Year 4 Curriculum Overview

Term 1.2

Birchfield PRIMARY SCHOOL

Teaching Team:

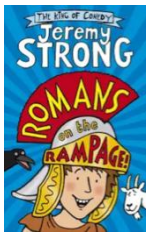
Miss Payne, Miss Rahman and Miss Hussain

SLT: Mr Mazhar

PE Days: Monday

Homework: Wednesday & Friday

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

Significant People	Anders Celsius (Celsius temperature scale) Daniel Fahrenheit (Fahrenheit temperature scale/ invention of the thermometer)
Class Texts	Romans on the Rampage 
Reading	This half term the children will continue their learning on giving the meaning of unknown words, retrieval and inference. The children will learn how to effectively skim and scan a text, ensuring they read the text carefully to locate key details/information to support them with their responses. Following this, children will learn how to justify their point using relevant information from the text and applying the point and evidence method to construct their responses.
Writing	This half term, children will continue to be exposed to different genres and apply the appropriate skills, whilst having an awareness of the purpose and audience. This half term children will be learning how to write narratives and biographies. They will be able to identify the features of the text and use these features in their own writing. This will be related to our enquiry question and book 'Romans on the Rampage'.
Maths	In Maths we will be starting with addition and subtraction, where the children will learn to add and subtract four-digit numbers with and without exchanging, use rounding and use inverse operations. Maths this half term will also be focusing on Measurement. We will be learning about what area is, strategies of counting squares inside a shape, how to make rectilinear shapes and how to compare areas of rectilinear shapes. Furthermore, we will be focusing on Multiplication and Division. We will be recalling multiplication and division facts up to 12x12; using this knowledge we will be able to recognise factor pairs and commutativity in mental calculations. We will be using place value and known facts to multiply and divide 3 - digit numbers.

History	During the topic of Romans, pupils will explore a range of secondary sources, including photographs, videos and non-fiction texts, to learn about the Celts and life in Britain before the Romans arrived. They will identify who the Celts were and will investigate Celtic settlements, hill forts, roundhouses, jobs and religion. Pupils will learn who the Romans were, where they came from and why they invaded Britain. They will discover the different invasion attempts led by Julius Caesar and will explain the impact these invasions had on Britain. Pupils will learn about Emperor Hadrian and the purpose of Hadrian's Wall, including why it was built and its impact on Britain. They will develop their understanding of the Roman army by exploring its organisation, weapons, armour and equipment, and will explain why it was so successful. They will also learn about the Roman withdrawal from Britain and the fall of the Roman Empire, exploring what happened after the Romans left and the lasting legacy they left behind, including roads, towns, religion, buildings, currency and calendars. Through a range of activities, pupils will present, report, research and communicate their historical knowledge in creative ways.
Science	Our topics for this half term are food and the digestive system and sound. During the first topic children will learn about the digestive system and how it is responsible for digesting food and absorbing nutrients and water. The children will know that the mouth, oesophagus, small intestine and large intestine are organs of the digestive system. We will also be looking at solids, liquids and gases. They will identify the properties of each state of matter, compare how materials behave and investigate how materials can change state through melting, freezing, evaporation and condensation. Pupils will also explore the water cycle and learn how heating and cooling affect different materials.
DT	This half term the children will be focusing on mechanical systems (pneumatics). The children will understand and use mechanical systems in their products. The children will use this knowledge to make a toy with moving parts using pneumatics.
Music	During their music lessons, the children will be learning how to play the Ukelele. They will get the chance to learn the various parts of a Ukelele, and learning the different notes and playing different tunes.
Computing	During children's computing lessons, the children will focus on the topic 'Audio Production'. In this topic we will identify the input device

	(microphone) and output devices (speaker or headphones) required to work with sound digitally.
PSHE	In PSHE we will be focusing on respecting the rights of others. Children will be looking at relationships and developing an understanding of respect. They will focus on rights and responsibilities, positive behaviour, and mutual respect. We will also be looking at being safe and respectful online.
RE	Unit 3 - Being Reflective and Self-Critical Children will explore how to be reflective of themselves and their behaviour whilst being self-critical. Unit 4 - Being Curious and Valuing Knowledge Children will explore the importance of being curious and valuing knowledge that they are presented with from others and themselves.
PE	We will be looking at Gymnastics in PE, where the children will learn to move in canon and unison.

Knowledge organisers:

Year 4: Multiplication and Division

Key Vocabulary

skip counting
number patterns
multiples
recall
multiplication
division
timestables
doubles
halves
commutative law

Counting

I can investigate number patterns of 3, 4, 6, 7, 8 and 9. ☐

3	6	9	12	15
4	8	12	16	20
6	12	18	24	30
7	14	21	28	35
8	16	24	32	40
9	18	27	36	45

I can recall multiplication facts up to 10 x 10. ☐

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

I can solve multiplication and division problems using doubling strategies. ☐

Double = x 2



Double +1 = x 3



Double and double = x 4



Double, double and double = x 8



I can solve multiplication and division problems using halving strategies. ☐

Half = ÷ 2



Half and half = ÷ 4



Half, half and half = ÷ 8



I can solve multiplication and division problems using commutative law strategy. ☐





4 x 2 = 8 = 2 x 4

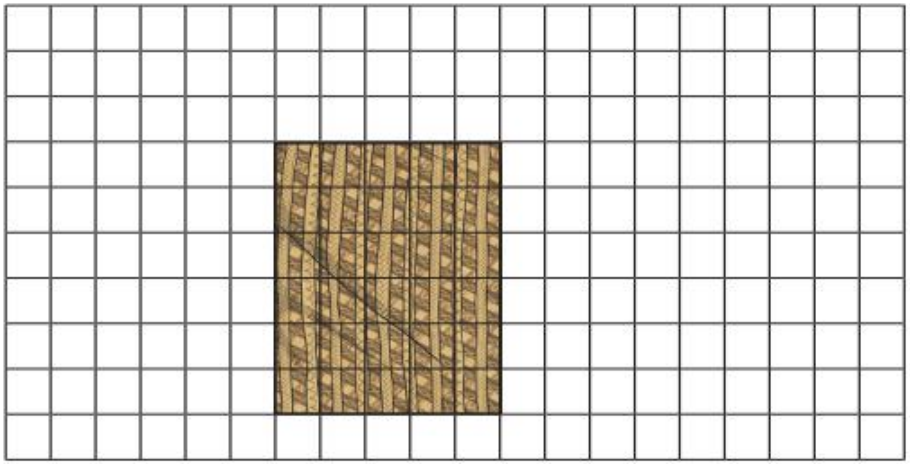


Year 4: Units of Measurement

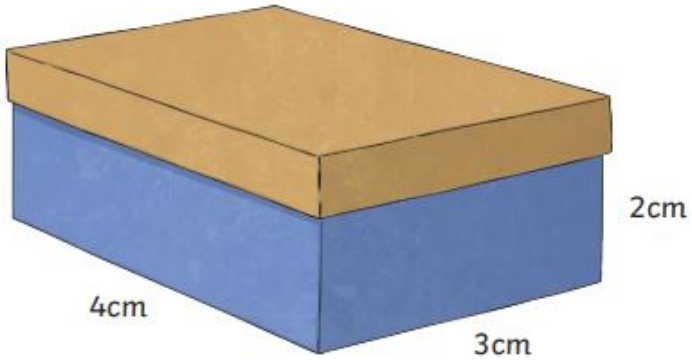
Key Vocabulary
60 seconds
60 minutes
Half past
Quarter to
Quarter past
Twenty to
Twenty past
Ten past
Ten to
Twenty-five past
Twenty-five to
Five past
Five to
Midday
Midnight
Noon
Analogue
Digital

Units of Measurement

☐ I can compare objects using familiar metric units of area and volume.



5cm x 6cm = 30cm^2



4cm x 2cm x 3cm = 24cm^3

Food and the Digestive System

Producers and consumers

A producer is a living thing that makes its own food through the process of photosynthesis. Almost all producers are plants. A consumer is a living thing that feeds on other living things. All consumers fit into one of three groups depending on what they eat: herbivores eat plant parts, carnivores eat meat from other animals and omnivores eat both meat and plant parts. Animals that are hunted and eaten by other animals are called prey. Animals that hunt other animals for food are called predators.

Ecosystems



An ecosystem is a community of living organisms and their environments that interact with each other, such as a rainforest, desert rainforest or ocean. Ecosystems have biotic, or living, features including plants, animals and microorganisms. They also have abiotic, or non-living, features, such as sunlight, water, air, soil and temperature.



desert

Interdependence



All living things depend on the biotic and abiotic features of their ecosystems to survive. This is called interdependence.

For example, the hummingbird depends on abiotic features, such as water to drink and oxygen to breathe. It also depends on biotic features, including the hibiscus flower for nutrition and trees for shelter.

Balance and change



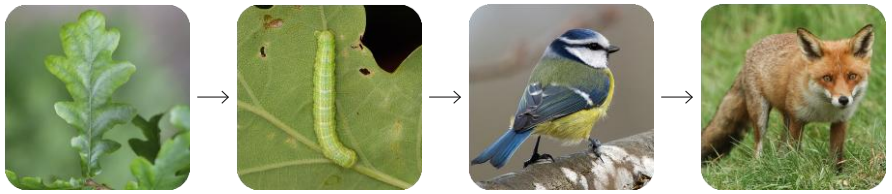
All the biotic and abiotic features of an ecosystem are finely balanced. Any change to one part will affect all the other parts. For example, a drought, or water shortage, can affect a plant's ability to grow. Animals that depend on that plant for food begin to starve and die unless they can adapt or move to a new ecosystem to survive. Human activity, such as deforestation and pollution, and natural events such as disease, floods, wildfires and drought, can damage ecosystems.

Food chains

Plants and animals need energy from food to survive. A food chain is a diagram that shows how food energy is transferred from one living thing to another.

Food chains start with a producer that makes its own food. Primary consumers are herbivores that eat the producers. Secondary consumers can be carnivores or omnivores that feed on primary consumers and producers. Tertiary consumers at the end of the food chain mainly feed on the secondary and primary consumers. They are called apex predators.

drought

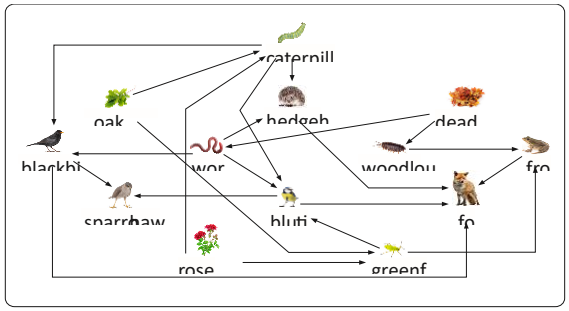


a food chain

Food webs

All the different food chains in a specific ecosystem can be linked together to make a food web.

Food webs show how different plants and animals in an ecosystem are connected through their interdependence.



a food

Digestion

Digestion is the process where food is broken down into small particles that can be absorbed by the body.

The digestive organs all work together to digest food.

Mouth

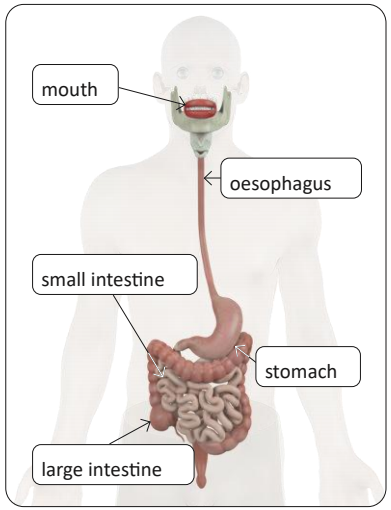
Digestion starts inside the mouth. The tongue rolls the food around and the teeth break it into smaller pieces by biting and chewing. Digestive enzymes in saliva break down the food further so the food can be swallowed.

Oesophagus

The food travels through the pharynx, or throat, then into the oesophagus. Muscles squeeze the food along the oesophagus and into the stomach.

Stomach

Inside the stomach, the food is mixed with digestive enzymes and digestive acid to chemically break it down into tiny particles. Muscles also squeeze and churn the food. **Small intestine**



digestive organs

Different states, same amazing particles!

Year 4 Science
Solids, Liquids and Gases
Knowledge Organiser

Explore
Compare
Observe
Explain

Key Vocabulary

Word	Meaning
Solid	A material that keeps its own shape.
Liquid	A material that can flow and takes the shape of its container.
Gas	A material that spreads out to fill all the available space.
Particle	Tiny pieces that make up all materials.
Melt	When a solid changes into a liquid.
Freeze	When a liquid changes into a solid.
Evaporation	When a liquid changes into a gas.
Condensation	When a gas changes into a liquid.
Temperature	How hot or cold something is.
Water vapour	Water in its gas form.

What are Solids, Liquids and Gases?

Solids



- Keep their shape
- Cannot flow
- Particles are packed closely together
- Example: rock, wood, ice

Liquids



- Take the shape of the container
- Can flow
- Particles are close together but can move past each other
- Example: water, milk, juice

Gases



- Spread out and fill all available space
- Can flow easily
- Particles are far apart and move freely
- Example: air, oxygen, steam

The Particle Model

Solid



Liquid



Gas

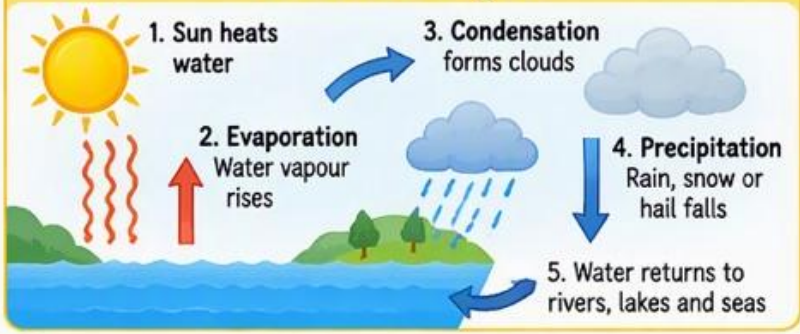


Changing State

Change	What Happens?	Example
Melting	Solid → Liquid	Ice melting into water
Freezing	Liquid → Solid	Water freezing into ice
Evaporation	Liquid → Gas	A puddle drying up
Condensation	Gas → Liquid	Water droplets on a cold window

together and vibrate in place.	together but can move around each other.	and spread out.

The Water Cycle



Key Facts to Remember

- Everything is made of particles.
- Heating usually causes particles to move faster.
- Cooling causes particles to slow down.
- Solids keep their shape because their particles are tightly packed.
- Liquids flow because their particles can move around each other.
- Gases spread out because their particles are far apart.
- Melting, freezing, evaporation and condensation are reversible changes.

Working Scientifically

I can:

- Identify solids, liquids and gases.
- Compare their properties.
- Observe changes of state.
- Explain melting, freezing, evaporation and condensation.
- Use scientific vocabulary accurately.



Be curious
Ask questions
Make careful observations
Find the answers!

Quick Quiz

1. What state of matter is air? _____
2. What happens during evaporation? _____
3. What is the opposite of melting? _____
4. Why do gases fill a container? _____
5. What is water vapour? _____



Small particles. Big changes. A world of science!

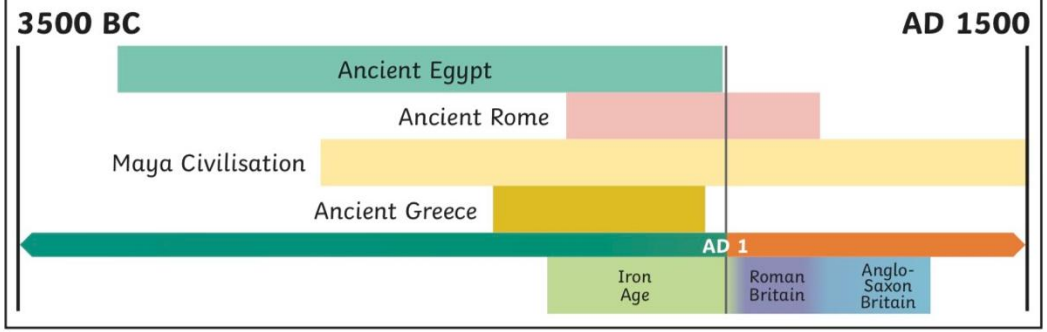




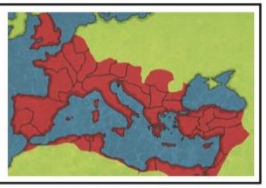
Key Vocabulary

Celts	People living in Britain in tribes, including the Iceni, Brigantes and Catuvellauni.
citizen	A person with all the rights and protections of a nation or land. In the Roman Empire, only citizens were able to vote.
conquest	Taking control of a place by force, often with an army.
emperor	The ruler of an empire.
empire	A group of countries controlled by one ruler (emperor or empress) or government.
legion	A large section of the Roman army, made up of around 5000 soldiers.
rebellion	An uprising or revolt by people who want to challenge what they believe is unfair treatment by rulers.
Roman Empire	The name used for the land that was controlled by the Romans, including large parts of Europe plus parts of North Africa and West Asia.
tribe	A group of people who share the same culture and values.

Timeline

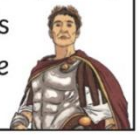


The first Romans lived in Italy nearly 3000 years ago. They founded the city of Rome in 753 BC and, over the centuries, conquered many lands to create a huge empire.



Julius Caesar Invades in 55 BC and 54 BC

The Roman General Julius Caesar made two attempts to conquer Britain. He wanted to add the rich land to the Roman Empire and punish the Celts for helping his enemies. His legions weren't able to overcome the Celts in 55 BC or 54 BC, but some leaders did pay tributes (a tax) so the Romans would leave. This meant the Celts could continue to live as they were.



Emperor Claudius Conquers Britain in AD 43

In AD 43, Emperor Claudius launched a third attack on Britain. He sent a powerful and well-organised army of around 40,000 men (that landed in southern England) to conquer the Celtic tribes. This time, much of Britain (or Britannia as the Romans called it) did become another province of Rome.

Boudicca Rebels in AD 60/61

The Romans seized the land and wealth of the Iceni tribe after King Prasutagus died. Queen Boudicca objected and she led a rebellion against the Romans. At first, her army was very successful but in the Battle of Watling Street, the Roman army finally defeated Boudicca and the Celts. Many people were killed in the rebellion.



Hadrian's Wall in AD 122

In AD 122, Emperor Hadrian gave an order to build a wall in the north of the country. Roman legions had tried to conquer Caledonia (Scotland), but the Picts would not give up their lands and they also raided land that the Romans controlled. Hadrian's Wall took around six years to build and it was 73 miles long. Around 15,000 troops lived at Hadrian's Wall so they could defend this northern border of the Roman Empire.



Roman Roads and Towns

The Roman army are famous for building long, straight roads. Special engineers planned these roads and they criss-crossed the whole Roman Empire. They boosted trade, communication with the Emperor and helped the legions to keep control of all the different provinces.



The Romans built new towns all over Britain. Each one had a marketplace, town hall, shops, temples and homes; larger towns had an amphitheatre. Bath houses were elaborately designed and were popular places to relax and meet friends.



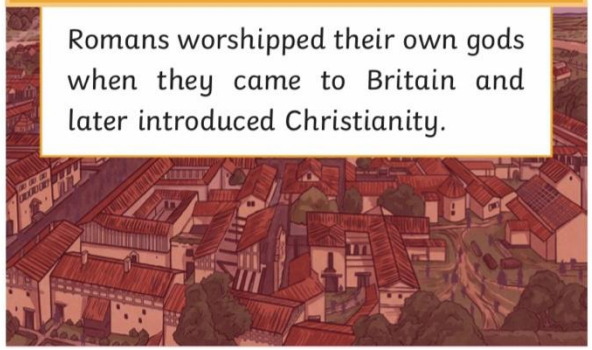
Roman Villas

Wealthy Romans and some Celts built large homes in the countryside called villas. The land attached to these homes was used for farming as agriculture was an important business for the Romans. Countryside villa complexes included a main house, bath house, workshops and gardens.



Did you know...?

Romans worshipped their own gods when they came to Britain and later introduced Christianity.



Home Learning and Useful Links:

Homework Books

At the end of each week, your child will return home with their homework books in both English and Maths. They will be given two pages to complete based on the learning they have completed that week or the learning they will be doing the following week.
Please encourage your child to complete these to the best of their ability and return to school by Wednesday for them to be marked and any issues to be addressed.

Spellings

These are words your child will be using daily and will need to be familiar with. We will also be sending home words with your children that are key in Year 3 and 4.
Please encourage your child to practise their spellings at the weekend and across the course of the week, as they will be tested on these at the end of each week.

Times tables

Each week, your child will receive a sheet of times tables to help prepare them for the Y4 Multiplication Check.

Please encourage your child to practise these times tables ready for a small test at the end of the following week. Your child should now be using Times Table Rock Stars and taking part in competitions between each other and the other Year 4 classes. Please see your child's class teacher for log in details.

Your child should be to completing at least 5 minutes of times table practice daily.

Please use the website below

Times Table Multiplication Check Website:

https://www.timestables.co.uk/multiplication-tables-check/

https://ttrockstars.com/

Reading:

At the end of each week, your child will also come home with a library book.

Please encourage your child to read this book regularly and listen to them read when you can.

Reading:

Oxford Owl for School and Home
Reading and comprehension - English - Learning with BBC Bitesize - BBC Bitesize

Books for Year 4 children aged 8-9 | School Reading List

Phonics:

Letters and Sounds, English Games for 5-7 Years - Topmarks

PhonicsPlay

Phase 2 Games – Letters and Sounds (letters-and-sounds.com)

Writing:

Year 4 English - BBC Bitesize

Writing in Year 4 (age 8–9) - Oxford Owl for Home

Spelling and Grammar, English Games for 7-11 Years - Topmarks

Maths:

Year 4 Maths Curriculum Toolkit | 8 & 9 Year Olds | Home Learning (thirdspacelearning.com)

Key Stage 2 Maths - Topmarks Search

https://www.timestables.co.uk/multiplication-tables-check/

Science:

Science KS2 / KS3: Classification of organisms - BBC Teach

Home | WowScience - Science games and activities for kids

Sound- https://www.bbc.co.uk/bitesize/topics/zgffr82

Computing:

Is my child safe online? Parent's questions answered | Barnardo's (barnardos.org.uk)

Parents and Carers - UK Safer Internet Centre

Parental Controls & Privacy Settings Guides | Internet Matters

PSHE:

Talk PANTS & Join Pantosaurus - The Underwear Rule | NSPCC

How to make an emergency 999 call – West Midlands Ambulance Service University NHS Foundation Trust (wmas.nhs.uk)

PE:

Nutrition Based Physical Activity Games - Action for Healthy Kids

Kids Active Learning & PE at Home – Think Active