

## Mathematics

This term in maths we will begin by focusing on fractions. Throughout the unit, we will develop our knowledge of the four operations using fractions and then use our fraction knowledge to find fractions of given amounts.

### Key Questions...

Work out

$$\frac{3}{4} \times \frac{2}{7}$$

$$\frac{3 \times 2}{4 \times 7} = \frac{6}{28} = \frac{3}{14}$$

Work out

$$\frac{3}{4} \div \frac{2}{7}$$

$$\frac{3}{4} \times \frac{7}{2} = \frac{21}{8} = 2\frac{5}{8}$$

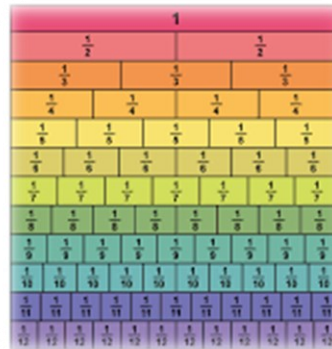
Work out

$$\begin{aligned} \frac{3}{4} + \frac{2}{7} &= \frac{21}{28} + \frac{8}{28} \\ &= \frac{29}{28} \\ &= 1\frac{1}{28} \end{aligned}$$

Work out

$$\begin{aligned} \frac{3}{4} - \frac{2}{7} &= \frac{21}{28} - \frac{8}{28} \\ &= \frac{13}{28} \end{aligned}$$

This unit provides a great opportunity to develop their problem solving and reasoning skills and allows them to make connections between areas in maths.



- How is multiplying fractions by integers similar to addition of fractions? How is it different?
- What happens to the denominator when you multiply a fraction by an integer?
- Do you find it easier to partition the mixed number first or to convert it to an improper fraction?
- Is  $2\frac{3}{4} \times 7$  equal to  $7 \times 2\frac{3}{4}$ ? Why?

There are 12 children in a class.

The teacher has 4 litres of orange juice.



Each child gets  $\frac{1}{3}$  litre of orange juice.

This unit is important because it develops children's understanding of fractions, moving onto comparing, adding and subtracting unrelated fractions using

## English

In English our two main writing genres will be *non-chronological reports*, *diary entries* and *poetry*.

Writing Genre:	Non-chronological reports	Diary entries	Poetry
Work:	Pupils will research different energy sources that are used around the world. They will then use this information to create their own non-chronological report about one of the sources	Using our guided reading book for support, children will meeting Bod in the Graveyard. They will need to think about the events but also incorporate thoughts and	We will look at different types of poetry such as; haikus, classic poems and cinquains. We will then use our knowledge of natural disasters to create our own charity fundraising poetry book to support the

## Knowledge Organiser Term 1 - Animals Including Humans - Year 6

Vocabulary	Definition
renewable energy	Energy that does not reduce in quantity when it is used.
non-renewable energy	Energy that cannot be replenished and will eventually run out.
fossil fuel	A material formed from the remains of plants and animals over millions of years.

**Other Subjects:** During the term we will also be completing our 3D Modelling unit in Computing. In RE will be answering the question- "What difference does it make to believe in Ahimsa, Grace & Ummah?". During our PE lessons we will be focusing on hockey and Volleyball and how to play safely whilst still incorporating skills such as team work and hand-eye coordination. For French this term we will look at; Items in a classroom, possessive adjectives (revision and new), prepositions and pronunciation: silent letters at the end of words

## The 7 Levels of Classification

Kingdom	5 widely accepted kingdoms for classification: monera, protists, fungi, plants and animals.
Phylum	Divisions based on shared physical characteristics among organisms.
Class	Classes are based on very important, and more detailed, similarities.
Order	Orders are based on characteristics listed on a taxonomy key.
Family	Groups of organisms that share certain adaptive traits. They have a common ancestry.
Genus	A way to describe the generic name for an organism.
Species	Species is the specific name given to a living organism.

## Famous Scientists

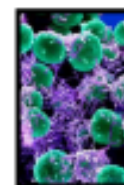


Aristotle (1799-1847)  
Philosopher and Scientist

Carolus Linnaeus (1707-1778)  
Father of Classification

## Micro-organisms

Microorganisms are very tiny living things. They are so small that they are not visible to the naked eye, so a microscope is needed to see them. Microorganisms can be found all around us. They can live on and in our bodies, in the air, in water and on the objects around us. They can be found in almost every habitat on Earth.



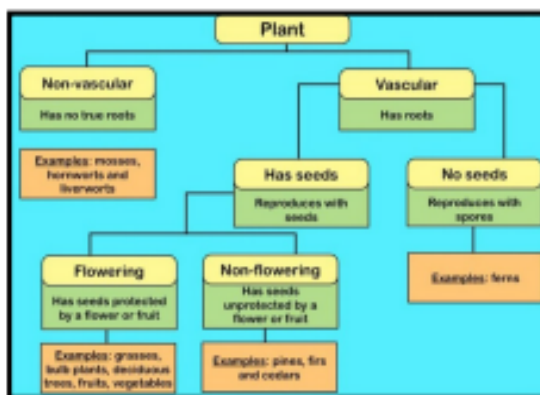
## Key Vocabulary

algae	A single or multi-cellular organism that has no roots, stems or leaves and is often found in water.
bacteria	Tiny little organisms that are everywhere around us.
classification	The arrangement of organisms into orderly groups based on their similarities and presumed evolutionary relationships.
fungi	A classification or group of living organisms. This means they are not animals, plants, or bacteria.
invertebrate	An invertebrate animal does not have a backbone and 97% of creatures belong to this group.
micro-organism	An organism which is microscopic, making it too small to be seen by the human eye.
organism	An individual animal, plant or single-celled life form.
species	A group of closely related organisms that are very similar to each other and are usually capable of producing offspring.
taxonomy	The science of naming, identifying and classifying organisms.
vertebrate	A vertebrate animal is one that has a backbone.
virus	A small infectious agent that replicates only inside the living cells of an organism.

## Classification of animals



## Classification of plants



# Knowledge Organiser Term 2 - Geography

## Where does our energy come from?



Renewable



hydropower

Energy generated by the movement of water.



wind power

Energy generated by wind powering large turbines.



geothermal energy

Energy generated by the heat from the Earth's core.



solar power

Energy generated by the sun and solar panels.



biofuel

Energy generated from plant or animal waste.

Non-renewable



coal

A black rock found deep underground which is used as fuel.



crude oil

A naturally occurring liquid made millions of years ago, found underground.



nuclear power

A highly-flammable mixture of gases found deep underground.



natural gas

Energy generated from radioactive materials that create heat.



Vocabulary	Definition
renewable energy	Energy that does not reduce in quantity when it is used.
non-renewable energy	Energy that cannot be replenished and will eventually run out.
fossil fuel	A material formed from the remains of plants and animals over millions of years.





### Maya art



### Artists

Dan Fenelon

Leonardo da Vinci

Banksy

Diego Rivera

Caravaggio

Pablo Picasso

### Chiaroscuro

Chiaroscuro is an Italian word meaning light and dark. A drawing, painting or photograph is described as using chiaroscuro when dramatic light and shade is the main feature of the image. It is used to make something on a flat surface look more three-dimensional.





## Year 6 - Drawing

aesthetic	As an adjective, it describes something that is pleasing to look at.
commissioned	When someone is asked to create a piece of art.
interpretation	How the meaning of an image is understood.
mural	A painting made directly on a wall or other permanent structure.
symbolic	Conveying a message using symbols.
tone	How light or dark something is.



### Graffiti



Graffiti is used to describe spray-painted words and images that appear on property without permission. It is illegal to graffiti on private and public property.

### Guerrilla art



Guerrilla art is similar to graffiti because it is often produced without permission. It usually appears unannounced in unusual places and can have a controversial message.

### Mural



A mural is a large painting that may cover a wall. Artists are usually commissioned to paint them.

## Year 6 - Digital world: Navigating the world

Biodegradable	Materials that break down and form part of the soil as part of the natural decomposition process.
Boolean	A form of data, which consists of (true) 1s and (false) 0s values.
Environmentally friendly	Does not cause harm to nature (animals, plants etc).
Finite	Limited in number, will eventually run out.
If statement	To instruct a program to respond based on two or more conditions (e.g. if it is below 10 degrees celcius turn on the heating; else switch the heating off).
Mouldable	Can be made into any shape.
Product lifecycle	How long an object is expected to last before becoming unusable.
Product lifespan	How long an object will last, before being recycled.
Smart	A device with processing capabilities.
Sustainable	Can be maintained.

Sometimes we need multiple products to help us achieve something. This can be a lot to carry especially if you are trekking.



GPS tracker



Compass



A map



Torch or headlamp



Pedometer

## Key facts



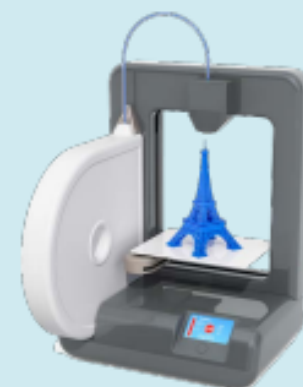
One electronic product with multiple functions could help lighten the load.

### 3D printing

A 3D printer can receive and output a 3D model file as a physical item.

It is very expensive to set up and fill with materials.

The models are restricted by the colour of the material the printer uses, but can be hand-painted after printing to add detail.



### Sustainable materials



#### Cork

Developed from living trees, without causing them harm. Cork comes from bark that regenerates.



#### Bamboo

Grows rapidly - some species will reach 3 ft in a single day.