



Glossary

1	characteristics	Special qualities or appearances that make an individual or group of things different to others.
2	classify	To sort things into different groups.
3	taxonomy	The science of naming and classifying organisms.
4	taxonomist	A scientist who classifies different living things into categories.
5	dichotomous key	A dichotomous key is a series of questions about the characteristics of living things. A key is used to identify a living thing or decide which group it belongs to. This usually splits into two branches.
6	hierarchy	A ranking of categories that narrows from general to specific.
7	botany	The study of plants.
8	vertebrate	An animal with a backbone.
9	invertebrate	An animal without a backbone.
10	microorganism	A tiny organism such as a virus, protozoan, or bacterium that can only be seen under a microscope.
11	microscope	A piece of equipment that is used to view very tiny (microscopic) things by magnifying their appearance.
12	bacteria	A single-celled microorganism.
13	virus	A very simple microbe which requires a host to reproduce.
14	protozoa	A single-celled organism that can move.
15	fungi	Plural of fungus. A single-celled or many-celled organism that reproduces by spores and lives by absorbing nutrients from organic matter.
16	algae	An organism belonging to a group that lives mainly in water and includes the seaweeds. Algae differ from plants in not having true leaves, roots, or stems.
17	angiosperms	The scientific name for flowering plants.
18	gymnosperms	The scientific name for non-flowering plants.
19	latin	Latin is used as an international language in the sciences, especially in taxonomic names and descriptions of organisms based on the system of Linnaeus.
20	biodiversity	The variety of plant and animal life on Earth.

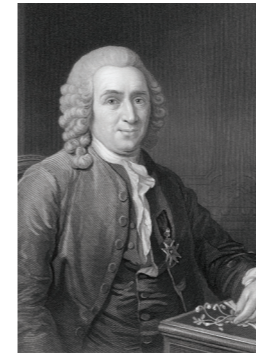
What is biodiversity?

Life on earth is incredibly diverse. Biological diversity (also known as biodiversity) is the variety of life on earth. Biodiversity includes the vast number of species of plants and animals, the genetic diversity within and between these species and the different biomes and ecosystems of which they are part, including rainforest and desert.

Sadly, much of the Earth's biodiversity is in jeopardy due to human consumption and other activities that disturb and even destroy ecosystems. Pollution, climate change, and population growth are all threats to biodiversity. These threats have caused an extraordinary rise in the rate of species extinction.



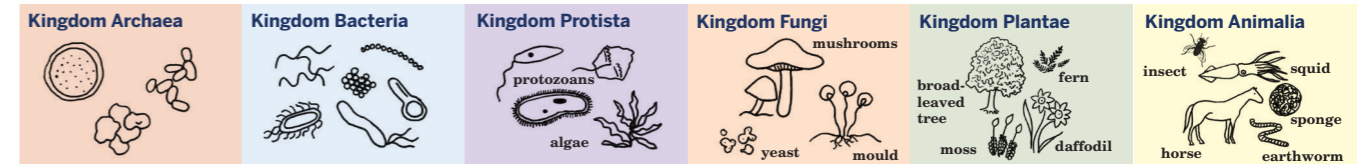
Who is Carl Linnaeus?



In 1735, Swedish Scientist Carl Linnaeus first published a system for classifying all living things. An adapted version of this system is still used today: The Linnaeus System.

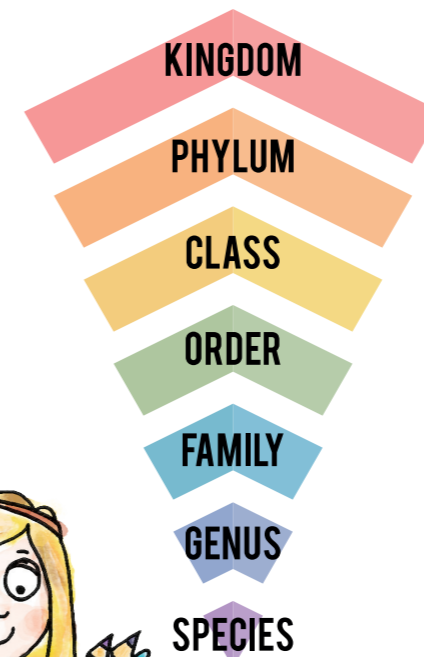
Linnaeus collected and examined over 40,000 specimens of plants, animals and shells. In 1735, he published his first edition of 'Systema Naturae', which described his system for classifying living things.

Linnaeus followed a general rule, dividing all living things into two kingdoms — the Kingdom Plantae (plants) and the Kingdom Animalia (animals). In modern science, there are more kingdoms to classify living things as the use of microscopes has found organisms at a cellular level. Here is the six-kingdom system that has been used since the 1990s.



How do we classify living things?

Scientists believe that there could be as many as 10 million different species on Earth. It would be very hard to study the lives and behaviours of all these living things without grouping them together in some way. Taxonomists classify living things by comparing them. They sort and group living things according to characteristics. These are the physical similarities and differences of animals and plants that help us identify a species. Taxonomists group similar things together, they then split the groups multiple times, so they become smaller and smaller. Each group allows scientists to observe and understand their similarities and differences more clearly.

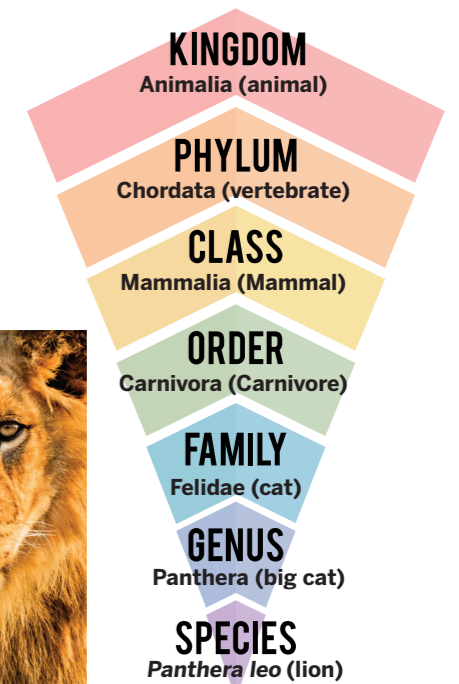


What is the Linnaeus system?

After classifying an organism into a kingdom, living things can then be classified according to phylum, class, order, family, genus and finally species. When the classification reaches species, that is the most specific group. This single organism in this group will have very specific features.

The names of animals are based in Latin and consist of two words. The first word is the genus (*Panthera* – big cat), and the second name is the specific species (*Panthera leo* – lion). The genus is capitalised, and the species is not. Both the genus and species are written in italics. For example: *Panthera leo* (lion).

Here is an example of the classification of lions.





Subject: Computing

Blogging

Unit overview

This unit uses the Purple Mash tool 2Blog and is designed to help pupils learn the basic principles of creating and maintaining a blog in a controlled and safe environment. A blog can be: a diary where life events are documented; a place to share information about interests and hobbies or a place to share knowledge on specific subjects.

Websites linked to topic you may wish to read:

<https://www.bbc.co.uk/bitesize/subjects/zvnrq6f>

<https://kids.kiddle.co/Blog>



Key Vocabulary

Audience In this case the readership of the blog.

Blog A regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.

Blog page A webpage onto which blog posts are hosted.

Blog post A piece of writing or other item of content published on a blog.

Collaborative Produced by or involving two or more parties working together.

Icon A symbol or graphic representation on a screen.

Learning Outcomes

To identify the purpose of writing a blog and its key features. • To plan the theme and content for a blog and write the content. • To consider the effect upon the audience of changing the visual properties of the blog. • To understand the importance of regularly updating the content of a blog. • To understand how to contribute to an existing blog. • To understand how and why blog posts are approved by the teacher. • To understand the importance of commenting on blogs.

Sticky Knowledge

What is a blog?

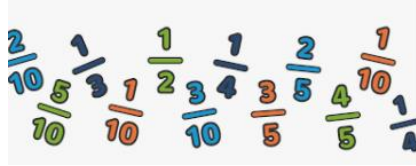
A blog is a website or webpage that is regularly updated by the author. A blog also allows the reader to post comments or opinion based on what is written.

What can a blog be about?

A blog can be written about any subject. You could write a blog about school such as information about the subject you are studying. Alternatively, you could write a blog about your favourite team or movie.

How are the audience involved in a blog?

A key feature of blogs is that the audience can leave a comment or opinion about what they have read on the blog.



Subject: Maths

Unit: Number- fractions



Key Vocabulary

numerator
denominator
proper fraction
improper fraction
factor
highest common multiple
lowest common multiple
equivalents
common numerator
common denominator
decimal equivalent
simplify
simplest form
mixed number
whole number
mixed number

Unit overview

In Year 6, your child will solve lots of problems involving fractions, decimals, and percentages. They will simplify fractions using common factors and will practise multiplying fractions.

Websites/books linked to topic you may wish to read:

<https://www.bbc.co.uk/bitesize/topics/zhdwxnb>

Simplify Fractions

9/12

Factors of 9: 1, 3, 9
Factors of 12: 1, 2, 3, 4, 6, 12

$\frac{9}{12} = \frac{3}{4}$

Compare and Order Fractions

Use the Common Denominator

Multiples of 5: 5, 10, 15
Multiples of 3: 3, 6, 9, 12, 15

$\frac{3}{5} = \frac{6}{10}$, $\frac{2}{3} = \frac{4}{6}$

$\frac{9}{15} < \frac{10}{15}$, $\frac{2}{3} = \frac{10}{15}$

Use the Common Numerator

Multiples of 5: 5, 10, 15
Multiples of 10: 10, 20

$\frac{5}{8} = \frac{10}{16}$, $\frac{10}{13} = \frac{20}{26}$

$\frac{5}{8} = \frac{10}{16}$, $\frac{10}{16} < \frac{10}{13}$

Multiplying Proper Fractions

Multiplying Fractions by Fractions

$$\frac{1}{2} \times \frac{1}{3} = \frac{1 \times 1}{2 \times 3} = \frac{1}{6}$$

Multiplying Fractions by Whole Numbers

$\frac{2}{5} \times 3 = \frac{6}{5} = 1 \frac{1}{5}$

Dividing Fractions by Whole Numbers

$$\frac{2}{5} \div 2 = \frac{1}{5}$$

Multiplication and division are the inverse of one another so:

$\div 2$ is the same as $\times \frac{1}{2}$

$$\frac{2}{5} \times \frac{1}{2} = \frac{2}{10}$$

Adding and Subtracting Proper Fractions

Same Denominators

$\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$, $\frac{8}{11} - \frac{3}{11} = \frac{5}{11}$

Different Denominators

Multiples of 7: 7, 14, 21, 28, 35
Multiples of 5: 5, 10, 15, 20, 25, 30, 35

$\frac{2}{7} + \frac{3}{5} = \frac{10}{35} + \frac{21}{35} = \frac{31}{35}$

Multiples of 10: 10, 20
Multiples of 4: 4, 8, 12, 16, 20

$\frac{9}{10} - \frac{1}{4} = \frac{18}{20} - \frac{5}{20} = \frac{13}{20}$

Adding and Subtracting Mixed Numbers

Add or subtract the whole numbers and fractions separately.

$2 \frac{2}{5} + 1 \frac{3}{10} = 3 + \frac{4}{10} + \frac{3}{10} = 3 \frac{7}{10}$

$2 \frac{1}{2} - 1 \frac{1}{4} = 2 - 1 + \frac{2}{4} - \frac{1}{4} = 1 + \frac{1}{4} = 1 \frac{1}{4}$

- #### Learning outcomes
- use common factors to simplify fractions; use common multiples to express fractions in the same denominator
 - compare and order fractions, including fractions >1
 - add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
 - multiply simple pairs of proper fractions, writing the answer in its simplest form
 - divide proper fractions by whole numbers
 - associate a fraction with division and calculate decimal fraction equivalents
 - identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places
 - multiply one-digit numbers with up to 2 decimal places by whole numbers
 - use written division methods in cases where the answer has up to 2 decimal places
 - solve problems which require answers to be rounded to specified degrees of accuracy
 - recall and use equivalences between simple fractions, decimals and percentages,



Subject: Religious Education Unit C: Advent

Unit overview

Children will be given the opportunity to develop knowledge and understanding of the two parts of the Season of Advent. A time to prepare for Christ to come again and a time to celebrate his birth at Christmas. Through Parables of Jesus and some of the prayers and hymns of the church they will explore these themes.

Related scripture linked to topic you may wish to read:

Luke. 12: 35-40- The Parable of the servant waiting for the master to return.

Isaiah. 7: 3-5- Emmanuel.

Micah 5: 1- From the city of David he will come.

Learning Outcomes

Know that there are two parts to the Season of Advent.

Understand some reasons why Christ will come again.

Recognise how we can prepare for the return of Christ.

Key Vocabulary

Vocabulary

Advent	second coming
Emmanuel	stay awake
parable	Rod of Jesse
pray	watch

Window of reflection

How can you prepare this Advent?

Can you use moments of quiet prayer and reflection to think about the future coming of Christ?



Tasks linked to unit:

- 1) Design a poster using some of the symbols of Advent.
- 2) Find out about other festivals of light in other religions, are they similar to Advent?
- 3) Explore how you can use drama and role-play to describe some of the Parables used in this unit.



**Subject: Religious Education
Unit E Baptism and Confirmation**

Unit overview

Children will learn about the celebration of the Sacraments of Baptism and Confirmation. They will explore the signs and symbols of both these sacraments. They will hear about the gift of the Holy Spirit being given in these Sacraments.

Related scripture linked to topic you may wish to read:

Matthew. 4:13-17 Accounts of the Baptism of Jesus

Exodus 29:1-9 Aaron is anointed to serve God

Learning Outcomes

Know that Baptism and Confirmation are Sacraments through which Christians receive the gift of the Holy Spirit.

Identify the actions, signs and symbols of Baptism and Confirmation. They will also be able to explain their meaning.

Key Vocabulary

Vocabulary

anointing	Confirmation name
Baptism	Godparent
Baptismal name	Oil of Chrism
Baptismal Promises	parent
Confirmation	sponsor

Window of reflection

Use some prayers from the Rite of Baptism and Rite of Confirmation during a collective worship.

How can they use the gifts and fruits of the Holy Spirit?



Tasks linked to unit:

- 1) Research some of the tasks undertaken by a bishop and a priest.
- 2) In what way might bishops and priests need the presence of the Holy Spirit to fulfil their tasks.
- 3) Brainstorm different words for 'sealed' and consider what this might mean about the presence of the Holy Spirit in the person being Confirmed.



Glossary

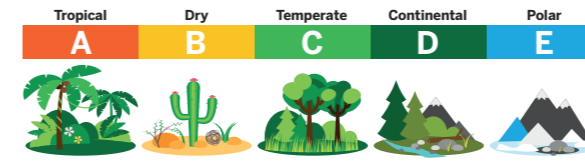
1	climate change	Is a long-term change of temperature and typical weather patterns in a place. Climate change could refer to a particular location or the planet as a whole.
2	natural resource	Raw materials or substances that are produced by the environment.
3	consumption	The action of using up a resource.
4	renewable	Resources that can be replenished in a human lifetime — such as water, wind and solar power.
5	non-renewable	Resources that can only be used once within a human lifespan and will eventually run out — such as oil, gas and coal.
6	emissions	The production and release of something, especially gas or radiation.
7	trade	The way people all around the world buy and sell goods or services.
8	import	Goods or services that are brought into a country from abroad to sell.
9	export	Goods or services that are sent to another country to be sold.
10	fair trade	Trade between companies in developed countries and producers in developing countries in which fair prices are paid to the producers.
11	biodegrade	When products decay and absorb into the environment in a safe way.
12	fossil fuels	A natural fuel such as coal or gas, formed within the Earth from dead plants and animals over millions of years.
13	sustainable	Using resources in a way that maintains their supplies for the future.
14	atmosphere	A layer of greenhouse gases that surrounds the earth.
15	greenhouse gases	Burning fossil fuels produces energy, but also releases greenhouse gases such as carbon dioxide, methane, and nitrous monoxide into the air.
16	global warming	The more greenhouse gases there are in the atmosphere the more the heat gets trapped which increases the earth's temperature.
17	migration	The movement of people from one place to another with the intentions of settling, permanently or temporarily, at a new location.
18	border	A real or artificial line that separates geographic areas.
19	refugee	A person who must leave their home for their own safety or survival.
20	displaced people	People who have had to leave their homes because of natural disasters, political or deliberate events.

Significant People and Places

Turkey	Syria	China	Japan
Turkey hosts the largest number of refugees worldwide. More than eight out of 10 of the world's refugees are from poor countries. Most refugees from poor countries seek asylum in other poor countries.	Since the Syrian civil war officially began in 2011, about 5.6 million Syrians have become refugees, and another 6.2 million people have been displaced within Syria. Nearly 12 million people in Syria need humanitarian assistance. At least half of the people affected by the Syrian refugee crisis are children.	With the world's largest population and for decades one of the fastest growing economies, China is far and away the world's top CO ₂ emitter. Close to 10,000 million metric tons of CO ₂ from burning fossil fuel were emitted by the superpower in 2017.	Japan is a country with very limited natural resources but is still one of the richest countries in Asia. This is because successful Japanese corporations such as Nintendo, Sony and Toyota make products that are highly desired in other countries. As a result of trade, Japan has enough wealth to buy the resources it needs.

What are climate zones?

Climate is the average weather conditions in a place over a long period of time — 30 years or more. Today, climate scientists split the Earth into approximately five main types of climates.



What is climate change?

Climate change is a long-term change of temperature and typical weather patterns in a place. Climate change could refer to a particular location or the planet as a whole. The climate of an area includes seasonal temperature and rainfall averages, and wind patterns. Different places have different climates.

What are natural resources and why do we use them?

Natural resources are raw materials or substances that are produced by the environment. Humans use natural resources to survive. They can be used to heat homes, transport people around the world, produce food and clothing.

Renewable resources are resources that can be replenished in a human lifetime — such as water, wind and solar power. **Non-renewable** resources are resources that can only be used once within a human lifespan and will eventually run out — such as oil, gas and coal.

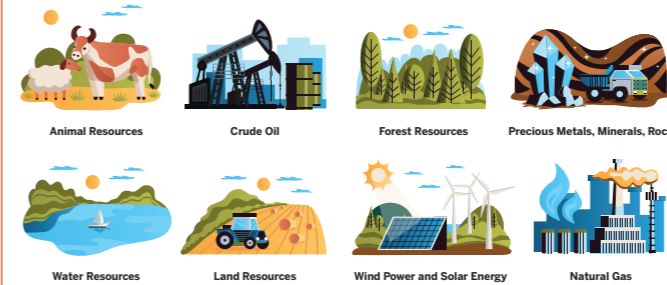


Image: Luke Duggleby / Climate Heroes

Significant People and Places

Isatou Ceesay	Greta Thunberg	Wangari Maathai	Sir David Attenborough
Isatou Ceesay is a Gambian activist, popularly referred to as the 'Queen of Recycling'. She started a recycling movement called One Plastic Bag. Ceesay aims to educate people about recycling and how we need to reduce the amount of waste that is created.	Greta Thunberg is the 17-year-old environmental activist from Sweden that took the world by storm with her Fridays for Future movement. Greta is known for her activism around the global climate crisis.	Wangari Maathai worked tirelessly for both land conservation and women's rights. She was the founder of the Green Belt movement, which focused on environmental conservation and women's rights, in her native country of Kenya. She was awarded the Nobel Peace Prize in 2004 for her approach to sustainable development, democracy and peace.	For more than 60 years, Sir David Attenborough has devoted himself to informing humanity about the beauty and fragility of the natural world. His countless series and programmes have inspired and educated many generations. Attenborough has highlighted our responsibility to treat the Earth with respect and not waste or destroy what it has provided us with.

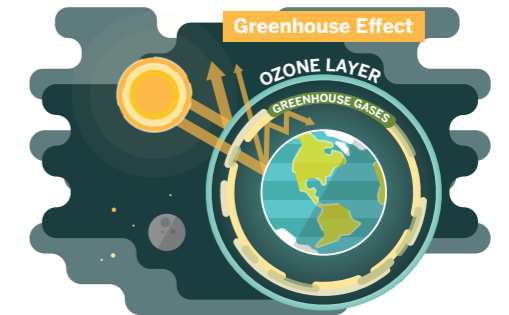


What causes climate change?

The Earth's atmosphere surrounds the planet. Greenhouse gases in the atmosphere such as water vapour, carbon dioxide, methane, and nitrous monoxide let the sun's radiation (heat) in. Some of the sun's radiation is absorbed by the Earth's surface and warms it and the rest is reflected or absorbed by clouds and the atmosphere.

The earth also releases heat back towards space. Some of this heat passes directly through the atmosphere, but most of it is captured and kept by greenhouse gases. Without the greenhouse gases acting like the walls of a greenhouse trapping in heat, Earth's temperature would be bitterly cold, and humans would be unable to survive.

However, the more greenhouse gases there are in the atmosphere the more the heat gets trapped which increases the Earth's temperature. This is called the 'greenhouse effect'. This rise in the planet's temperature is often referred to as global warming.



What are the effects of climate change?

Climate change may cause weather patterns to be less predictable. These unexpected weather patterns can make it difficult to maintain and grow crops in areas that rely on farming. Climate change has also been connected with other damaging weather events such as more frequent and more intense hurricanes. This can destroy homes and livelihoods as well as displace many people.