only sets for a few hours so it never gets really dark.

Solstice Celebrations

For thousands of years, there have been solstice celebrations around the world. The hours of daylight and the seasons were important to the people long ago. Today, festivals, bonfires and parades mark the Summer Solstice.

In England, many people gather at Stonehenge, which is believed to have been an important religious site 4000 years ago. At the Summer Solstice, some of the stones at Stonehenge are in line with the rising sun.

On the Orkney Islands, Summer Solstice is celebrated at the ancient standing stone circle of the Ring of Brodgar.

Questions

1. Explain what the terms equator, northern hemisphere and southern hemisphere mean.

2. Explain what the Earth's axis is.

3. Why, during the Earth's orbit, are some places nearer to the Sun than others?

4. When does Summer happen in the northern hemisphere?

5. When does Winter happen in the northern hemisphere?

6. What is the Summer Solstice?

7. What happens to the hours of daylight in the northern hemisphere at the Summer Solstice?

8. Why do some countries of the northern hemisphere have 24-hour daylight around the Summer Solstice?

Questions

9. Where would you go in the UK to enjoy the longest hours of daylight?

10. What evidence is there at Stonehenge that Summer Solstice was in some way significant for the people of ancient times?

Answers

1. Explain what the terms equator, northern hemisphere and southern hemisphere mean.
   The equator is an imaginary line around the middle of the Earth.
   Countries above the equator are in the northern hemisphere.
   Countries below the equator are in the southern hemisphere.

2. Explain what the Earth's axis is.
   The Earth's axis is an imaginary pole going from the North pole to the South pole. The axis is not vertical but tilted. The Earth spins round on this axis.

3. Why, during the Earth's orbit, are some places nearer to the Sun than others?
   The Earth appears to be tilted and as it orbits the Sun, some places are tilted towards the Sun and are therefore closer to the Sun than others. As the Earth continues on its path, these places then become further away from the Sun.

4. When does Summer happen in the northern hemisphere?
   Summer happens in the northern hemisphere when this part of Earth is tilted closer to the Sun, therefore receiving more light and heat.

5. When does Winter happen in the northern hemisphere?
   Winter happens when the northern hemisphere is furthest away from the Sun, therefore receiving less light and heat.

6. What is the Summer Solstice?
   The Summer Solstice happens when the North Pole is most tilted towards the sun. The Summer Solstice happens around 21st June.

7. What happens to the hours of daylight in the northern hemisphere at the Summer Solstice?
   Summer Solstice is the longest day and shortest night of the year in the northern hemisphere.

8. Why do some countries of the northern hemisphere have 24-hour daylight around the Summer Solstice?
   Some countries have 24-hour daylight because they are tilted closest to the sun and the sun never seems to set.

9. Where would you go in the UK to enjoy the longest hours of daylight?
   You would have to go to the Shetland and/or Orkney Islands to enjoy the longest hours of daylight.

Answers

10. What evidence is there at Stonehenge that Summer Solstice was in some way significant for the people of ancient times?
At the Summer Solstice, some of the stones at Stonehenge are in line with the rising sun, which indicates a link of some significance between this ancient site and the solstice.

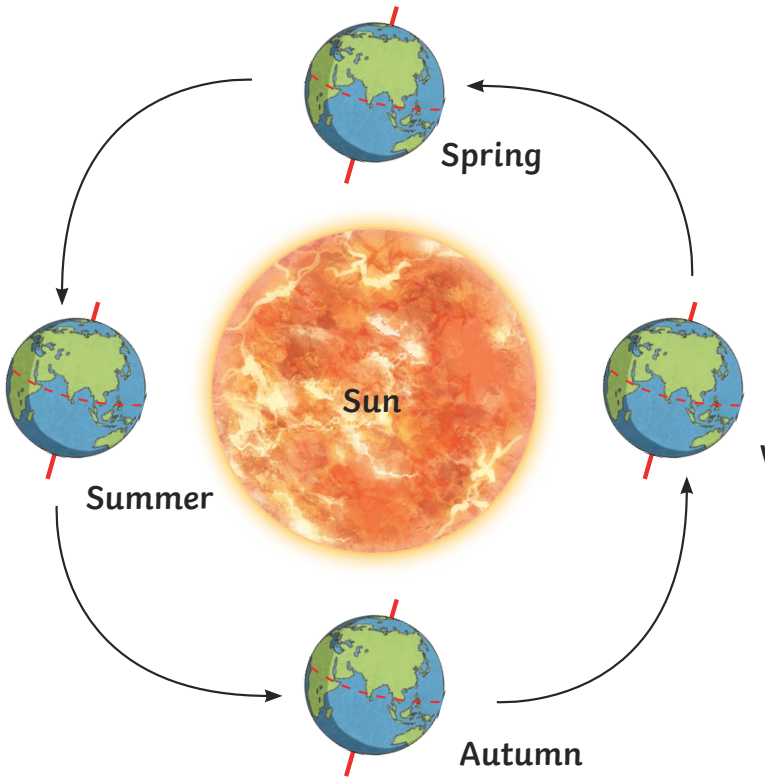
Summer Solstice

The equator is an imaginary line around the middle of the Earth. Countries above the equator are in the northern hemisphere. Countries below the equator are in the southern hemisphere.

Can you imagine a pole going through Earth from the North Pole to the South Pole? This pole would be the Earth's axis. The Earth spins around this axis. The axis is not vertical; it tilts the Earth over. This means the Earth appears to lean at an angle.

The Earth orbits around the Sun. This orbit takes around one year. At different times of the year, as it journeys around the Sun, some places on Earth are nearer to the Sun than others.

If you live in the northern hemisphere, Earth is tilted closer to the Sun in the summer, giving more light and heat. The northern hemisphere is further away from the sun in the winter and countries receive less light and heat.



This diagram shows the seasons in the northern hemisphere.

Can you see how the northern hemisphere is tilted towards the Sun in summer?

What is the Summer Solstice?

The Summer Solstice happens when the Earth has reached the part of its orbit when the North Pole is most tilted towards the Sun. It marks the change when the days in the northern hemisphere begin to grow shorter. The Winter Solstice in December marks the change when days begin to grow longer.

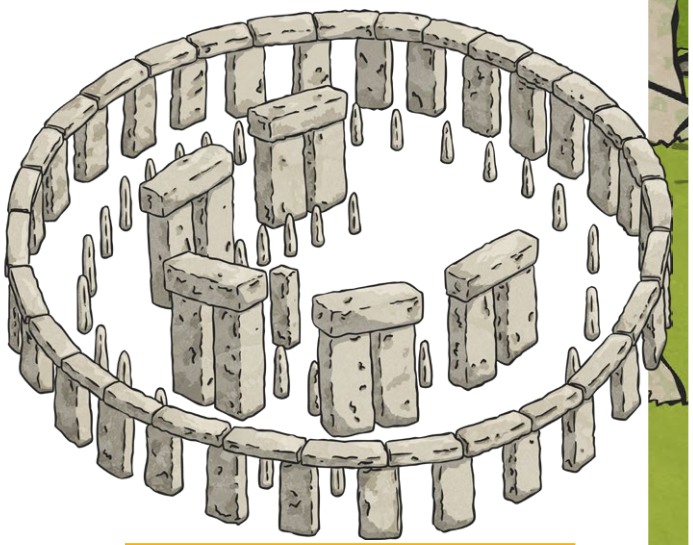
The word solstice comes from Latin words which mean 'sun stand still'. During the solstice, for people in the northern hemisphere, the sun reaches its highest point in the sky and after the solstice the sun gradually gets lower.

The Summer Solstice happens around 21st June. This is also known as midsummer and is the longest day and shortest night of the year in the northern hemisphere. On this day, there is the most amount of sunshine, if the weather is good.

Summer Solstice in the Far North

Around the Summer Solstice, northern hemisphere countries in the Arctic Circle, like parts of Norway, Finland, Greenland and Alaska, have daylight all day long. This is sometimes called the midnight sun. In the Arctic Circle, the sun does not set and this is all because of the tilt of the Earth's axis.

In the UK from mid-May to mid-July, the Shetland Islands and Orkney enjoy the simmer dim or summer twilight. This is when the sun only sets for a few hours so it never gets really dark. In fine weather, the islands can have almost 19 hours of sunshine a day.



Stonehenge, Wiltshire, UK

Solstice Celebrations

For thousands of years, there have been solstice celebrations around the world. The hours of daylight and the seasons were important to the people who lived by growing, hunting and gathering long ago. Today, festivals, bonfires and parades mark the Summer Solstice around the northern hemisphere.

In England, many people gather at Stonehenge, which is believed to have been an important religious site 4000 years ago. At the Summer Solstice, some of the stones at Stonehenge are in line with the rising sun.

On the Orkney Islands, Summer Solstice is celebrated at the ancient standing stone circle of the Ring of Brodgar.

Questions

1. Explain what the terms equator, northern hemisphere, southern hemisphere mean.

2. Explain what the Earth's axis is.

3. Why is the tilt of Earth's axis significant?

4. When would it be a good time to visit countries in the far north of the northern hemisphere? Explain your answer.

5. When would it be a good time to visit countries in the far south of the southern hemisphere? Explain your answer.

6. When does the Summer Solstice occur and what does it mean for countries in the northern hemisphere?

7. What does the word **solstice** come from and what does it mean?

8. What is simmer dim and where would you go to experience this?

Questions

9. a. What evidence is there at Stonehenge that Summer Solstice was in some way significant for the people of ancient times?

b. Through research, can you find out about other ancient sites in the UK or further afield, that are linked to the Summer or Winter Solstice?

10. The Shetland Islands can have almost 19 hours of sunshine a day around the Summer Solstice.

a. Through research complete the table below:

Summer Solstice is on:			
Places	**Sun rise**	**Sun set**	**Hours and minutes of daylight**
Lerwick	03:38	22:34	18 hours 56 min
Edinburgh	04:26	22:02	17 hours 36 min
London	04:43	21:21	16 hours 38 min
Where I live			

b. Now compare the differences in daylight hours. How do you think these differences affect people's daily activities?

Answers

1. Explain what the terms equator, northern hemisphere, southern hemisphere mean.
   The equator is an imaginary line around the middle of the Earth.
   Countries above the equator are in the northern hemisphere.
   Countries below the equator are in the southern hemisphere.

2. Explain what the Earth's axis is.
   The Earth's axis is an imaginary pole going from the North pole to the South pole. The axis is not vertical but tilted. The Earth spins round on this axis.

3. Why is the tilt of Earth's axis significant?
   The tilt of Earth's axis is significant because, during Earth's orbit, it allows parts of the Earth to receive more light and heat than others at different points in the orbit.

4. When would it be a good time to visit countries in the far north of the northern hemisphere? Explain your answer.
   Various answers. This depends on pupil preference - some may say in the summer because these countries receive much longer daylight and are less cold.

5. When would it be a good time to visit countries in the far south of the southern hemisphere? Explain your answer.
   Various answers. This depends on pupil preference.

6. When does the Summer Solstice occur and what does it mean for countries in the northern hemisphere?
   The Summer Solstice happens when the Earth has reached the part of its orbit when the North Pole is most tilted towards the Sun. The Summer Solstice happens around 21st June. It marks the change when the days in the northern hemisphere begin to grow shorter.

7. What does the word **solstice** come from and what does it mean?
   The word solstice comes from Latin words which mean 'sun stand still'.

8. What is simmer dim and where would you go to experience this?
   Simmer dim is summer twilight. This happens in Shetland and Orkney between mid-May to Mid-July, when the sun only sets for a few hours so it never gets really dark.

9. a. What evidence is there at Stonehenge that Summer Solstice was in some way significant for the people of ancient times?
   At the Summer Solstice, some of the stones at Stonehenge are in line with the rising sun which indicates a link of some significance between this ancient site and the solstice.

Answers

b. Through research, can you find out about other ancient sites in the UK or further afield, that are linked to the Summer or Winter Solstice?
Various answers - Maeshowe in Orkney is a burial ground from around 2800 BC. It is a grass covered mound and inside the mound are chambers and tunnels. During the Winter Solstice, the sunlight streams through to light up an area of its back wall.

10. The Shetland Islands can have almost 19 hours of sunshine a day around the Summer Solstice.

a. Through research complete the table below:
Answers given are for 2017 but will vary according to year.

Summer Solstice is on: 21st June 2017			
Places	**Sun rise**	**Sun set**	**Hours and minutes of daylight**
Lerwick	03:38	22:34	18 hours 56 min
Edinburgh	04:26	22:02	17 hours 36 min
London	04:43	21:21	16 hours 38 min
Where I live			

b. Now compare the differences in daylight hours. How do you think these differences affect people's daily activities?
Various answers - answers may relate to work patterns, sleep patterns, outdoor activities etc.