Birchfield
PRIMARY SCHOOL

Year 2 Curriculum Overview
Term 1.2

Teaching Team:

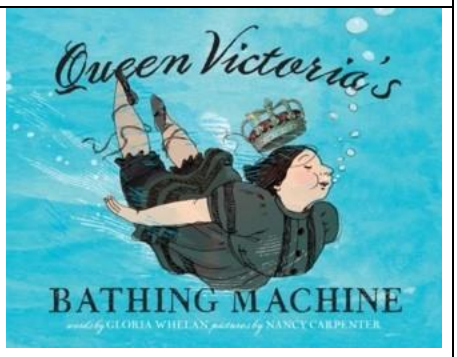
Miss Nguyen, Miss Naz, Miss Mazar

SLT: Mrs Sperrin

PE Days: Monday & Wednesday

Homework: Homework is set on Friday and returned by Wednesday. Home reading books must be returned by Monday,

Please see below an overview of the main themes, knowledge and skills we will be covering this half term.

Enquiry Question	What do I know about the United Kingdom?
Significant People	Hilary Lister
Class Texts	Queen Victoria's Batching Machine by Gloria Whelan ***(Themes: Perseverance, Relationships, Problem-solving and Resilience)*** 
Reading	1e – Predict what might happen on the basis of what has been read so far. **Test Technique:** True or false – literal/inference (table) In Reading children will be focussing on the domain, 1e. They will explore what prediction means and make their own predictions, using what we have already read to support. We will then learn the text technique, true or false, to develop our comprehension further. Children will continue developing their reading fluency and intonation when reading different sentence types. As the children's phonics knowledge increases, the children will be practising how to read poly-syllabic words within overt blending.
Writing	This half term, the children will be developing their writing skills through formal letters, instructions, narratives and recounts, using their whole class text, Queen Victoria's

	Bathing Machine inspiration. Through narratives, children will innovate a new invention for Queen Victoria and will use a variety of language devices to entertain the reader. There will be a focus on coherence, tense and detail through using a range of conjunctions to extend their sentences. Children will also use real-life events to write formal letters and recounts. They will learn the organisational features of these and will adapt their vocabulary to match the purpose for writing. Finally, children will be introduced to instructional writing. They will use their own experiences as well as Royal traditions to create their own set of instructions. They will learn how to organise instructions as well as the language needed, for example imperative verbs and adverbs. Children will also be taught how to add flare and personality to their writing through rhetorical questions and including their own opinions.
Maths	This term, Year 2 will continue their learning of addition and subtraction. They will add and subtract using concrete objects, pictorially and mentally. Some of the concrete objects we will be using will include Rekenerek, base ten and tens frames. The children will learn how to add using different methods such as the column method and number line. They will add two-digit numbers and ones, two-digit numbers and tens and two, two-digit numbers. The children will develop their understanding of how two numbers can be added in any order (commutative) and

	subtraction, of one number, cannot. They will recognise and use the inverse relationship between addition and subtraction. The children will use this and everything we have learnt to check calculations and solve missing number problems and word problems. Towards the end of the term, the children will also be exploring shape. They will identify and describe the properties of 2D and 3D shapes. They will develop their understanding of line of symmetry in a vertical line and use this to complete shapes. The children will compare and sort common 2D and 3D shapes and everyday objects. They will also make patterns with 2D and 3D shapes.
Geography	This half term, children will be learning about the UK. They will be exploring the four countries that make up the United Kingdom. Each lesson will focus on a country within the UK, exploring the human and physical features as well as the cities and capital city of each. Children will be learning important map skills to locate both countries and cities on the map of the United Kingdom. To conclude the half term, children will be identifying how paths, roads air and sea link different cities and countries. They will learn the importance of linking these cities due to transporting goods such as food, clothes, around the countries. They will retrieve their map skills by identifying transport links on a map and planning a route from Gatwick airport to another city in England, Scotland or Wales.

Science	This half term, children will continue their Habitats project in science, learning what a habitat provides for the plants and animals that live there, and that habitats contain both living and non-living things. They will use spotting sheets to identify plants and animals by carefully observing their physical characteristics. They will research how a woodland habitat provides the things necessary for the survival of the animals that live there. Pupil's will learn about food chains and construct their own. They will investigate the different ways prey animals avoid being eaten and investigate animal camouflage. They will also look at the different methods plants use to avoid being eaten, and group them according to how they defend themselves. Children will then use the skills they have learned in the project to investigate the living things, food chains and adaptations in a mystery habitat. Children will then revisit human survival and the necessities to keep our bodies healthy with a balanced diet and good hygiene. Children will learn what germs, bacteria and viruses are and learn how germs spread with links to our enquiry questions through discussing such events as The Great Plague, which killed many people.
DT	By the end of this half term, the children will create a chassis in the form of a car or truck. In order to do this, the children will explore different toy vehicles, primarily focusing on the wheels and how they are fixed to the

	frame. They will then learn how to create their own axle and wheel, whilst also learning the importance of the axle rotating freely in order for the toy to move. Once they have developed their knowledge on axles, they will then begin to design their own product for a particular purpose for example, to carry a load, deliver post, transport children to school or a racing car. They will then make their product and ensure the finishing touches are appealing for the user. Children will evaluate their product; they will test their product to determine whether it is fit for purpose.
Music	This half term, children will consolidate their previous learning when playing a recorder. They will continue to learn how to keep the pulse when playing the recorder, playing in time and in tune as well as developing their performance skills. Children will also learn the names of the notes in their instrumental part from memory or when written down.
Computing	During this term, students will explore digital photography. Children will learn the different devices that can be used to take photographs and will gain experience capturing, editing and improving photos. They will also use their knowledge recognise if an image is real or not.
PSHE	This term Year 2 will be looking at 'What is bullying?' and continuing the theme of relationships. They will understand how words and actions can affect how people feel. The children will develop their understanding that name-calling, hurtful teasing and excluding others in unacceptable. They will learn how

	to respond to bullying and how to seek help. The children will also be exploring our school value 'Respect'. They will reflect on what this is, who in our lives shows respect, and how we can show respect towards others
RE	At the beginning of this half term, the children will look at responding to suffering. They will look at different religions including Humanism, Christianity and Islam. They will learn how people from different religions can make things and people better. Towards the end of the term, the children will be looking at sharing and generosity. They will begin to understand why Christian's give gifts and celebrate Christmas.
PE	Within every P.E unit, all pupils develop their physical, social, emotional and thinking skills. **Fitness** This half term, children will participant in a range of fitness activities. Children will develop agility, co-ordination, speed, balance, stamina and have the opportunity to work with their peers and independently. Working with their peers will allow the children work on their social skills of taking turns as well as supporting and encouraging one another. Children will demonstrate our school value, determination, whilst having to work and be active for longer periods of time. Throughout the fitness unit, children will have the opportunity to identify their strengths and areas for improvement and will challenge

	themselves to work on this. **<u>Dance</u>** Also, this half term, pupils will participate in dance lessons. The children will explore space and learn how their body can be moved to express a mood, character, feeling or idea. They will explore a range of travelling techniques to create flow within their dance routines. The children will also use counts of 8 to allow them to keep in time with the music when they are dancing. Through their dances, children will explore shapes, directions, speed and travel. Within the unit, children will work independently and with a partner. This will allow them to develop their social skills of working respectfully with others and sharing ideas. They will also have the opportunity to observe and offer feedback using key terminology that they have learnt within their lessons.

Knowledge Organiser

Science

HUMAN SURVIVAL

Regular exercise keeps our bodies strong and healthy. It also **improves our mood. We should exercise for one hour every day.** There are four main types of exercise:

Key Vocabulary	Definition
Healthy	In a good physical condition
Hygiene	A process to maintain good health through cleanliness.
Germs	Tiny organisms that cause disease.
Bacteria	A type of germ that can cause disease or be helpful.
Nutrients	Provides nourishment essential for life and growth.
Vitamins and minerals	Nutrients found in food that help body grow and be healthy.
Virus	A type of germ that is infectious.
Calcium	Helps bones and teeth grow strong.
Protein	Helps muscles develop and repair.
Carbohydrates	Provide the body with energy.
Fat	Essential for our bodies in moderation.
Predict	Using knowledge to guess what might happen.

Aerobic exercises like running make the heart beat faster to keep it healthy for pumping blood around the body.

Strengthening exercises like push-ups make our bones and muscles stronger and helps our balance.

Stretching exercises like the cobra stretch make our bodies more flexible, to help prevent sprains and injuries.

Balancing exercises like gymnastics improve our balance and coordination. This makes us less likely to fall and improves our sporting performance.

Bodily hygiene is the way we **keep our bodies clean and get rid of germs. Germs** are tiny **living things**, such as bacteria, that can **cause illness** in humans. There are germs on most surfaces we touch, so keeping ourselves clean helps us stay healthy.

Wash your hands with soap and running water frequently.

Wash your hair with shampoo at least once or twice a week.

Brush your teeth twice a day.

Trim your fingernails and toenails every week and clean them every day.

Wipe your bottom and wash your hands after using the toilet.

Wear clean clothes. Change your underwear and socks every day.

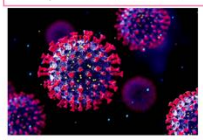
Have a bath or shower at least twice a week and also after playing sport or getting dirty.

Cough and sneeze into a tissue before throwing it in the bin and then washing your hands.

Germs can spread onto our hands and surfaces we touch. Sneezing, coughing, using the toilet, handling pets and dirt from playing outside can all spread germs. Washing with soap and water removes germs.

Types of germs:

Bacteria



Viruses

Habitats

What is a habitat?

A habitat is a place where plants and animals live. There are many different habitats on Earth, including:


forest


polar


desert


ocean


mountain


rainforest

Every habitat provides the things that plants and animals need to survive:

- **food** to provide nutrients for energy and growth
- **water** for plants to make food and stand upright and for animals to stay alive
- **shelter** for protection from weather and predators
- **space** to grow, feed and have offspring

Living and non-living things

Habitats contain living things, such as plants and animals, and non-living things, such as dead plants and animals, rocks and water. Living things can be identified because they carry out the seven life processes:

- moving
- breathing
- using their senses
- feeding
- getting rid of waste
- producing offspring
- growing

Identifying plants and animals

Many different plants and animals live in a habitat. Unknown plants and animals can be identified using spotting sheets. Observations of their physical features and behaviour can be compared with pictures and descriptions of plants and animals on the spotting sheet to find a match.

Woodland habitat

Woodland habitats are green, damp and shady. They contain living things, such as oak trees and squirrels, and non-living things, such as rocks and streams. Woodland habitats provide everything needed for its living things to survive and grow.

Food chains

A food chain shows how energy from food is transferred from plants to animals in a habitat. The arrow between members of a food chain means 'is eaten by'. Food chains start with a plant because plants make their own food using sunlight. Plants are eaten by animals, some of which are eaten by other animals. Predators are animals that eat other animals. Prey are animals that are eaten.


grass (producer)

is eaten by


water vole (herbivore)

is eaten by


stoat (carnivore)

In this food chain, the grass is a producer because it makes its own food from sunlight. It is eaten by the water vole, a herbivore, which is eaten by the stoat, a carnivore. The stoat is the predator, and the water vole is its prey.

Animal adaptations

Prey animals use different ways to avoid being eaten by predators.

Speed

Some prey, such as the springbok, use speed to outrun predators.

Weapons

Some prey, such as the porcupine, use body parts, such as sharp quills, to hurt their predators.

Warning colouration

Some prey use bright colours to warn predators to stay away.

Shields

Some prey have hard coverings for protection.

Mimicry

Some prey look like other, more dangerous animals.

Camouflage

Some prey blend into their surroundings so that predators will not see them.

Plant adaptations

Plants also have adaptations that protect them from being eaten by animals.

Spines

Some plants grow sharp spines to hurt predators.

Thorns

Woody thorns can scratch and pierce the skin of predators.

Hairs

Tiny hairs on the stems and leaves of some plants stop insects from crawling on them.

Prickly leaves

Sharp prickles can put animals off eating the leaves.

Stings

Painful stings can stop animals from eating some plants.

Chemicals

Some plants produce chemicals that are poisonous to animals.

Camouflage

Some plants are camouflaged so that they do not look like food.

Sheltering animals

Some plants provide a home to other animals that provides them with protection.

Glossary

camouflage	The ability to hide or blend in with the surrounding habitat.
identify	To recognise something and say what that thing is.
mimicry	When a living thing copies the appearance or behaviour of another animal, plant or object.
nutrient	A substance that plants and animals need to grow, live and stay healthy.
offspring	The young of an animal or plant.
quill	A long, sharp spine found on some animals, such as porcupines.

Maths

Maths Knowledge Organiser – Addition & Subtraction

Topic Coverage

Addition & Subtraction

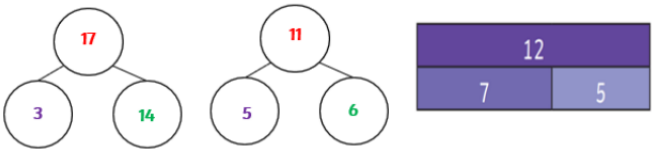
- Add and subtract using concrete objects, pictorially and mentally, including 2 digit numbers and ones, a two digit number and tens, two two digits numbers.
- Recognise and use the inverse relationship between addition and subtraction.
- Solve problems with addition and subtraction (with concrete objects, pictorially).

Key Vocabulary

Add Plus	To bring 2 or more numbers together to make a new total.
Sum	The calculation/number sentence of 2 or more numbers.
Solve	To find a solution (to work out something)
Altogether Total	The answer of adding numbers.
Subtract Minus Take away Difference between	Finding the difference between numbers. (What is left)
Inverse operation	The opposite operation (inverse of + is – and inverse of – is +).
Column addition	Writing one number below another and then adding one column at a time.
Column subtraction	Writing one number below another and then subtracting one column at a time.
Number facts	Simple calculations with 2 numbers (number bonds/fact families)
Commutative	Solving a number sentence in any order (only with addition e.g. 3+7 = 10 and 7+3=10).

Recognise and use the inverse relationship between addition and subtraction.

Inverse operation helps you to check you answer. It is the opposite operation.
For example:
Inverse for subtraction (-) is addition (+)
Inverse for addition (+) is subtraction (-)



3 + 14 = 17
14 + 3 = 17
17 – 14 = 3
17 – 3 = 14

5 + 6 = 11
6 + 5 = 11
11 – 6 = 5
11 – 5 = 6

7 + 5 = 12
5 + 7 = 12
12 – 5 = 7
12 – 7 = 3

Important vocabulary to remember

Commutative Law

Addition can be solved in **ANY** order. You are able to swap the numbers around.

Examples:

5 + 9 = 14
9 + 5 = 14

7 + 8 = 15
8 + 7 = 15

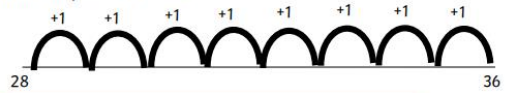
2 + 7 = 9
7 + 2 = 9

9 + 1 = 10
1 + 9 = 10

4 + 3 = 7
3 + 4 = 7

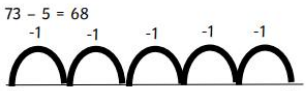
Add and subtract using concrete objects, pictorially and mentally, including 2 digit numbers and ones, a two digit number and tens, two two digits numbers.

2 digit numbers +/- 1 digit number
When subtracting or adding 2 digit and 1 digit numbers it is useful to draw your own number like.
For example: 28 + 8 = 36



First, write the addend on the left (28). Then make small jumps forwards adding one each time until you have added the correct amount (8). Fill in the numbers until you get the total (36).

73 – 5 = 68



First, write the minuend on the right (73). Then make small jumps backwards subtracting one each time until you have subtracted the correct amount (5). Fill in the numbers until you find the difference (68).

2 digit number +/- 2 digit numbers
When adding or subtracting two 2 digit numbers it is useful to use the column method.

Not crossing ten

	2	3
+	1	2
	4	5

	2	5
-	1	3
	3	8

Always +/1 ones first and write number underneath ones column. Then +/- tens and write under tens column.

Crossing ten

	4	9
+	2	6
	7	5
	1	

Always + ones first. If the value is 10 or bigger then you must regroup. (moving the ten into tens column and leave ones in ones column. Then add tens column (remember to add the ten you regrouped).

	3	1
	4	1
-	2	6
	1	5

Always - ones first. If the number on top is smaller than the number on the bottom then you much exchange a ten to make it bigger. Then continue the column process.

Solve problems with addition and subtraction (with concrete objects, pictorially).

Sam took 25 minutes to do his homework. It took Jacob 22 minutes. How long did they take altogether?

25 + 22 = 47

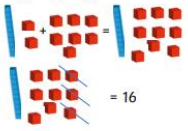
	T	O
+	2	5
	2	2
	7	7

A florist has 72 roses. She sells 40 in one day.
How many are left?

72 - 40 = 32

John buys 12 pencils one week and 7 the following week. He gives 3 pencils to his friend.
How many pencils does he have left?

12 + 7 = 19
19 – 3 = 16



Maths Knowledge Organiser – Geometry: Properties of Shape

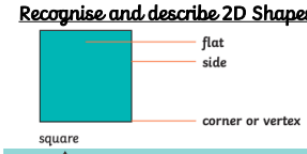
Topic Coverage

Shape

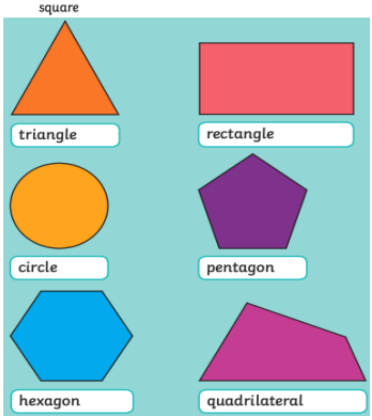
- Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.
- Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.
- Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.]
- Compare and sort common 2-D and 3-D shapes and everyday objects.

Key Vocabulary	Definition
Two dimensional (2D)	Any shape that is 'flat' or has 2 dimensions.
Three dimensional (3D)	Any shape that is 'solid' or has thickness or depth.
Flat	A level surface.
Solid	An object which is firm and stable.
Corners	Another word for vertices/ where 3 edges meet.
Apex	The highest point of a shape.
Vertex	Where two or more edges of a shape meet.
Vertices	More than one corner.
Side	Where two vertices on a shape meet.
Edge	Where two faces on a shape meet..
Face	The largest surface area of a shape.
Curved	A rounded surface which is not flat.
Straight	Something that does not have a wave or a curve
Lines of symmetry	A central dividing line (a mirror line) to show that both sides of the shape is exactly the same.
Pattern	A design in which the same shape/lines are repeated

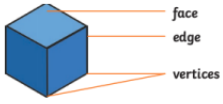
Recognise and describe 2D Shapes



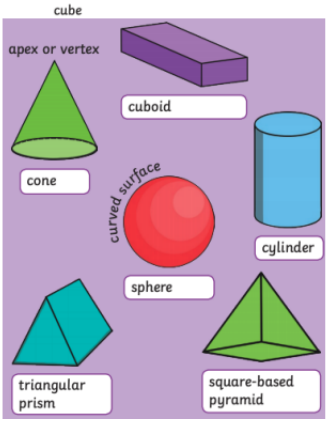
square



Recognise and describe 3D Shapes

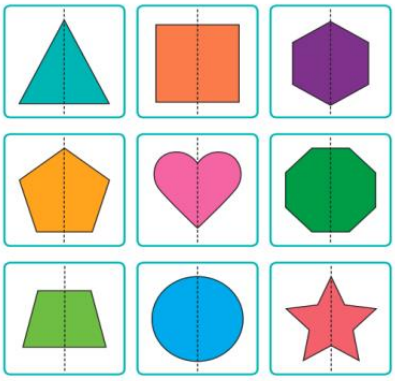


cube



Lines of Symmetry

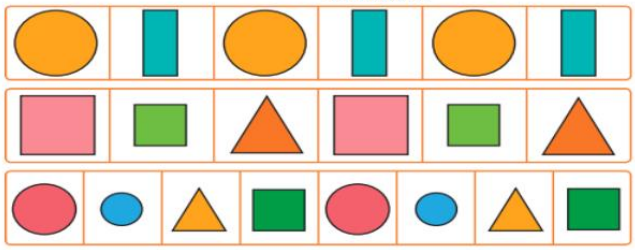
These 2D shapes have a line symmetry (a mirror line) because it is the same on both sides.



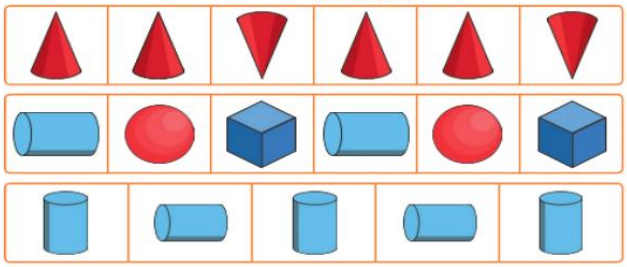
These 2D shapes are not symmetrical because it is not the same on both sides.

Repeating Shape Patterns

2D Patterns



3D Patterns



Important information

- Not all same-sided shapes look the same, such as irregular 2D shapes.
- When making patterns, shapes which are placed in different orientations (positions) stay the same. For example, squares do not become diamonds when placed sideways.

Home Learning and Useful Links:

Home Learning

Research Captain James Cook in preparation for a non-chronological report at school.
Create a fact file on Woni Spotts
Creating a poster on Weston-Super-Mare and what people can do there (written in the past).

Useful links

https://www.bbc.co.uk/history/historic_figures/cook_captain_james.shtml

https://www.ducksters.com/biography/explorers/captain_james_cook.php

https://www.google.co.uk/intl/en_uk/earth/

https://www.ncetm.org.uk/in-the-classroom/national-curriculum-resource-tool/?topic=1563&year=1450

https://www.bbc.co.uk/bitesize/topics/zpxnyrd/articles/zkp2jsg

https://www.bbc.co.uk/bitesize/topics/zsrfvwx/articles/zd9w8hv

https://www.bbc.co.uk/bitesize/topics/zsrfvwx/articles/z62txbk

https://www.youtube.com/watch?v=9Dzuu9DVv5M

https://www.youtube.com/watch?v=5qJAEudN-Yk

https://www.natgeokids.com/uk/