

Mathematics

In mathematics this term we are going to be learning about multiplication and division before moving onto fractions. Don't forget to complete your homework on Doodle!

Children need to be aware that the effect of multiplying by 10 twice is the same as multiplying by 100 and that multiplying by 10 three times is the same as multiplying by 1,000. Children should be comfortable with the language of "10 times the size of", "100 times the size of" and "1,000 times the size of".

In the next steps, children look at dividing whole numbers by 10, 100 and 1,000 and then multiplying and dividing by multiples of 10, 100 and 1,000

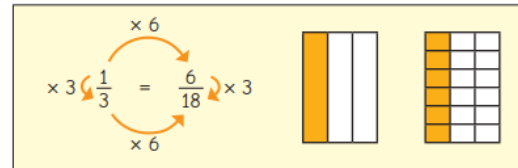
Things to look out for

- Children may move digits in the wrong direction in the place value chart, or by the wrong number of columns.
- Some children may over-generalise that multiplying by a power of 10 always results in adding zeros, which will cause issues in the Spring term when multiplying decimals.

Fractions

In this unit the children will find fractions equivalent to a unit and non-unit fractions (unit fractions have 1 as a numerator and non-unit fractions have numbers other than 1 as their numerator), recognise equivalent fractions, convert improper fractions to mixed numbers and vice versa, compare and order fractions less than and greater than 1.

Recognising equivalent fractions:



The numerator/denominator has been multiplied by _____, so the denominator/numerator should also be _____ by _____.

Adding fractions

Annie adds two mixed numbers by adding the wholes first and then adding the fractions.

$$2\frac{3}{5} + 4\frac{1}{5} = 6 + \frac{4}{5} = 6\frac{4}{5}$$

The following websites might be useful to support these topics:

Square and cube numbers <https://www.bbc.co.uk/bitesize/topics/zyhs7p3/articles/z2ndsrd>

Simple multiplication (BBC Bitesize) <https://www.bbc.co.uk/bitesize/articles/zb4gcqt>

Long multiplication (BBC Bitesize) <https://www.bbc.co.uk/bitesize/articles/z4chnrd>

Short division introduction (BBC Bitesize) <https://www.bbc.co.uk/bitesize/topics/z36tyrd/articles/zgxdfcw>

Adding and subtracting fractions (BBC Bitesize) <https://www.bbc.co.uk/bitesize/topics/zhdwxnb/articles/z9n4k7h>

Please continue to practice times tables on TTRockstars <https://play.ttrockstars.com/auth/school/student/42278> and watch out for some battles!

Year 5 Maths homework:

Stay in the Green Zone on
Doodle Maths.



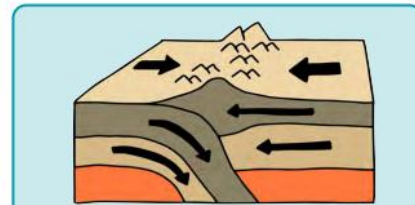
English

In English our three main writing genres will be Creative writing, Non-Chronological Report and narrative writing.

Writing Genre:	Creative Writing	Non-Chronological Report	Narrative
Works:	Year 5 will familiarise themselves with our theme Amazing Alps. We will be using this to write our own adventure story on a journey of mountaineering through the Alp's largest mountain Mont Blanc.	The children will be learning about the Alps in Geography. To embed and develop their understanding of the human geography we will be writing an information text about Tourism in the Alps. We will use an example about Gravesend to help them.	During this he pupils will be writing a story based on the story Polar Express. We will follow the main structure but also use our imagination to help us develop our own ideas.
Main skills covered	Descriptive writing skills will be our focus, looking at expanded noun phrases, relative clauses and emotive language to develop our paragraphs. We will ask the children to develop suspense and atmosphere by using a wide range of vocabulary and sentence structures.	The children will create an interesting report exploring tourism in the Alps. As part of this unit, they will be exploring a variety of nouns and expanded nouns phrases, alongside relative clauses. They will be writing factually and will be developing their use of dashes, commas and apostrophes.	The children will work on using vocabulary/phrases which will show they are aware of their audience. They will effectively use relative clauses to develop complex sentences and use punctuation correctly to clarify meaning or signify dialogue.
Ways to help at home:	Ask your child what key events they have chosen to write about and support them in researching this area together.	You can learn about the use dashes here: https://www.bbc.co.uk/bitesize/topics/zvwwxn/b/articles/zmnwjhv	Relative clauses: https://www.bbc.co.uk/bitesize/topics/zwwp8mn/articles/zsrt4qt Speech marks: https://www.bbc.co.uk/bitesize/clips/zvftsbk
Reading and Spelling:	Guided Reading	Our weekly Spelling patterns:	
	This term's book is: <i>Treason</i> 	Don't forget to log into Doodle spelling to complete your spelling practice and tests!	Please stay in the Green Zone for Doodle English - 

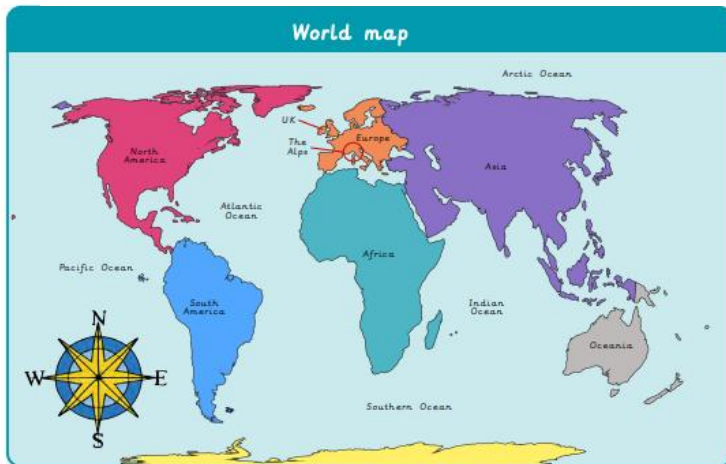
Geography: Term 2 - Amazing Alps

What is life like in the Alps?



Alpine mountains are fold mountains. They were formed when two tectonic plates pushed together and the ground was forced upwards.

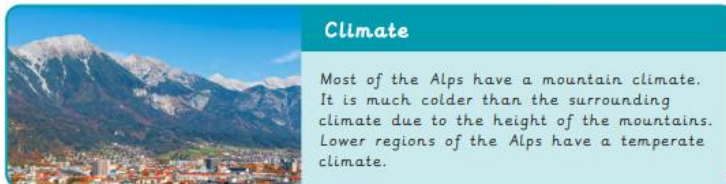
leisure	The use of free time for enjoyment.
tourist	A person who travels to a place for pleasure.
tourism	Travel for pleasure in which people visit places of interest.



Mont Blanc is the highest mountain in the Alps.



Popular activities in the Alps include skiing, hiking and sightseeing



Climate

Most of the Alps have a mountain climate. It is much colder than the surrounding climate due to the height of the mountains. Lower regions of the Alps have a temperate climate.

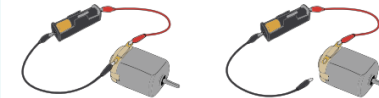
Design Technology: Term 2 - Wobble bots!



D&T - Wobble bots

assemble	To put parts together.
charge	An amount of electrical energy.
design criteria	The important features that a product must have or do to work correctly.
evaluate	Looking at the good and bad points about something and thinking about how to improve it.
product	Something that has been made to be used or enjoyed by someone.

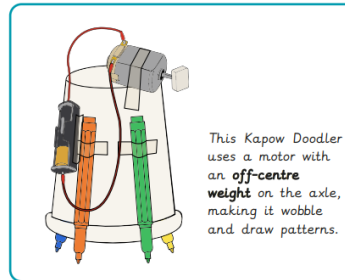
A **circuit** is a path that electricity can flow around.



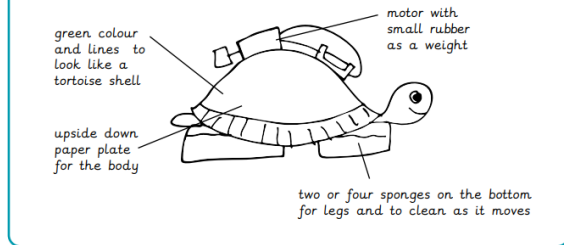
The motor axle turns when the circuit is a complete loop because the charge can flow around. If the circuit is not a loop, the axle will not turn.

Electrical components are parts of a circuit such as a bulb, battery, wires or a motor. A **motor** is an electrical component that uses electricity to make something move.

A **diagram** is useful when designing a **product**. It can show what the product will look like. **Annotate** the diagram with labels that explain each part.



This Kapow Doodler uses a motor with an **off-centre weight** on the axle, making it wobble and draw patterns.



RE: Our key question this term is, 'If God is everywhere, why go to a place of worship?' We will explore places of worship for a range of different religions.

PSHE: Our key question is, 'How will we grow and change?' This topic, which focuses on physical and emotional changes which occur during puberty, will be taught alongside science this term (see below).

PE: Every Monday afternoon, we'll be having a gymnastics lesson inside and handball outside. Please make sure warm kit is brought in for the outside lesson.

Science – Animals including humans

Prior Learning - Whilst this is a new topic, pupils may benefit from recapping what they have learnt in previous years, as this will help with some concepts.	
1	I can identify and name a variety of common animals that are birds, fish, amphibians, reptiles and mammals. I can identify and name a variety of common animals that are carnivores, herbivores and omnivores. I can describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles and mammals, and including pets). I can identify, name draw and label the basic parts of the human body and say which parts of the body is associated with each sense.
2	I can notice that animals, including humans, have offspring which grow into adults. I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air). I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.
3	I can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. I can identify that humans and some animals have skeletons and muscles for support, protection and movement.
4	I can describe the simple functions of the basic parts of the digestive system in humans. I can identify the different types of teeth in humans and their simple functions. I can construct and interpret a variety of food chains, identifying producers, predators and prey.
Animals including humans - Year 5	
I can describe the changes as humans develop from birth to old age.	

Key Vocabulary	
Gestation	(the period of) the development of a child or young animal while it is still inside its mother's body.
Foetus	A young human being or animal before birth, after the organs have started to develop.
Fertilisation	The process of causing an egg or seed to start to develop into a new young animal or plant by joining it with a male cell.
Species	A set of animals or plants in which members have similar characteristics to each other and can breed with each other.
Baby	A very young child, especially one that has not yet begun to walk or talk.
Toddler	A young child, especially one who is learning or has recently learned to walk.
Adolescent	A young person who is developing into an adult.
Adult	A person or animal that has grown to full size and strength. An adult human, under English law, is someone over 18 years old.
Elderly person	Someone who has lived for many years.
Puberty	The stage in people's lives when they develop from a child into an adult because of changes in their body that make them able to have children.
Hormones	Any of various chemicals made by living cells that influence the development, growth, sex, etc. of an animal and are carried around the body in the blood.
Pituitary gland	Located at the base of the brain between the eyes, this controls a whole range of vital functions by releasing hormones.
Testosterone	A male hormone that causes a stage of growth in older boys and development of their sexual organs.
Oestrogen	A female hormone that causes development and change in the reproductive organs.

Babies and children

We investigate early milestones to understand how babies change during the first year of their lives, then beyond into childhood. We make tables and charts to investigate average heights in different age groups in school.



Fun Fact!

Did you know our ears continue to grow while we are alive? In 1993 a GP from Bromley, Kent found that ears grow approximately 0.22mm per year (which means our ears grow 1cm every 50 years.)

Puberty

Boys The male body produces the hormone testosterone, which starts off the changes of puberty. Development can happen at any time between 10 and 18, but usually happens around 13 or 14.

Girls The female body produces the hormones progesterone and oestrogen, which start the changes of puberty. Development can start anywhere between the ages of 8-14

When these hormones are produced, changes happen to our bodies. We will be learning about the changes that happen.

How does the human body change as we age?

We will learn about the human aging process.

As we get older the skin wrinkles; this is because we produce less oil and sweat. Our bodies store less fat under the skin, so our bones become more visible. Muscles and bones become weaker, memory may become worse and the immune system cannot fight illness as easily.

