

Mathematics

In mathematics this term we are going to continue learning about decimals and percentages before moving on to perimeter and area.

Decimals and percentages

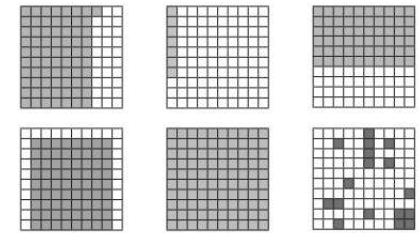
In this unit, children are introduced to percentages for the first time. Children learn that “per cent” relates to “number of parts per 100”. If the whole is split into 100 equal parts, then each part is worth 1%. Hundred squares and 100-piece bead strings or Rekenreks are useful representations for exploring this concept.

Watch these clips for further help:

<https://www.bbc.co.uk/bitesize/topics/zsiqtfr/articles/zsbd7p3>

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

Complete the sentence to find what fraction and what percentage of each hundred square has been shaded.



_____ parts out of 100 = $\frac{\square}{100}$ = _____%

Perimeter and area

Perimeter - the distance around the outside of a two-dimensional shape.

In this unit, children build on learning from earlier years to find the perimeters of rectangles by measuring the sides and by calculation.

Children then explore different methods of finding the perimeter, for example adding all four sides separately, adding the length to the width and then doubling, or doubling the length and the width and then adding the results, before deciding which they find most efficient. Children use their understanding of perimeter to calculate missing lengths.

The children then apply their knowledge of perimeter to find the perimeters of polygons and to solve word problems.

A **polygon** - a closed two-dimensional shape with straight sides.

They then focus on area. **Area** - the space inside a two-dimensional shape.

They find areas by counting squares, and are introduced to the square centimetre (cm²) by counting squares on a centimetre squared grid. They complete the unit by calculating the areas of **compound shapes**, which are shapes made up of two or more other shapes.

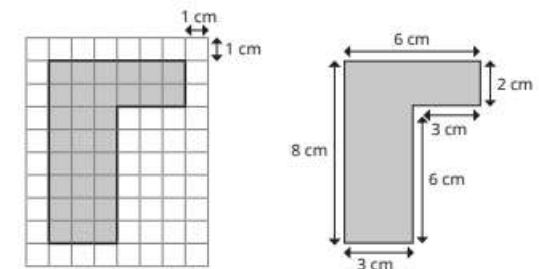
Watch these clips to help you talk to your child about perimeter and area:

<https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-understanding-area-and-perimeter/zb87t39>

<https://www.bbc.co.uk/bitesize/topics/zvmxsbk/articles/zsr4k7h>

<https://www.bbc.co.uk/bitesize/topics/zjbg87h/articles/zwt6fr>

Work out the perimeters of the shapes.



What do you notice?

English

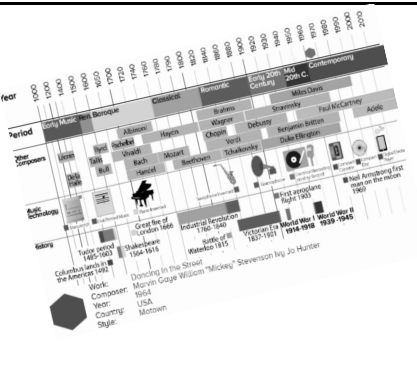
In English our three main writing genres will be Adventure story writing, poetry and an information text

Writing Genre:	Narrative Adventure story	Poetry	Information text
Work:	During this, Year 5 pupils will be planning and writing an adventure story. We will explore famous video clips as a stimulus to inspire our ideas and to write creatively.	Pupils will be looking at various different types of poems. We will be working on reciting some poems within a group and will write our own poem based around emotions.	Over the course of the term, the children will be comparing the Anglo-Saxon's to the Ancient Mayans. They will then use this knowledge to write an information text exploring these in detail.
Main skills covered	We will be recapping previous descriptive writing skills such as similes and metaphors, but our main focus will be perfecting our use of punctuating speech. We will also work on how to develop a character's personality through the use of speech.	We will be exploring moods and things that we associate with different moods that we experience. The children will develop their use of similes and personification when writing their own version of a poem. We will also be exploring fluency, when reciting poems	The children will focus on developing their use of punctuation used in information texts such as, colons, semi-colons, brackets and dashes.
Ways to help at home:	BBC how to write an adventure story https://www.bbc.co.uk/bitesize/topics/zx339j6/articles/zgthrwx	BBC how to write poetry https://www.bbc.co.uk/bitesize/topics/zkgcwmn/articles/zb4tbdm	BBC bitesize https://www.bbc.co.uk/bitesize/topics/zq6svcw https://www.bbc.co.uk/bitesize/articles/zq2m6sg
Reading and Spelling:	Guided Reading	Our weekly Spelling patterns:	
	This term's focus is poetry. We will be reading and reciting a range of poems each week.	W1-Words ending in -ent W2- Words ending in -ence, W3-The ee sound spelt ei, W4-Words ending in -ant W5-Words ending in shus spelt -cious and W6 homophones	Try to practice spelling throughout the week with your child. Don't forget to stay in the green zone on Doodle!

In PSHE we will be learning about first aid. We will learn what to do in an emergency and how to help someone that needs help.



In French we will be finding out how to discuss our likes and dislikes, learning traditional French stories and pronouncing the a and j phoneme correctly.

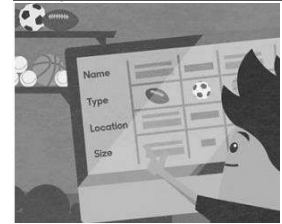


In music we will be developing our understanding of rhythm, pace, composition and extending our knowledge of different genres such as: Motown.

In art we will completing sketches and doing mono-printing based on Architecture.



In computing we will be learning about databases.
<https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z8yk87h>



In religious education we will be learning about the Christian religion. We will use this religion to discuss, forgiveness, greed equality and consider what Christians believe by looking at quotes from the Bible.





How did the Maya civilisation compare to the Anglo-Saxons?

How did the Maya settle in the rainforest?

The Maya faced many challenges settling in the rainforest including dangerous animals, dense vegetation and shady conditions, which made growing crops difficult. They solved these problems by slashing and burning trees to clear rainforest areas, becoming adept hunters and developing crops that could grow successfully in the conditions, such as cocoa and maize.



Maya houses

The Maya lived in houses called Nah. Initially, they were wooden, rectangular structures covered with wattle and daub with a thatched roof made of palm leaves. The Maya partitioned their houses into separate sleeping, eating and living areas and had an area outside to keep animals. Significant people like kings lived in palaces built out of limestone.



Maya cities

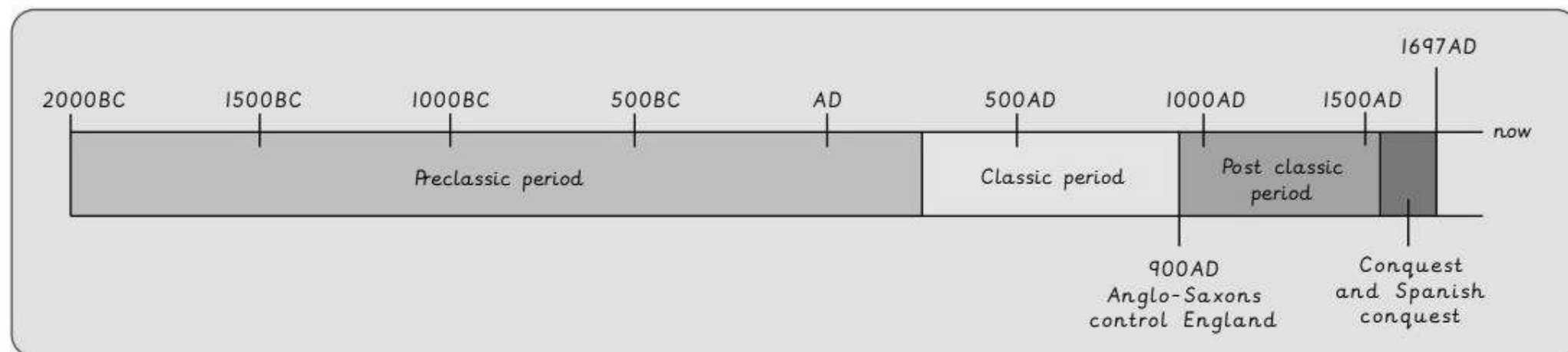
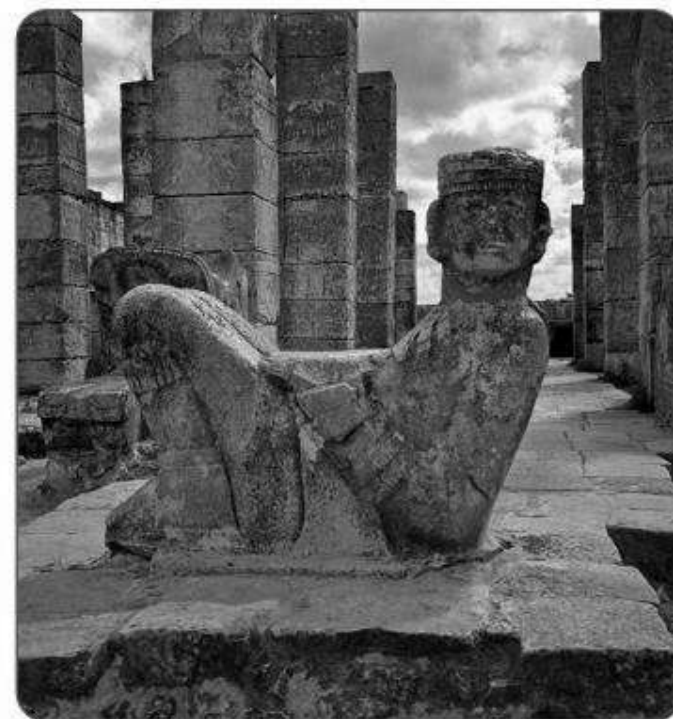
Maya cities such as Tikal thrived in the Classic period. The cities had a grand plaza (main street) on which the most important buildings were found (such as temples, observatory towers, ball courts and palaces). Ordinary people lived in houses on the outskirts of the city and the cities themselves were connected by roads. Historians have learned more about these cities from recent archaeological discoveries in the rainforest (e.g. hieroglyphics were discovered in the buildings).





How did the Maya civilisation compare to the Anglo-Saxons?

abandon	To leave something and not return.
city-state	A large, independent city running the surrounding area.
Classic period	A period of time in the Maya civilisation from AD 250 to 900.
creation story	A story which explains how the world was made, from a particular point of view.
decline	When something becomes less important, prominent or reduces in quality.
deforestation	When forests in a large area are cut down.
drought	A prolonged period of no rain, leading to water shortages.
hieroglyphics	Maya symbols which represented words or letters.
pyramid	Pyramid-shaped buildings which functioned as temples.
slash and burn	Cutting and burning down trees and plants to clear land.
tropical rainforest	Dense forest that grows in hot, wet areas between the Tropics.



Science Term 4 Forces

Prior Learning - Whilst this is a new topic, pupils may benefit from recapping what they have learnt about light as this will help with some concepts

- | | |
|---|--|
| 3 | <p>I can compare how things move on different surfaces.</p> <p>I can notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>I can observe how magnets attract or repel each other and attract some materials and not others.</p> <p>I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.</p> <p>I can describe magnets as having two poles.</p> <p>I can predict whether two magnets will attract or repel each other, depending on which poles are facing.</p> |
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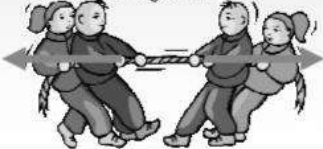



I can	Properties and changes of materials - Year 5
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...explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object

...identify the effects of air resistance, water resistance and friction, that act between moving surfaces

...recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Forces in Action Fact Sheet

 <p>Air resistance is a type of friction which slows the fall of a parachute or a piece of paper in air. The bigger the surface area the greater the amount of air resistance.</p>	 <p>This is a forcemeter. It is marked in newtons, and is used to measure the magnitude of a force.</p>
<p>Friction is the force between two surfaces - for example there is friction between a car tyre and the road, or a ski and snow. Melted snow between the ski and the snow lubricates the ski and reduces the friction.</p> 	<p>These two teams are both pulling, in the direction of the arrows, in this game of tug o' war:</p> 
 <p>Water resistance is another type of friction which slows objects moving through water.</p>	 <p>The forces of gravity and upthrust need to be balanced for a ship to float.</p> <p>The Earth's gravity pulls objects to its centre.</p> 

Gears and Pulleys

Mechanisms are the parts that make something work.

-Mechanisms are all around us. A set of related mechanisms used to create movement is called a mechanical system.

-Gears are toothed wheels (cogs) that lock together and turn one another. When one gear is turned the other turns as well.

The wheels are usually different sizes, so that one gear speeds up to slow down the next gear. They therefore increase the power of a turning force.

-Pulleys are like gears, but the wheels do not lock together. The wheels are instead joined together by a drive belt. Pulleys can be used to affect the speed, direction or force of a movement.



Key Vocabulary

air resistance	The force air exerts on a moving object
balanced	When the forces acting on an object are opposite and equal such that the object does not move.
gears	They are wheels with small bumps on their rim called teeth.
gravity	The force that causes an object to fall to the ground.
friction	The force that slows moving objects when surfaces rub together.
lever	A long beam that rests on a fulcrum.
mass	The measurement of the amount of matter something has.
Newtons	The measure of force named after scientist Sir Isaac Newton. A Newton meter is a piece of equipment that is used to measure the forces acting on an object.
particle	An extremely tiny piece of matter.
pulley	A machine that helps to move objects around by making a small force a large force.
upthrust	A force that pushes objects up, usually in water.
weight	A measurement of the force exerted on a mass by gravity.