



Saint Nathaniel's Academy

Knowledge Organisers

Autumn Term 2

Year 3

Addition and Subtraction

Knowledge Organiser

Key Vocabulary

Addition and Subtraction Methods

- add
- total
- plus
- sum
- more
- altogether
- difference
- subtract
- less
- minus
- take away
- column addition
- column subtraction
- exchange
- estimate
- inverse operation
- solve problems
- number facts
- place value

3 digit and 1 digit numbers

Not crossing 10s

$$268 - 4 = 264$$



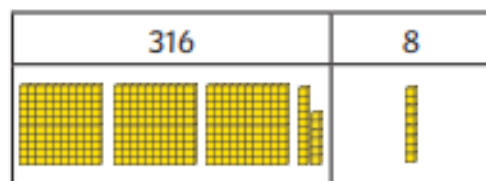
$$343 + 6 = 349$$



Crossing 10s (Exchanging)



$$316 + 8 = 324$$



$$324 - 8 = 316$$

3-digit and 2-digit numbers

Add and subtract tens



$$451 + 3 \text{ tens} = 481 \quad (5 + 3 = 8)$$

$$451 - 4 \text{ tens} = 411 \quad (5 - 4 = 1)$$

Crossing 10s (Exchanging)

$$258 + 80 = 338$$

- Column method
- Count in 10s mentally
- Add 100, subtract 20

Crossing 10 and 100

$$\begin{array}{r} 368 \\ +73 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 31 \\ 441 \\ -73 \\ \hline 8 \end{array}$$

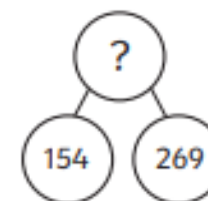
3-digit numbers

Not crossing

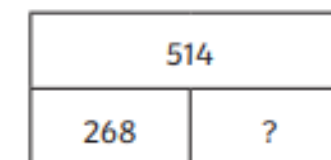
$$679 - 351 = 328$$



Crossing 10s (Exchanging)



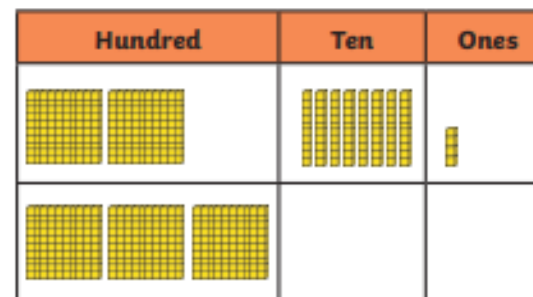
$$\begin{array}{r} 269 \\ +154 \\ \hline 423 \\ 11 \end{array}$$



$$\begin{array}{r} 4101 \\ \cancel{514} \\ -268 \\ \hline 246 \end{array}$$

Add and Subtract 100s

$$284 + 300 = 584$$



Addition and Subtraction

Estimate

Divide number lines into smaller sections to help estimate marked numbers. Estimate by dividing the hundred into 250 and 225.

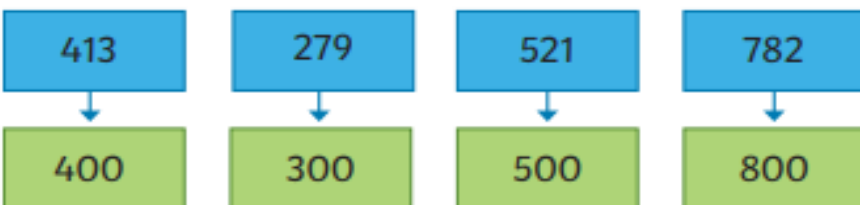
Estimate 10s (230, 240) between 225 and 250.



Estimate $167 - 89$

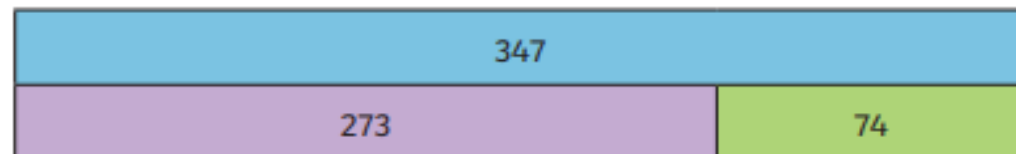
Use near numbers $170 - 90 = 80$

Near numbers:



Knowledge Organiser

Check Answers



$347 - 74 = 273$ can be checked using

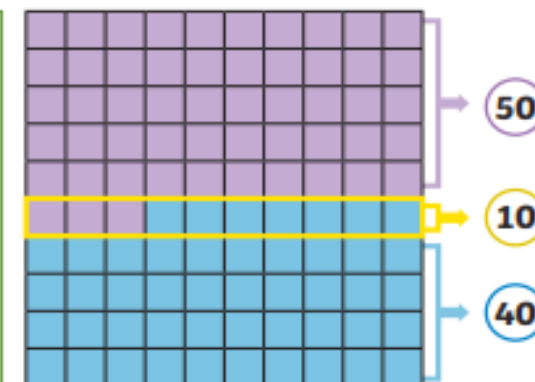
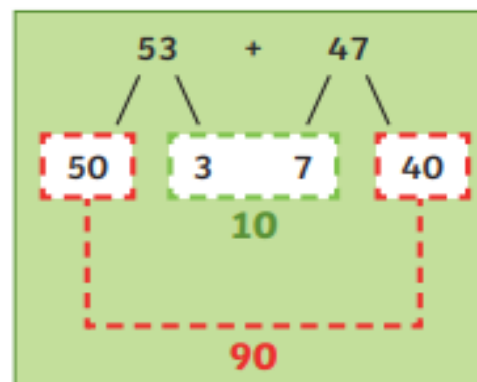
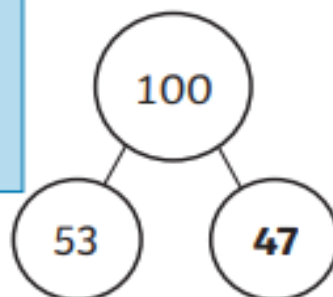
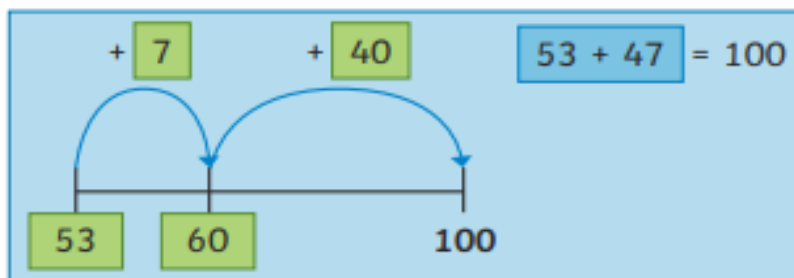
$$273 + 74 = 347$$

This part whole shows the inverse calculations using these three numbers.

$154 + 269 = 423$	$269 + 154 = 423$
$423 - 154 = 269$	$423 - 269 = 154$



Complements to 100



$$53 + 47 = 100$$

Writing Outcome

To write a fantasy based story based on a fable.

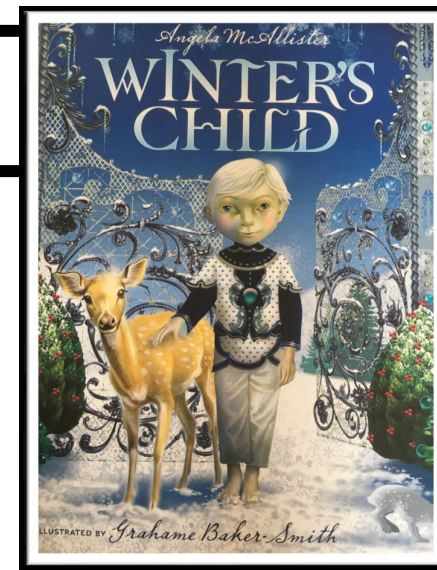
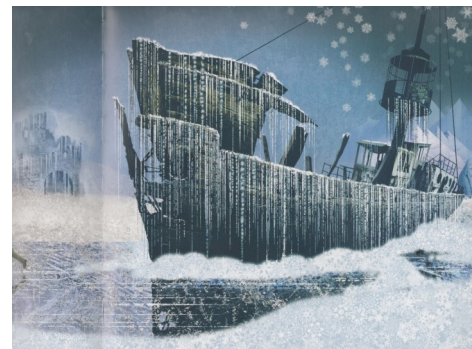
Punctuation and Grammar

Non-negotiables


- ◆ **Capital letters** - Correct use of capital letters for start of sentences for proper nouns.
- ◆ **Full stops** - to be used at the end of a statement.
- ◆ **Conjunctions** - used to link words/phrases together
- ◆ **Past and present tense** -
- ◆ **Subordination**—use of when, if, that because.
- ◆ **Paragraphs**—grouping similar ideas together to form paragraphs.

The **past** is used to describe things that have already happened.

The **present tense** is used to describe things that are happening right now, or things that are continuous..



These are the writing 'keys' which we aim to use in our Y3 writing.

 Pathways to Write keys		
Gateway keys (non-negotiables/basic skills)	➔ Mastery keys (year group national curriculum expectations)	Feature keys (vocabulary, manipulating sentences and tense, structure)
<ul style="list-style-type: none"> • Use punctuation at Y2 standard correctly (full stops, capital letters - including for proper nouns, exclamation marks, question marks, commas in a list, apostrophes for contraction and singular noun possession) • Use subordination (when, if, that, because) and co-ordination (or, and, but) • Use present and past tenses consistently and correctly • Use noun phrases and prepositions to add detail • Group related ideas into paragraphs 	<ul style="list-style-type: none"> • Use conjunctions and adverbs to express, time, place and cause • Use a or an according to whether the next word begins with a vowel or consonant • In narratives, create characters, settings and plot • Use inverted commas to punctuate direct speech 	<ul style="list-style-type: none"> • Use small details to describe characters • Establish the setting in the first line • Include a setting to create atmosphere • Use imagery for description • Use 1st or 3rd person consistently • Use tenses appropriately • Sequence story and use paragraphs

New Curriculum Spelling List Years 3 and 4

accident	centre	experience	important	ordinary	reign
accidentally	century	experiment	interest	particular	remember
actual	certain	extreme	island	peculiar	sentence
actually	circle	famous	knowledge	perhaps	separate
address	complete	favourite	learn	popular	special
although	consider	February	length	position	straight
answer	continue	forwards	library	possess	strange
appear	decide	fruit	material	possession	strength
arrive	describe	grammar	medicine	possible	suppose
believe	different	group	mention	potatoes	surprise
bicycle	difficult	guard	minute	pressure	therefore
breath	disappear	guide	natural	probably	though
breathe	early	heard	naughty	promise	thought
build	earth	heart	notice	purpose	through
busy	eight	height	occasion	quarter	various
business	eighth	history	occasionally	question	weight
calendar	enough	imagine	often	recent	woman
caught	exercise	increase	opposite	regular	women



Year 3 Science—Autumn 2

Crucial Knowledge - Forces and Magnets

Year 3

Key Vocabulary

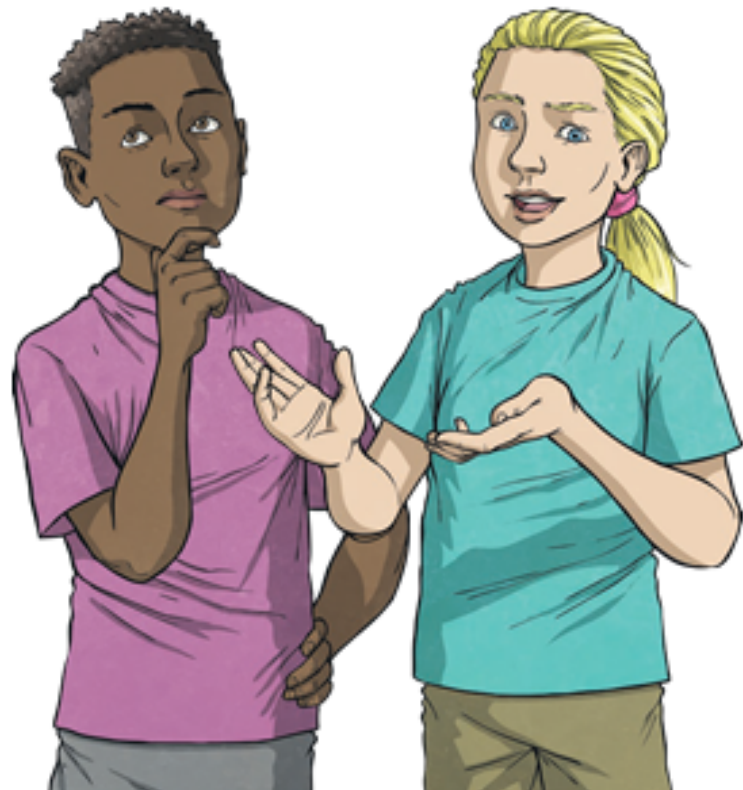
forces	Pushes or pulls.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
surface	The top layer of something.

Key Knowledge

Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.

The driving **force** pushes the bicycle, making it move.

Friction pushes on the bicycle, slowing it down.



Pushes



Pulls

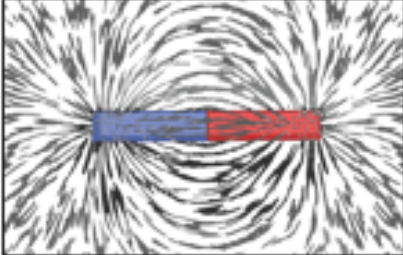

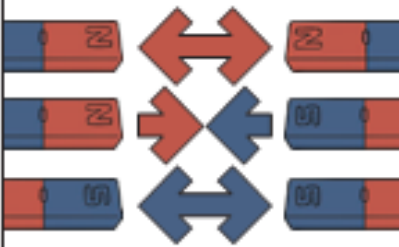
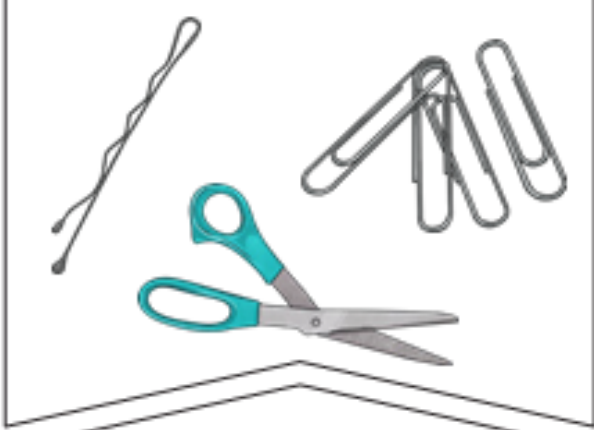



Forces will change the motion of an object. They will either make it start to move, speed up, slow it down

Year 3 Science—Autumn 2

Forces and Magnets

Year 3

Key Vocabulary		Key Knowledge		
magnet	An object which produces a magnetic force that pulls certain objects towards it.		Like poles repel . Opposite poles attract .	
magnetic	Objects which are attracted to a magnet are magnetic . Objects containing iron, nickel or cobalt metals are magnetic .			
magnetic field	The area around a magnet where there is a magnetic force which will pull magnetic objects towards the magnet .	A magnetic field is invisible. You can see the magnetic field here though. This is what happens when iron filings are placed on top of a piece of paper with a magnet underneath.		The needle in a compass is a magnet . A compass always points north-south on Earth.
poles	North and south poles are found at different ends of a magnet .			
repel	Repulsion is a force that pushes objects away. For example, when a north pole is placed near the north pole of another magnet , the two poles repel (push away from each other).			
attract	Attraction is a force that pulls objects together. For example, when a north pole is placed near the south pole of another magnet , the two poles attract (pull together).			
		Magnetic ✓ 	Non-magnetic ✗ 	
		These objects contain iron, nickel or cobalt. Not all metals are magnetic .	These objects do not contain iron, nickel or cobalt.	

Year 3 History – Autumn 2

Chronological Understanding

Children will learn;

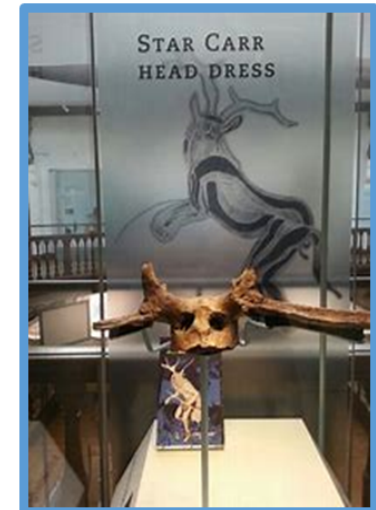
- That prehistory spans millions of years.
- To place the Stone Age, Bronze Age and Iron Age on a timeline.



Historical Understanding

Children will learn;

- What the term 'prehistory' means.
- That the Stone Age can be split into three different time periods.
- Be able to describe the main features and developments of each of the eras of prehistory.



Crucial Knowledge - History

Stone age to Iron Age



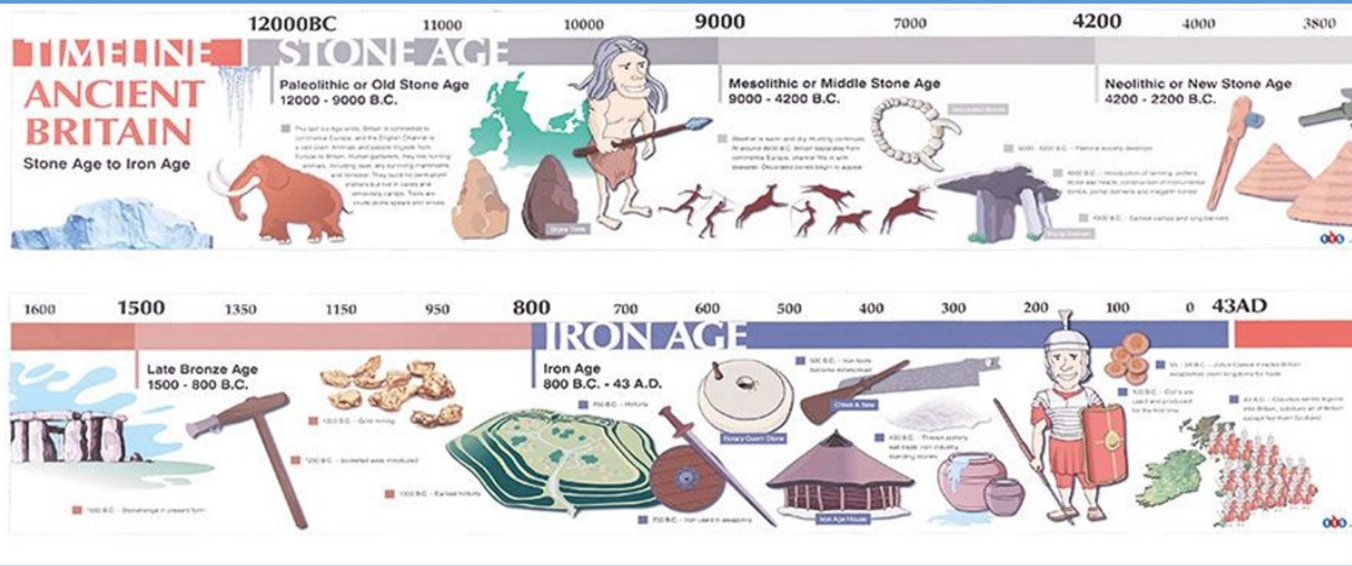
Crucial Knowledge - History

Stone age to Iron Age

Historical Enquiry

Children will be able to:

- Explain how archaeologists use artefacts to learn about the past.
- Explain some of the methods archaeologists use to find out about the past.
- Look at historical places such as Star Carr and will be able to explain it's an important archaeological site.
- Use a variety of sources to answer questions about the past.



Year 3 Design and Technology – Autumn 2

Storybooks

Design

- ◆ I can explore moving parts in storybooks, suggesting how they work and what purpose they serve.
- ◆ I can explain what the word 'linkage' means (bars, rods or springs that cause something to move).
- ◆ I can explain what the word 'pivot' means (a pin which turns something).
- ◆ I can explain what the word 'rotate' means (to turn or twist).
- ◆ I can explain what the word 'lever' means (a bar used to move something).

Rotate



Linkage



Lever



Make

- ◆ I can use a paper concertina to make an object pop out of a book.
- ◆ I can arrange and stick paper between pages to create a pop-out.
- ◆ I can use levers to create moving parts.
- ◆ I can create moving wheel mechanisms to create different effects.
- ◆ I can experiment with different fonts and graphic design features.

Evaluate

- ◆ I can evaluate how well my moving mechanisms work.
- ◆ I can evaluate the overall effectiveness of my storybook.

FLOWERS

Flames

CARTOON

GRAFFITI

What could be made better?

Is the storybook suitable for the intended audience?

Do the mechanisms fit the purpose?

Computing: Autumn Year 3



Purple Mash Computing Scheme of Work: Knowledge Organisers

Unit: 3.2 Online Safety

Key Learning

- To know what makes a safe password.
- To learn methods for keeping passwords safe.
- To understand how the Internet can be used in effective communication.
- To understand how a blog can be used to communicate with a wider audience.
- To consider the truth of the content of websites.
- To learn about the meaning of age restrictions symbols on digital media and devices.

Key Vocabulary

Appropriate

When using online services such as blogging or sharing information. It's important that users behave appropriately. Users should be truthful, respectful, kind, seek any permissions and report anything they feel uncomfortable with.

Password

A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as a website.

Spoof

An imitation of something that appears to look genuine.

Inappropriate

Behaviour or content online that is upsetting, rude, unkind or makes someone feel unsafe or concerned.

Internet

A global computer network providing a variety of information and communication facilities, consisting of interconnected networks and computers.

Permission

When someone shares or accesses content online, it's important that permission is given if it belongs to someone else or has information about them.

Blog

A regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.

Personal Information

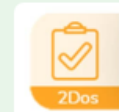
This is information that is personal to someone. For example, their favourite food, their name and age.

Reputable source

Reputable sources are known places or sites that have accurate information. For example, well known news sites or encyclopaedias.

Key Resources

purple
mash



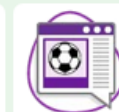
2Dos



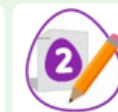
2Connect



2Publish Plus



2Blog



2Write