



A FREE RESOURCE PACK FROM EDUCATIONCITY

Summer Solstice



Topical Teaching
Resources



Suitability

Summer Solstice

What Does This Pack Include?

This pack has been created by teachers, for teachers. In it, you'll find high quality Lesson Plans and Fact Sheets, which can be used to support teaching and learning during Summer Solstice.

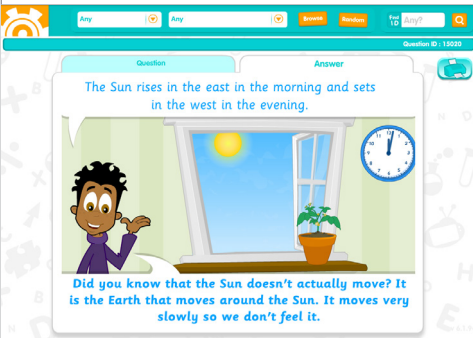
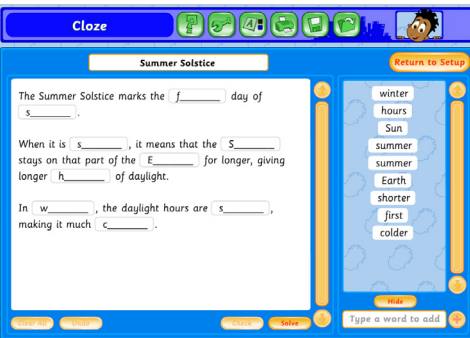

To go directly to the content, simply click on the title in the index below:

FACT SHEETS:	
1. Summer Solstice Around the World	2. Seasons
Learning Objective: Discover the history of the Summer Solstice and how this event is celebrated in different countries.	Learning Objective: Learn what causes the Earth's seasons.

LESSON PLANS:			
1. Summer Solstice	2. The Green Man	3. Summer Solstice – EYFS	4. Summer Solstice – KS1
Learning Objective: To understand what causes the daylight hours to alter.	Learning Objective: To write and perform a poem to celebrate the Summer Solstice.	Learning Objective: To identify seasonal changes associated with summer.	Learning Objective: To learn about the importance of the Summer Solstice.
60 minute Lesson Plan	60 minute Lesson Plan	45 minute Lesson Plan	45 minute Lesson Plan

Other Resources Linking to the Theme

Before deciding what to include in your lesson, check out our online content relating to Summer Solstice too. It's simple to find, just enter the Content ID number in EducationCity's Search tool!

ThinkIts:	Topic Tools:	Activities:
Inspire Creative Ways of Thinking	Explore Concepts as a Class	Educational Content
Changes in the Sun Content ID: 15020 	Cloze Content ID: 2141-2146 	High Noon Content ID: 963 
Consider what happens to the sun during the day.	Ask students to fill in the blanks to Summer Solstice related sentences. Ideal for whiteboard use.	To learn about the movement of the sun and the effect this has on shadows.

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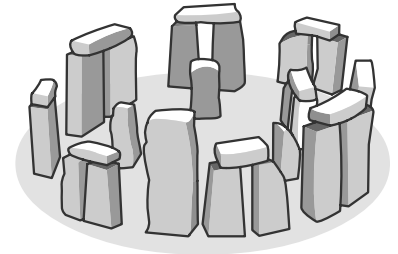
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The Summer Solstice, also known as Litha (meaning light), marks the first day of summer in the Northern Hemisphere, as it is the longest day and shortest night of the year. The word 'solstice' comes from the Latin, 'sol' (sun) and 'sistere' (to stand still). Many cultures have ancient traditions linked to this Summer Solstice, and these are still celebrated today.

Stonehenge, UK

- Stonehenge is a prehistoric ring of standing stones, which was believed to have been built between 3000 – 2000 BC.
- On the day of the Summer Solstice, the sun rises and lines up with the heel stone, and the first rays shine through a stone archway.
- In 2013, 21,000 people gathered at Stonehenge for Summer Solstice celebrations.



Pagan (Germanic, Slav & Celt)

- In Pagan tradition, bonfires were set alight and large wheels were lit and rolled down hills, to strengthen the Sun.
- It is believed that the Summer Solstice was a time to honour the space between the Earth and the Heavens.

North America

- North American tribes honour the Sun with rituals, including dancing, raising trees to link Heaven and Earth, decorating bodies in red (sunset), blue (sky), white (light) and yellow (lightning), and setting up tipis to form the shape of a circle.
- There are also different monuments connected to the Summer Solstice, including the Chaco Canyon, in which 3 slabs of rock were placed about 1000 years ago, to form a dagger shape on the day of the Summer Solstice.

Ancient China

- In China, the Summer Solstice celebrated the 'yin' force and ceremony would take place to honour the Earth and femininity.
- The Winter Solstice would celebrate the 'yang' force, the heavens and masculinity.

Ancient Rome

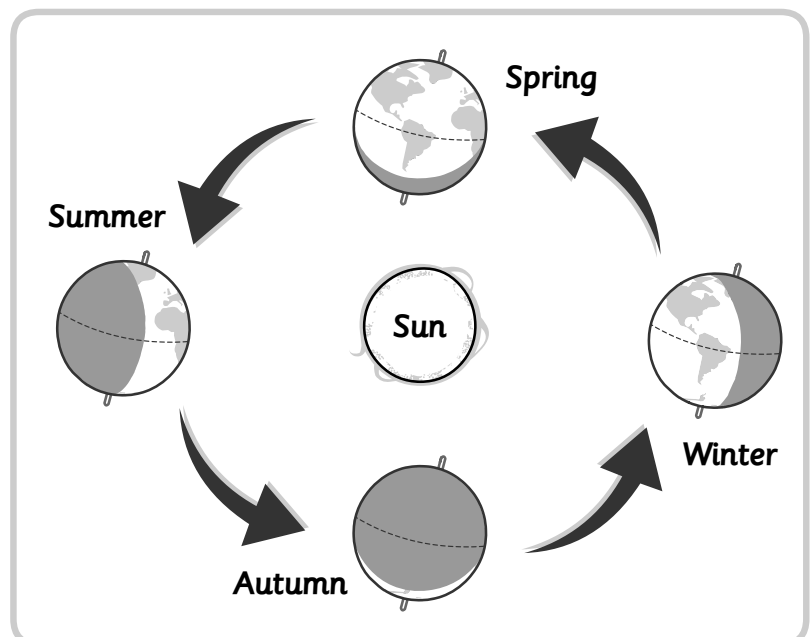
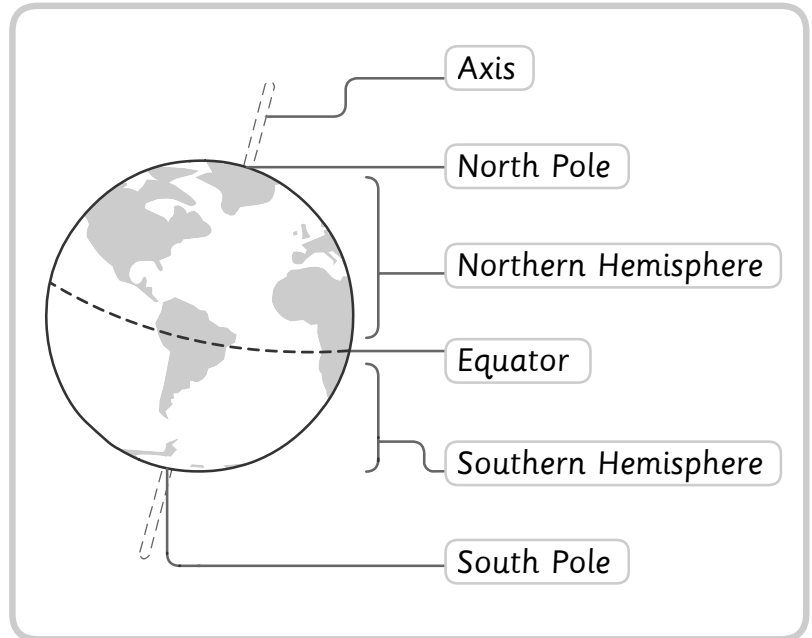
- The Ancient Romans held a feast to honour Vesta, the Roman goddess of the Hearth.
- The festival of Vestalia lasted from 7th to 15th June.

Scandinavia

- The Summer Solstice is also known as St. John's Day, linked to the Christian saint, John the Baptist, although the roots are of pagan origin.
- Celebrations include dancing around the maypole, listening to traditional folk music and lighting large bonfires.
- Traditional foods to be eaten at this time include pickled herring, potatoes with sour cream and chives, salmon and strawberries and cream.
- In Alesund, Norway, wood pallets are stacked to make a large bonfire on an artificial island. In 2010, the world's biggest bonfire was built; it reached 40.45m high, and the base was about 20m wide.

How Seasons are Created on Earth

- The Earth has an imaginary pole through its centre called an axis.
- It turns on this axis. It takes 24 hours to rotate completely.
- The axis is tilted at an angle.
- The Earth passes around the Sun. It takes 365.24 days (1 Earth year) to pass completely around the Sun.
- The Earth is split into two halves. The top half is called the **Northern Hemisphere**. The bottom half is called the **Southern Hemisphere** and the centre line is called the **Equator**.
- The tilt of the Earth means that as it passes around the Sun, the Sun's rays shine on different parts of the Earth, for different lengths of time.
- When it is summer it is because the Sun stays on that part of the Earth for longer, giving longer hours of daylight. This makes it hotter.
- In winter, the daylight hours are shorter which makes it colder.
- The seasons for the countries in the Northern and Southern Hemispheres are opposite and so when the Northern Hemisphere has summer the Southern Hemisphere has winter.





Teacher's Overview

In this lesson, children will understand how the tilt of the Earth and its orbit around the Sun cause the length of daylight hours to alter in different parts of the globe and subsequently how seasons are created.

National Curriculum 2014 Links

To describe the Sun, Earth and Moon as approximately spherical bodies.

To describe the movement of the Earth, and other planets, relative to the Sun in the solar system.

To use the idea of the Earth's rotation to explain day and night.

Lesson Objective

To create a model of the Earth showing why day length varies and the world has seasons.

Materials

- globe
- torch
- clay or plasticine
- pencil
- 3 different sized balls to represent the Earth, Sun and Moon

Key Vocabulary

spherical, sphere, hemisphere, northern, southern, equator, axis, orbit

Lesson Structure

Starter

0-15 minutes

What do you think the Earth, Sun and Moon would look like from space? Draw and annotate what you think. Discuss the drawings as a class, ensuring that children recognise that their images of the Earth are circular (2D) and the Earth is actually spherical (3D). Explain that in the last 50 years, we have been able to journey into space and observe how the Earth is spherical. Demonstrate this using 3 different sized balls to represent the Sun, Earth and Moon.

Main

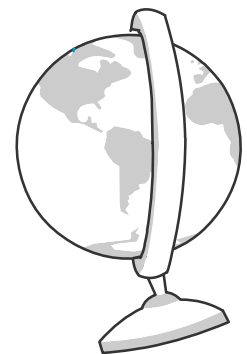
15-25 minutes

Use the Science Learn Screen 'Planet Watch' to explain how the Earth Sun and Moon move relative to each other.

25-40 minutes

Using the globe to model, show how the Earth is split into two halves: the Northern Hemisphere and the Southern Hemisphere. Explain that at the halfway point between the two hemispheres is an imaginary line, called the Equator. Ask the children to point to where we live and label it. Which hemisphere do we live in?

Stand a child in the centre of an open space holding a picture of the Sun and a torch. Stand a second child holding the globe with the label of where we live facing the Sun. The first child should shine the torch at the globe, to mimic the Sun shining on the Earth. Use the children to demonstrate the Earth's movement, during the day and year, subsequently explaining how seasons occur. The accompanying notes for teachers can be used to support understanding throughout this part of the lesson.





Activity

40 -55 minutes

Split the class into groups of 3 or 4. Each group should be given some clay (to make a model of the Earth and the Sun), a pencil (for the axis) and a torch. Tell the children that it is now their turn to produce a demonstration of how seasons are created. Each group should use the resources provided to demonstrate with a commentary, how the seasons are created. The 'Seasons' Fact Sheet can be used to support children with the commentary.

Challenge

Children create their own commentary.

Children produce a multimedia presentation to accompany their commentary.

Plenary

5 minutes

All over the world people celebrate the longest day of the year. Why do you think that is? Discuss as a class.

Notes for Teachers

How seasons are created on Earth.

The Earth has an imaginary pole through its centre called its axis. We cannot see the axis but we call the top of the Earth (the top of the Northern Hemisphere) the North Pole and the bottom of the Earth (the bottom of the Southern Hemisphere), the South Pole. The axis is tilted. The tilt of the Earth means that different parts of the Earth lean towards the Sun in the summer and away from the Sun in the winter, 6 months later. The North Pole always points the same way as the Earth revolves around the Sun but either tilts towards or away from the Sun as it passes around it. This can be demonstrated with the globe and torch.

A lot of people think that seasons occur because a particular area of the Earth is nearer to the Sun in summer than in winter. This is not the case. It is actually because, in summer, the tilt of the Earth allows the Sun to shine for longer on that part of the Earth, heating the Earth up for longer and consequently making that area hotter. In the summer there are longer daylight hours, resulting in it being hotter. In the winter there are shorter daylight hours, resulting in it being colder.

As the North Pole points towards the Sun, daylight hours are longer in countries in the Northern Hemisphere and it is summer. In the Southern Hemisphere daylight hours are shorter and so it is winter.

As the North Pole tilts away from the Sun, daylight hours are shorter in the countries in the Northern Hemisphere and it is winter time. In the Northern Hemisphere daylight hours are longer and it is summer.

Each day the length of daylight hours changes a small amount and as a result the temperature begins to change. This is why we have 4 seasons: summer, autumn, winter and spring.

At the Equator, the length of daylight hours is almost the same throughout the year and as a result, there is very little change in temperature between summer, autumn, winter and spring.



Teacher's Overview

In this lesson, children will be introduced to the Green Man and his link to the Summer Solstice celebrations. They will compose and perform a poem to celebrate the Summer Solstice.

National Curriculum 2014 Link

To identify the audience for the purpose of the writing, selecting the appropriate form and using other similar writing as models.

To perform their own compositions, using appropriate intonation, volume and movement so that meaning is clear.

Starter

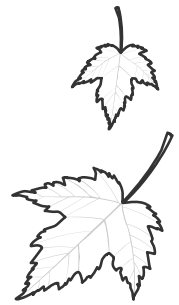
0-10 minutes

Introduce the concept of the Green Man through the ThinkIt 'The Green Man'.

Main

15-30 minutes

Explain that today children will be writing and performing a poem to celebrate the Summer Solstice.



Read with the children the following poem.

Summer time is arriving but what's that creeping in the garden?

His hair is as soft as ferns, which move gently in the breeze.

His eyes are as white as snowdrops, which glisten brightly in the Sun.

Ask the children in small groups to think of other words and phrases that could describe the Green Man's appearance. Think of how we could describe his nose, ears, mouth, and hair. Discuss and display the children's suggestions.

Activity

30-50 minutes

Now ask the children to write a short poem describing the Green Man.

Challenge

Challenge children by asking them to include how his reappearance each year acts as a joyous reminder of summers beginning.

Take the children to an outside area and in small groups, practise performing their poem.

Plenary

50-60 minutes

Children perform their poem to the rest of the class as a celebration of the Summer Solstice.

Notes for Teachers

The Green Man has been mentioned throughout history for thousands of years. In Celtic mythology he is the god of spring and summer who appears each year in time for summer and disappears in the winter. In pre-Christian religions, trees were sacred and forests were places thought to hold gods and nature spirits. The Green Man is often depicted as a man's face covered with leaves. In the past, people were much more aware of the effects of longer daylight hours and the changing seasons and so the 'Green Man' was sometimes honoured at times such as the Spring Equinox (when the length of daylight hours roughly equals the length of night hours) and the Summer Solstice (The day in a year with the longest daylight hours).



Overview

In this lesson, the children will go on a summer walk. They will discuss and observe seasonal changes and collect natural objects linked to summer. (Note: This lesson can take place either in or out of school grounds).

National Curriculum Links

Early Years Foundation Stage 2014

Understanding the World: The World

Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observation of animals and plants and explain why some things occur, and talk about changes.

Learning Objective

Children will be able to identify some seasonal changes associated with summer within their environment.

Materials

- magnifying glasses
- bags or pots for collecting summer items
- print outs of seasonal images

Lesson Preparation

Prior to the lesson:

- Risk Assessment (if leaving the school grounds)
- Print out examples of seasonal images
- Collect materials needed for the walk (magnifying glasses and bags/pots).



Lesson Structure

0-5 minutes

Explain to children that today (21.06.14) is a special day, known as the Summer Solstice. It is the longest day of the year because it has the most sunlight.

Ask children to recall the four seasons. Talk about each season in turn and match the season to the corresponding picture. What season are we in now? How do you know? Ask children to discuss this in pairs or small groups. Encourage children to discuss the different aspects of summer which they have observed in their environment.

List some of the children's ideas on a board. Encourage a range of responses linked to summer, including, the different plants, animals and mini-beasts, and also changes in the weather.

5-10 minutes

Explain to children that they will be going on a walk. The purpose of this walk is to see how many different signs on summer they can identify. Encourage children to think about how they should treat nature with care and respect. It is recommended that children work in pairs for the following activity, in order to promote discussion and cooperative behaviour.



10-20 minutes

Take children to a suitable location to hunt for different mini-beasts. (This could be extended by comparing two different locations, e.g. playground and grassy area). Talk about the different mini-beasts which children might find, and where they might find them (e.g. tree trunks, in the grass, under rocks). If using magnifying glasses, hand these out to children. After children have had adequate time to explore the environment, bring them together and talk about some of the different mini-beasts they identified on their hunt.

20-30 minutes

Continue with the walk and encourage children to observe seasonal changes linked to summer. Encourage children to observe and identify different examples of animals, birds, seeds. Identify different trees, shrubs and flowers within the local environment. If possible, take photographs of these observations, and use these for a display.

30-40 minutes

Choose a safe location for the class to stop and collect relevant objects linked to summer. Give each pair a container, and ask children to work together and hunt for 10 different examples of summer. Explain to children that these must come from the floor, and must not be picked.

40-45 minutes

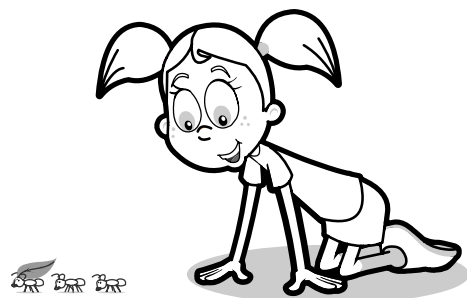
Return to the classroom. Ask children to look back at the list which the class made earlier on the different things which remind them of summer. From the list, identify the things which children observed on their walk.

Extension

- Create an investigation table, and leave out some of the items which children collected to sort and explore.
- Use any leaves which were collected to make rubbings using paper and crayons.
- Leave out the magnifying glasses and identification sheets for children to independently hunt for mini-beasts within the class environment.
- Make bird feeders and hang these outside. Identify the different birds which use the feeders.
- Look at the lifecycles of plants and animals, by growing vegetables, or hatching butterflies.

Notes for Teachers

During the mini beast hunt, other equipment could be used to extend the search. A range of mirrors could be used for looking under leaves or in small spaces. Pooters are small containers which allow children to collect and observe different examples of mini-beasts. Identification sheets can be used for children to recognise different species of common mini-beasts.





Overview

In this lesson, children will understand the importance of the Summer Solstice, and how it is celebrated in different places around the world. Children will make a sundial to observe how the position and size of the shadow changes cast by the Sun, changes during the day.

National Curriculum 2014 Links

Science: Working Scientifically (Years 1&2)

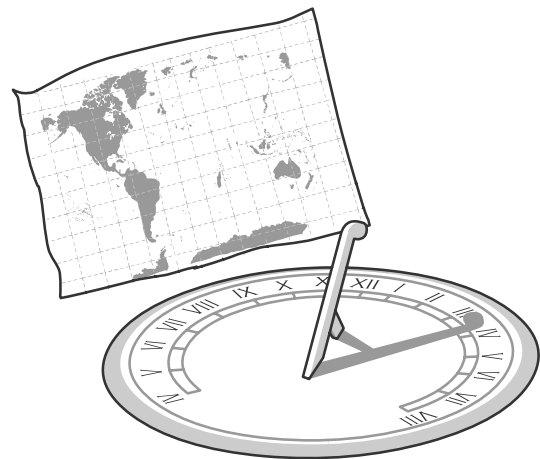
Observing closely using simple equipment

Performing simple tests

Using their observations and ideas to suggest answers to questions

Materials

- map of the world
- images/Videos of different celebrations
- plasticine
- small stick, skewer or pencil
- chalk.



Lesson Preparation (5 minutes)

Prior to the lesson:

- Collect the materials for making the sundial.

Lesson Structure

0-10 minutes

Ask the children if anyone knows the significance of the date today (21.06.14). Explain to children that it is the Summer Solstice, which is the longest day of the year, because it has the most hours of sunlight.

What happens in England? Locate Amesbury, Wiltshire on a map and explain that this is where Stonehenge is located; an ancient prehistoric site and a place of celebration for the Summer Solstice. Show children images of previous Summer Solstice celebrations.

Explain that the Summer Solstice is celebrated in different places around the world. Locate Alesund, Norway on a map, in which an annual midsummer festival is held each year. Show children images of the celebration, including the largest bonfire. Tell children that in Norway, the sun does not set on this day. Other famous Summer Solstice sites which would be explored during this time include, the Chaco Canyon in New Mexico, the St. John festival in Brazil or the Intihuatana Stone at Macchu Picchu.

In pairs, ask children to discuss why they think different cultures around the world celebrate the Summer Solstice. Discuss with pupils that we could not survive without food, and that without the Sun our crops would not grow. In historical times, a bad harvest would have had a devastating impact on civilisations, which is why different cultures honoured and celebrated the Sun at the time of the Summer Solstice.



15-35 minutes

Ask the children how they think people were able to tell the time before clocks and watches were invented. Explain to the children that they used the Sun to tell them the time, using an invention called a sundial. Tell children that they are going to investigate how a sundial works. Explain that the Sun casts a shadow on the sundial, and it is this shadow which tells us the time. Go outside with the children and talk about the position of the sun in the sky (Note: Make sure children do not look directly at the sun). Ask children what they think happens to the position of the Sun during the day. Listen to the responses.

Show children the materials (plasticine, pencils and chalk), and explain that we will be using these to make a sundial. Choose an unshaded location, and encourage children to identify why this is important to the investigation. Demonstrate to children how to make the sundial using the materials, by firstly making a mound out of the plasticine and then inserting the stick. Have children working in pairs, and ask them to find an unshaded spot, and then make their sundial.

40-45 minutes

Look at a clock, and encourage children to recognise what the next hour is. At this time, ask children to mark the top of the shadow, and next to this write down the hour number using chalk next to the shadow. Ask children to predict, what will happen at the next hour, where they think the shadow will be. During the day, continue to mark each hour on the sundial and observe the position of the Sun in the sky (making sure children do not look directly at the Sun).

At the end of the day, ask children to look at their sundials and observe how the position and size of the shadow has changed throughout the day. Ask children to discuss why the shadow of the Sun has changed both position and size. Encourage children to use their observations of the Sun, and its position during the day, in their responses.

Extension

Make a table and record the time and length of shadow. Use this data to make a bar chart, and discuss what happens to the length of the shadow during the day.

Look at a range of different sundials, and recognise their importance in history. Look at other time-telling devices, including the water clock in Ancient Egypt.

Have a Midsummer Scandinavian celebration. Try pickled herrings, traditional boiled potatoes, salmon and strawberries with cream. Decorate a Maypole and try maypole dancing.

Learn and sing traditional Scandinavian songs which would be sung at the Summer Solstice.

On the playground, use chalk and metre sticks to draw the height of the bonfire in Alesund.

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"Teachers have been delighted with the content of this package and most impressed with how easy it is to find appropriate learning and teaching resources and then to use them in a variety of ways."

Mark Sanderson,

Senior ICT Consultant, Herefordshire Learning and Achievement Service

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