

# Let there be Light!



## Electrical inventions through history

**Ancient Greeks 600BC** – discovered that by rubbing amber and stone together it creates static electricity.

**William Gilbert 1600** - used the word 'electricus' to describe static. This is a Latin word which means 'like amber' .He also discovered the earth is like a big magnet.

**Benjamin Franklin 1752** – discovered that lightening is the same as electricity and went on to invent the electric rod used on the top of tall buildings to protect them from lightening.

**Alessandro Volta 1800** – invented the first battery.

Michael Faraday 1832 – improved this battery and invented the electric motor.

**Thomas Edison 1879** – invented the first light bulb



Battery



Wire



Switch



Light bulb in a lightbulb holder



Buzzer



Motor

## Questions:

What appliances use electricity in your home?

Are they powered by mains or batteries.

How would you have made toast before electricity?

How would your great great grandparents have heated their homes?

<b>electricity</b>	a form of energy that can be carried by wires and is used for heating and lighting, and to pro-
<b>bulb</b>	the glass part of an electric lamp, which gives out light when electricity passes through it.
<b>battery</b>	a container of one or more cells in which chemical energy is converted into electrical energy and used as a source of power.
<b>buzzer</b>	an electrical device that is used to make a buzzing sound .
<b>cells</b>	a cell is a single unit used for converting chemical or solar energy into electricity.
<b>circuit</b>	a complete route which an electric current can flow around.
<b>switch</b>	a small control for an electrical device which you use to turn the device on or off.
<b>wires</b>	a long thin piece of metal that is used to fasten things or to carry electric current.
<b>motor</b>	a device that uses electricity or fuel to produce movement.
<b>conductors</b>	a substance that heat or electricity can pass through or along.
<b>insulators</b>	a non-conductor of electricity or heat.
<b>electrical appliances</b>	an electrical device or machine in your home that you use to do a job such as cleaning or cooking.
<b>mains</b>	where the supply of water, electricity, or gas enters a building.
<b>component</b>	the parts that something is made of.
<b>current</b>	a flow of electricity through a wire or circuit.
<b>energy</b>	the power from sources such as electricity that makes machines work or provides heat.



# Let there be Light!



## English

This term we will be reading "The Last Bear" by Hannah Gold. This is a captivating story that explores themes of friendship, conservation, and the impact of human actions on wildlife. Through the journey of April and her bond with a polar bear, we will be working to build empathy and an understanding of the importance of protecting our natural world. This book will inspire discussions on environmental issues, resilience, and the power of individuals to make a positive difference in the world around them.

## DT

This term we will be designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Pupils will electing appropriate materials to build a strong structure and will create different textual effects with materials.

**PE** - This term, we will continue to build on our hockey skills, focusing on perfecting the push pass and improving the accuracy of our passes. In netball, we'll work on refining our passing techniques and developing our shooting accuracy towards a target. Additionally, students will start to learn and understand the line markings on the court, enhancing their overall game strategy.

## English Key vocabulary

**Main clause**— The main clause has the ability to convey meaning and make complete sense even if taken separately from the sentence

**Subordinate clause**— a group of words that form part of a sentence but unlike the main clause, it cannot stand alone as a sentence as it would not make sense.

**Complex sentences** — made up of a main clause and a subordinate clause connected to each other with a subordinating conjunction.

**Fronted adverbials** — Fronted adverbials are words or phrases placed at the beginning of a sentence which are used to describe the action that follows

**Possessive apostrophes**— where Apostrophes are used to show possession – who something belongs to.

## RE —Incarnation/The Holy Trinity

In our second unit on Christianity, the children will explore the symbolic depictions of the holy trinity in the bible and in religious artwork. We will link this to the story of incarnation and how God took the human form of Jesus when he came down to Earth.

## Times Table Rock Stars

Times table Rock stars is a great way to help your child to improve their times table knowledge. We would encourage all children to be practising their tables using the different games that this program offers. It is more effective for your child to practice 4 times a week for 5 minutes than spending the equivalent time in one session. Can they improve their time and becomes a Rock star?

## PSHE

Learning about our emotions is very important to us. Our PSHE work this term is centred around the topic Celebrating Difference. We will be discussing how everyone is unique and helping the children to understand that it is ok to be different. This includes knowing how to combat prejudice and how to help if someone is being bullied.

## Music

In our unit on Rock and Roll, children will be playing melody parts on tuned instruments with accuracy and control and developing instrumental technique. We will also be recognising, naming and explaining the effect of the interrelated dimensions of music.

# Term 2 Homework and Spelling lists

Reading—Please try to read 3 times a week or more. Remember to ask an adult at home to enter your reading onto Learning with Parents

TT Rockstars— Practise your TT Rockstars for 20 minutes each week. Having rapid recall of your times table facts helps you in many areas of your maths.

Spelling—Try to practise these words as much as you can so that you can easily recall the spelling patterns and rules.

## Spellings week 1 and 2

grown

groan

grasp

guilty

guide

guard

tongue

league

fatigue

guess

ghost

## Spellings week 3 and 4

separate

communicate

angel

ancient

faint

favourite

famous

strange

volcano

potatoes

## Spellings week 5 and 6

fountain

mountain

entertainment

main/mane

pane/pain

male/ mail

sail/sale

weight

Eight

Eighth

sleigh

## Spellings week 7 and 8

vein

reindeer

reign

beige

straight

steak/stake

grate/great

isn't/ didn't/ wasn't

your/you're

their/there/they're

its/it's

You Can Do all the multiplication facts of 6.

0	x	6	=	0	=	6	x	0
1	x	6	=	6	=	6	x	1
2	x	6	=	12	=	6	x	2
3	x	6	=	18	=	6	x	3
4	x	6	=	24	=	6	x	4
5	x	6	=	30	=	6	x	5
6	x	6	=	36	=	6	x	6
7	x	6	=	42	=	6	x	7
8	x	6	=	48	=	6	x	8
9	x	6	=	54	=	6	x	9
10	x	6	=	60	=	6	x	10
11	x	6	=	66	=	6	x	11
12	x	6	=	72	=	6	x	12

If I know... then I also know...

The digit sum of multiples of 6 is 3, 6 or 9

All multiples of 6 are even numbers.

You Can Do all the multiplication facts of 9.

0	x	9	=	0	=	9	x	0
1	x	9	=	9	=	9	x	1
2	x	9	=	18	=	9	x	2
3	x	9	=	27	=	9	x	3
4	x	9	=	36	=	9	x	4
5	x	9	=	45	=	9	x	5
6	x	9	=	54	=	9	x	6
7	x	9	=	63	=	9	x	7
8	x	9	=	72	=	9	x	8
9	x	9	=	81	=	9	x	9
10	x	9	=	90	=	9	x	10
11	x	9	=	99	=	9	x	11
12	x	9	=	108	=	9	x	12

multiple factor product

The digit sum of multiples of 9 is 9

An odd number multiplied by 9 gives an odd product.

You Can Do all the multiplication facts of 7.

0	x	7	=	0	=	7	x	0
1	x	7	=	7	=	7	x	1
2	x	7	=	14	=	7	x	2
3	x	7	=	21	=	7	x	3
4	x	7	=	28	=	7	x	4
5	x	7	=	35	=	7	x	5
6	x	7	=	42	=	7	x	6
7	x	7	=	49	=	7	x	7
8	x	7	=	56	=	7	x	8
9	x	7	=	63	=	7	x	9
10	x	7	=	70	=	7	x	10
11	x	7	=	77	=	7	x	11
12	x	7	=	84	=	7	x	12

An odd number multiplied by 7 gives an odd product.

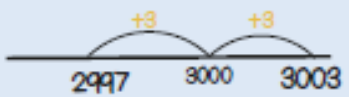
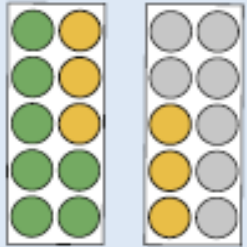
An even number multiplied by 7 gives an even product.

$64 \times 0 = 0$   
The product of a number and zero is zero.

$64 \times 1 = 64$   
The product of a number and 1 is the number itself.

$64 \div 1 = 64$   
The quotient when dividing a number by 1 is the number itself.

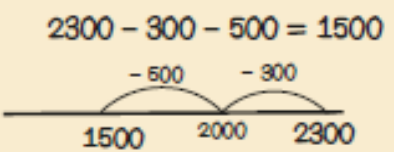
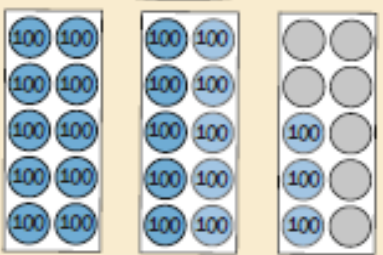
$2997 + 6$   
Bridging boundaries



If I know  $7 + 6 = 13$  then...

Year 4 Term 2

$2300 - 800$   
Bridging boundaries by counting back in efficient steps

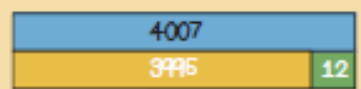


$3754 + 600$   
Add multiples of ten and a hundred

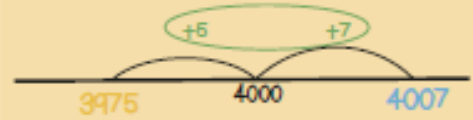


total difference  
ones  
tens  
hundreds  
thousands

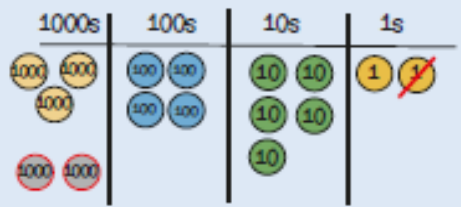
$3995 - 4007$   
Find the difference between two numbers



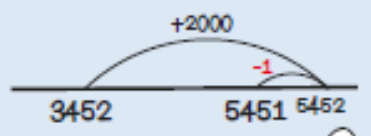
Count on 5 from 3995 to 4000, then 7 more so the difference between them is  $5 + 7 = 12$



$3452 + 1999$   
Round then adjust

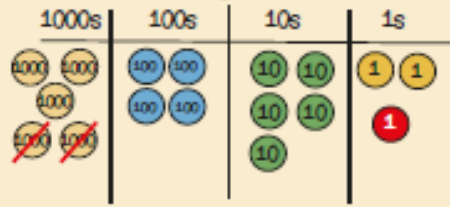


Add 2000 then subtract 1



Stop and Look!  
What do you notice?  
What's the most efficient way?

$5451 - 1999$   
Round then adjust



Take away 2000 then add 1

