Birchfield PRIMARY SCHOOL

Year 4 Curriculum Overview
Term 1.1

Teaching Team:

Class Teachers: Miss Rehman, Miss Hussain and Miss Payne

Teaching Assistant: Mrs Khatri

SLT: Mr Mazhar

PE: PE lessons are on **Monday.**

On these days, children must be wearing their P.E kits. This includes a white t-shirt, black tracksuit bottoms and trainers. No jewellery is to be worn on PE days; parents must remove this before bringing their child to school on these days.

Homework: **Tuesday and Friday**

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

Enquiry Question	**How are volcanoes formed and earthquakes caused?**
Significant People	- Leonardo Da Vinci
Class Texts	Find out! Volcanoes Romans on the Rampage
Reading	During this half term, the children will be exploring both the class text Romans on the Rampage and the non-fiction text Find Out! Volcanoes. The children will begin by developing their vocabulary skills through exploring unfamiliar words and using strategies such as reading around the word and word substitution to determine their meaning in context. They will then move on to retrieval activities, identifying and recording key information from both fiction and non-fiction texts through a range of question types. Later in the half term, the children will develop their inference skills by using evidence from the text to infer characters' feelings and thoughts, explaining and justifying their answers with clues from the text. Throughout all reading lessons, children will continue to develop key test techniques, including reading and circling question words, underlining key information, skimming and scanning texts for evidence, and using sentence stems such as "I infer that... because..." to justify 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 purpose and audience. This half term children will be learning how to write descriptively. They will learn about the features of descriptive writing and include these features in their own writing. The children will also be learning how to write a biography. Their writing this half term will focus on our class text 'Song of the Dolphin Boy'.
Maths	This half term we will be focussing on place value, children will begin to recognise the of each digit in a four-digit number. They will be using number lines and place value grids to order and compare numbers beyond 1000. They will also be learning about negative numbers and begin to read Roman numerals up to 1000. The children will then move on to using formal and informal methods to add and subtract four- digit numbers. They will estimate and check their answers using inverse calculations.
Geography	In the Year 4 Autumn topic, children will learn about volcanoes and earthquakes—how they form, where they occur, and their impact on people and the environment. They will explore famous volcanoes, understand the features of eruptions, and investigate how tectonic plates cause earthquakes. Using maps and grid references, pupils will locate major earthquake sites and compare the effects of these natural disasters on human life and landscapes.

Science	Our topics for this half term are food and the digestive system. This term, children will learn about teeth and the digestive system. They will explore the types and functions of human teeth, compare animal teeth, and investigate tooth decay. They will also study how food travels through the body, identifying key organs and understanding the process of digestion through practical experiments and scientific diagrams.
Art	This half term the children will be focusing on the topic of painting. The children will be exploring artwork from the renaissance time period and taking inspiration from the artist Leonardo Da Vinci. They will explore tints and tones and how these can be used to ad detail to portrait paintings. The children will them compile their new learning to paint a portrait of a Roman soldier.
Music	During their music lessons, the children will be looking at EDM music. They will learn about the history and how to appraise this genre.
Computing	During children's computing lessons, the children will focus on the topic 'The Internet'. Children will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. They will learn that the World Wide Web is part of the internet and will be given opportunities to explore the World Wide Web for themselves in order to learn about who owns content and what they can access, add, and create. Finally, they will evaluate online content to decide how honest, accurate, or reliable it is, and understand the consequences of false information.
PSHE	Children will be looking at individuality, developing and understanding their own self-worth and will be looking at the importance of a positive mindset.
RE	Unit 1- Expressing Joy: Children will explore the ways different groups in society express joy and look at the reasons why they express joy. Unit 2 – Being Thankful - Children will explore the importance of being thankful and the ways in which different religions and cultures show thanks.
PE	Pupils will develop physical, social and emotional objectives. Pupils will develop key skills such as jumping, dodging, balancing, hopping and skipping whilst taking turns and challenging themselves. Pupils will be able to identify strengths and weaknesses in themselves and learn how to give constructive feedback and areas for development to their peers. They will learn how to explore how the body moves at different speeds as well as how to accelerate and decelerate.

Knowledge Organisers:

Number and Place Value — Knowledge Organiser

Key Vocabulary

- thousands
- hundreds
- tens
- ones
- zero
- place value
- greater than
- less than
- order
- round
- rounded to
- negative number
- partition
- digit
- Roman numeral

Counting

Counting in 6s

0	6	12	18	24	30	36	42	48	54	60

Counting in 7s

0	7	14	21	28	35	42	49	56	63	70

Counting in 9s

0	9	18	27	36	45	54	63	72	81	90

Counting in 25s

0	25	50	75	100	125	150	175	200	225	250

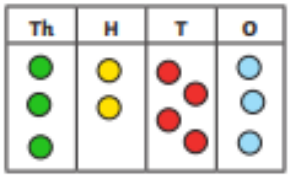
Counting in 1000s

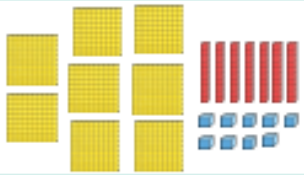
0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10 000

Compare and Order

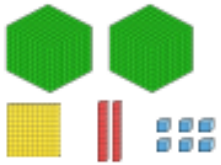


4324 > 3243
greater than





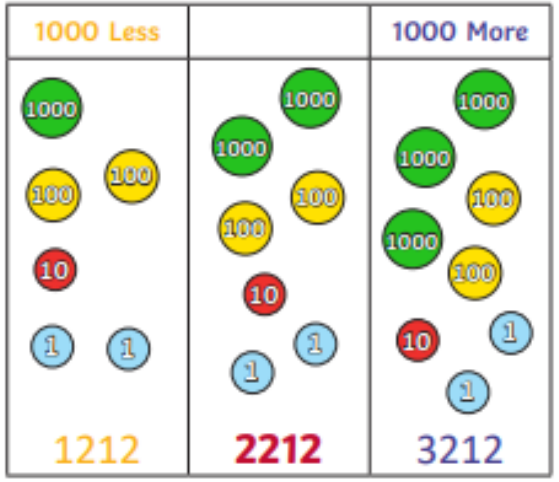
879 < 2126
less than



2497	2508	3012	3521	3530	4002

smallest — greatest

1000 More or 1000 Less



Addition and Subtraction — Knowledge Organiser

Key Vocabulary

- Add
- Total
- Plus
- Sum
- More
- Altogether
- Difference
- Subtract
- Less
- Minus
- Take away
- Mentally, Orally
- Column Addition
- Column Subtraction
- Exchange
- Estimate
- Inverse operation
- Solve problems
- Number facts

Addition and Subtraction Methods

Add 4-digit numbers

No exchange

```
  5162
+ 3427
------
  8589
```

Starting with the ones, add each column in turn.

One exchange

```
  5162
+ 3497
------
  8659
  1
```

Starting with the ones, add each column in turn. When adding
6 tens + 9 tens = 15 tens
= 1 hundred + 5 tens
Place 1 hundred under the hundreds answer and 5 tens in the answer.

Multiple exchanges

```
  5864
+ 3497
------
  9361
  1 1 1
```

Starting with the ones, add each column in turn. Exchange tens, hundreds and/ or thousands as required.

Subtract 4-digit numbers

No exchange

```
  5789
- 3421
------
  2368
```

Starting with the ones, subtract each column in turn.

One exchange

```
   6 1
  5749
- 3471
------
  2278
```

Starting with the ones, subtract each column in turn. When subtracting 4 tens -7 tens, exchange 1 hundred to make:
14 tens – 7 tens = 7 tens

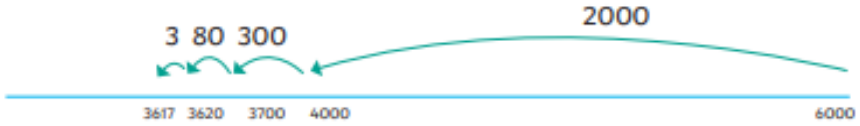
Multiple exchanges

```
  6131
  5742
- 3476
------
  2266
```

Starting with the ones, subtract each column in turn. Exchange tens, hundreds and/ or thousands as required.

Efficient subtraction

Calculate 6000 – 3617 = 2383



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



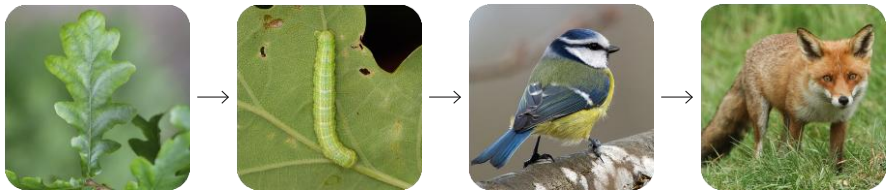
All the biotic and abiotic features of an ecosystem are finely balanced. Any change to one part will affect all the other parts. For example, a drought, or water shortage, can affect a plant's ability to grow. Animals that depend on that plant for food begin to starve and die unless they can adapt or 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

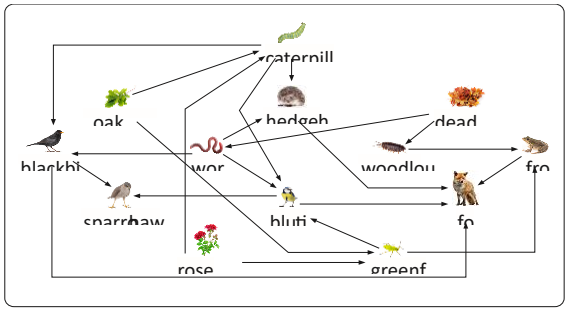


a food chain

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

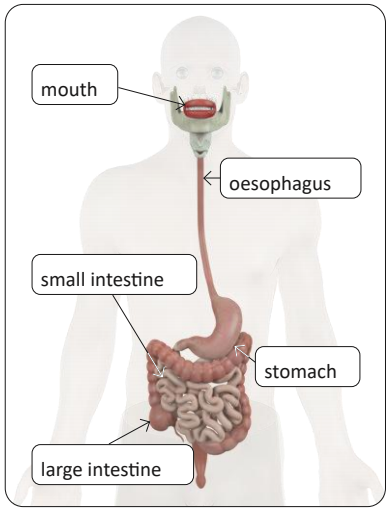
Digestion starts inside the mouth. The tongue rolls the food around and the teeth break it into smaller pieces by biting and chewing. Digestive enzymes in saliva break down the food further so the food can be swallowed.

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

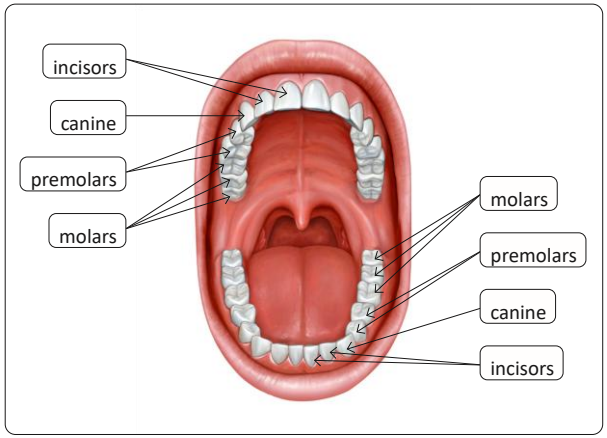
Inside the stomach, the food is mixed with digestive enzymes and digestive acid to chemically break it down into tiny particles. Muscles also squeeze and churn the food. **Small intestine**



digestive organs

Teeth

Human teeth begin to grow when a baby is around six months old and continue growing until a child has 20 teeth. These are called primary teeth. These begin to fall out at around six years old and 32 permanent teeth then grow. There are four types of teeth:



Carnivore, herbivore and omnivore teeth

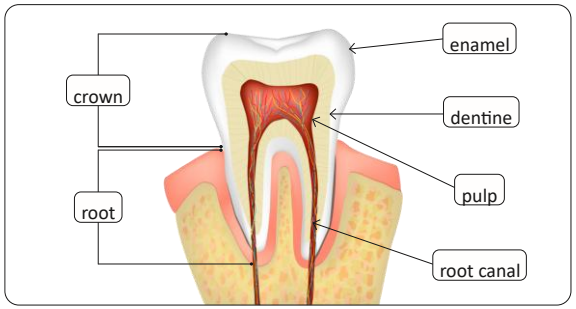
Animals have different types of teeth depending on the food they eat. Carnivores usually have large canines for ripping and tearing meat.

Herbivores usually have sharp incisors for cutting plant material and large flat

teeth: canines for tearing meat and large, flat molars for grinding plants.

Tooth structure

A tooth has a very hard, outer layer called enamel to protect against bacteria and hot and cold temperatures. Dentine under the enamel gives the tooth its structure and colour. Pulp in the middle of the tooth contains nerve endings and a blood supply which continues through a space in the root called the root canal. These nerves send pain messages from the tooth to the brain.



Oral hygiene

Oral hygiene is the practice of keeping the mouth and teeth clean to protect against the buildup of bacteria called plaque, which can lead to tooth decay and gum disease. To ensure good oral hygiene, it is important to:

- Avoid consuming too many sugary foods and drinks.
- Brush teeth twice a day with fluoride toothpaste.
- Visit the dentist at least once a year.

Glossary

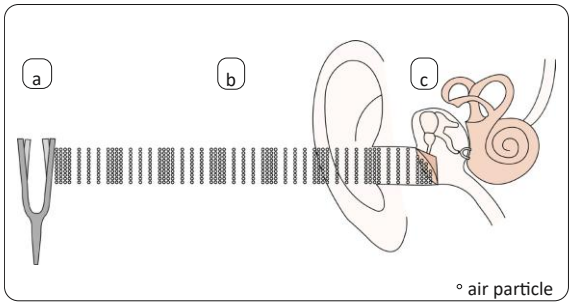
Bacteria	A type of microorganism, some of which can cause disease.
Fluoride	A chemical that can be added to toothpaste to prevent tooth decay.
Microorganism	A living thing that is too small to be seen without a microscope.

Sound

What is sound?

Sound is energy produced by vibrations from a sound source. Sound travels in waves through a medium, such as a solid, liquid or gas, to our ears. Most of the sound waves we hear travel through air, which is a gas. Where there is no medium for sound waves to travel through, such as in space, there is no sound.

How we hear sound



a. When energy is put into a sound source, it starts to vibrate, quickly moving back and forth repeatedly in a regular pattern.

b. These vibrations disturb the tiny particles of the medium that is close by, such as air, and they start to vibrate. They collide with the air particles next to them and pass the vibration energy along in sound waves.

c. When the sound waves enter the ear, they make the eardrum vibrate. These vibrations pass through small bones called ossicles and are turned into electrical signals in the spiral-shaped cochlea. These signals travel through the cochlear nerve to the brain and are interpreted as sounds.

Volume

The volume of a sound is how loud it is. It is measured in units called decibels (dB). Energy affects volume. The larger the force of energy put into the sound source, the louder the volume; the smaller the force, the quieter the volume. Distance also affects volume. The nearer the sound source, the louder the volume. The further away the sound source, the quieter the volume.

Pitch





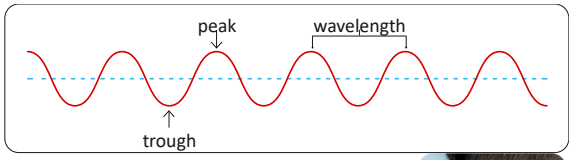
The pitch of a sound is how high or low it is. Pitch is measured in units called hertz (Hz). Humans can hear between 20 and 20,000 Hz but dogs can hear higher-pitched sounds. Fast vibrations produce high-pitched sounds, such as the sound of a whistle. Slow vibrations produce low-pitched sounds, such as the sound of a bass drum.

Representing sound waves

Sound waves can be represented by a wavy line in a sound wave diagram.

Volume is represented by the size of the peaks and troughs; large peaks and troughs represent a loud volume and small peaks and troughs represent a quiet volume.

Pitch is represented by the distance between each peak, called the wavelength. A long wavelength represents a low-pitched sound, and a short wavelength represents a high-pitched sound.

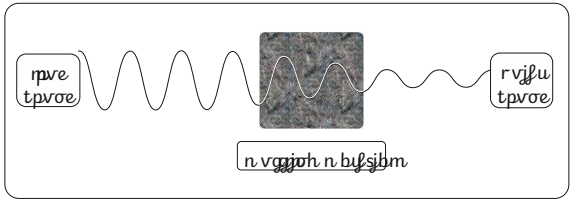


N vgggjoh tpvoe





Cfjoh fyqptfe up wfsz mpve ps dpoujovpvt tpvoet dbo ebn bhf jfbsjoh: Judbo brtp nbhe up jodsfbtfe tusftt- ujsfoftt boe jfbnj qspcmfn t: N bufsjbmt ui bun vggfs tpvoe bctpsc b nuipgtpvoe fofshz boe sfevdf ii f wpnnf pgtpvoe sfbdijoh pvs fbst: Fbsqnvht- fbs efgfoefst boe tpvoeqspppgjoh n bufsjbmt bnn n vggfs tpvoe:



Hmptttbsz

cochlea	The spiral-shaped part inside the inner ear that turns vibrations into electrical signals.
eardrum	A thin layer of tissue inside the ear through which vibrations pass.
medium	A material, such as a solid, liquid or gas, that transfers energy from one place to another.

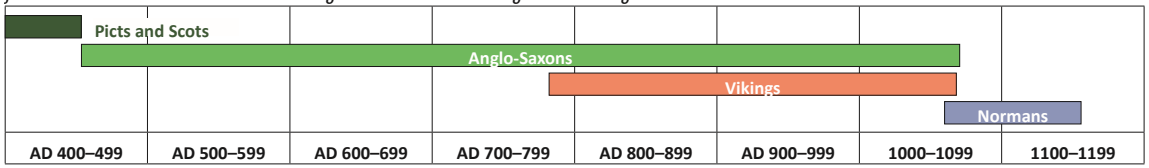
ossicles	Three tiny, linked bones inside the ear through which vibrations pass.
particle	A single piece of matter that is too small to be seen.
vibrate	To quickly move back and forth repeatedly.

Invasion

After the Romans

After the Romans left Britannia in AD 410, many towns fell into disrepair and the country became vulnerable to attack.

This marked the beginning of a period of invasions from different groups: Picts and Scots from Scotland and Ireland; Anglo-Saxons from Germany, the Netherlands and Denmark; Vikings from Scandinavia and Normans from France. This time in history is called the early Middle Ages.

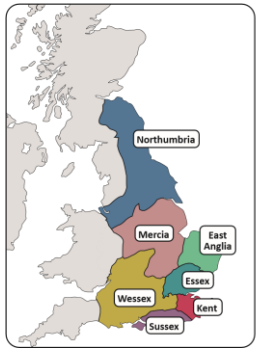


Timeline showing the periods of invasion and settlement in Britain from AD 410–1199

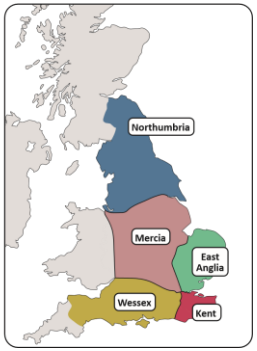
Anglo-Saxons

Invasion

The Picts and Scots tried to invade England after AD 410, because the Britons were undefended. In AD 449, a British leader, Vortigern, asked Hengist and Horsa, two Jutes, to come to England to help the Britons. However, the Jutes realised that the land in England was good for farming, so they, along with the Angles and Saxons, invaded England.



The heptarchy



The five English kingdoms cAD 800

Settlement

The Anglo-Saxons invaded the east and south coasts of England and pushed the Celtic Britons west. They split England into seven kingdoms, which became known as heptarchy. The rulers of these kingdoms fought each other for land and power. By AD 800, there were five main kingdoms: East Anglia, Kent, Mercia, Northumbria and Wessex. Celtic Britons still lived in Wales, Cornwall, Scotland and Ireland..

Monasteries

Monasteries were significant in Anglo-Saxon England because they spread Christianity, promoted reading and writing and provided help for the poor. Monasteries were usually built in isolated places and were rich with money and precious objects.



Image from: Getty Images/Heritage Images

Everyday life

Anglo-Saxon society had a hierarchy, with a king at the top. Landowners, called thegns, were below the king and peasant farmers worked on the thegn's land. Slaves were at the bottom of the hierarchy. Most Anglo-Saxons were farmers or craftspeople. They lived in homes made from wood or wattle and daub, with a single room and central fireplace. Settlements were surrounded by high fences to protect animals and villages from thieves and attack.

Legacy

There are still aspects of life in modern England that date back to the Anglo-Saxons, including the English language, the rule of law, place names, Christianity and even the layout of England itself.

Uniting England

Alfred the Great's grandson, Athelstan, was a successful Anglo-Saxon warrior. During his reign from AD 924–939, he defeated Welsh, Scottish, Celtic and Vikinga King s to become the first King of all England. England has been united since the reign of Athelstan.



Images from: Wikimedia Commons/Public domain

Vikings

Invasion

The Vikings first visited England in AD 789, when they sailed from Norway to the Isle of Portland on the south coast and killed the reeve, who had greeted them on the shore. However, their first major raid was four years later, on the monastery at Lindisfarne.

Viking raid on Lindisfarne

In AD 793, the Vikings arrived on Lindisfarne and destroyed the monastery buildings, stole precious objects, killed and injured the monks and took some as slaves. The Christian world was shocked by this raid on a remote monastery and monks wrote about the attack.

Resisting the Vikings

Over the next 60 years, the Vikings continued to raid England in the spring and summer, before returning to Scandinavia in the winter. To try to stop the raids, some Anglo-Saxon kings paid the Vikings money, called *Danegeld*, to leave. However, the Vikings returned, and *Danegeld* became another way for them to make money.

Great Heathen Army

After 60 years of summer raids, a huge army of 3000 Vikings arrived on the south coast to invade England in AD 865. They conquered every kingdom other than Wessex and took control of Jorvik (York).

Everyday life

The Vikings lived in a similar way to the Anglo-Saxons. Most Vikings were farmers or craftspeople, but they were also warriors who carried out frequent raids. Men and boys trained in boat building, weapon making, crafts and combat. They lived in longhouses, with a central fire and thatched roof. When the Vikings first invaded, they were pagans and worshipped many gods. Over time, they converted to Christianity

Alfred the Great

Alfred the Great was the King of Wessex from AD 871–899. He defeated the Viking leader, Guthrum, at the Battle of Edington in AD 876. He made peace with Guthrum and insisted that he was baptised as a Christian. Alfred the Great split England into Viking Danelaw and Anglo-Saxon Wessex.



Normans

Invasion

When the King of England, Edward the Confessor, died in 1066, he left no successor to the throne. His adviser, Harold Godwinson, was crowned king, but the King of Norway, Harald Hardrada, and William, Duke of Normandy, also claimed the throne. Harold Godwinson defeated Harald Hardrada at the Battle of Stamford Bridge in the north of England and then marched south to fight William, Duke of Normandy at the Battle of Hastings. William, Duke of Normandy won the battle and Harold Godwinson was killed. He was crowned king on Christmas Day in 1066 and became known as William the Conqueror. This was the end of Anglo-Saxon or Viking rule in England.

Glossary

Christianity	A religion based on the teachings of Jesus Christ.
Conquer	Overcome and take control of a place or people.
Danegeld	A tax collected from the Anglo-Saxon people paid to the Viking invaders in exchange for peace.
Invasion	When a foreign army enters a country by force.
Monastery	A building where monks live, work, study and pray, separate from the outside world.
Monk	A member of a male religious community who lives in a monastery.
Pagan	A person who believes in many gods, or does not follow one of the world's major religions.
Raid	A sudden attack, which aims to cause damage.
Reeve	A local official in Anglo-Saxon England.
Scandinavia	An area of Europe, which includes Sweden, Norway and Denmark.

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 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/

Reading:

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

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

Within their reading diary, we ask that you please make a comment on how your child has read, whether they are enjoying their book or even any questions you may have asked them and discussed about their story.

Both the reading book and reading diary need to be returned to school by Wednesday.

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

History/Geography:

Anglo Saxons KS2 https://www.bbc.co.uk/bitesize/topics/zxsbcdm
https://www.natgeokids.com/uk/discover/history/general-history/anglo-saxons/

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