

Year 6 Maths Knowledge Organiser – Autumn 1



Key Vocabulary
place value
rounding
digit
sequence
addition
subtraction
operation
total
exchange
amount

Place Value of Digits

Place value helps us know the value of a digit, depending on its place in the number.

TM	M	HTH	TTH	TH	H	T	O
1	3	7	6	4	8	2	5

- In the number above, the 1 digit is in the ten millions place so it really means 10,000,000 (ten million).
- The 3 digit is in the millions place so it really means 3,000,000 (3 million).
- The 7 digit is in the hundred thousands place so it really means 700,000 (seven hundred thousand).
- The 6 digit is in the ten thousands place so it really means 60,000 (sixty thousand).
- The 4 digit is in the thousands place so it really means 4,000 (four thousand).
- The 8 digit is in the hundreds place so it really means 800 (eight hundred).
- The 2 digit is in the tens place so it really means 20 (twenty).
- The 5 digit is in the ones place so it means 5 (five).

Comparing Numbers

We can compare numbers using the < and > symbols.

< means less than > means greater than
= means equal to

122,845 < 123,518

2,579,736 > 2,579,436

Negative Numbers

If you count backwards from zero, you reach negative numbers.

Positive numbers are any numbers **more than** zero e.g. 1, 2, 3, 4, 5.

Negative numbers are any numbers **less than** zero e.g. -1, -2, -3, -4, -5.

Negative numbers Positive numbers

Term	Definition	Example
factor	A number that divides exactly into another number	Factors of 12: 1, 2, 3, 4, 6, 12
common factor	Factors of two numbers that are the same	Common factors of 8 and 12: 1, 2 and 4
prime number	A number with exactly two factors	2, 3, 5, 11, 13, 17, 19...
composite number	A number with more than two factors	12 (as it has six factors)
prime factor	A factor that is prime	Prime factors of 12: 2, 3
multiple	A number that is in another number's times table	Multiples of 9: 9, 18, 27, 36...
common multiple	Multiples of two numbers that are the same	Common multiples of 4 and 6: 12, 24...
square numbers	A result when a number has been multiplied by itself	25 (52 = 5x5) 49 (72 = 7x7)
cube numbers	When a number has been multiplied by itself three times	8 (23 = 2x2x2) 27 (33 = 3x3x3)

Roman Numerals				
	I = 1	II = 2	III = 3	
IV = 4	V = 5	VI = 6	VII = 7	VIII = 8
IX = 9	X = 10	XI = 11	XX = 20	XXX = 30
XL = 40	L = 50	LX = 60	LXX = 70	LXXX = 80
XC = 90	C = 100	CL = 150	CC = 200	CCC = 300
CD = 400	D = 500	DC = 600	DCC = 700	DCCC = 800
CM = 900	M = 1000	MC = 1100	MD = 1500	MM = 2000

Short Division

Start from the left.

		4	4	0	5	
12	5	2	8	6	0	

5 ÷ 12 = 0 r5
52 ÷ 12 = 4 r4
48 ÷ 12 = 4
6 ÷ 12 = 0 r6

Long Division

Divisor ← 4 18 → Quotient
75 → Dividend
-4
35
-32
03 → Remainder

Multiply up to 4-digits by 2-digits

1	2	2	
	1	5	4
x		2	6
	9	2	4
3	0	8	0
4	0	0	4
1	1		

Start with the ones.
154 × 6 = 924
154 × 20 = 3080
3080 + 924 = 4004

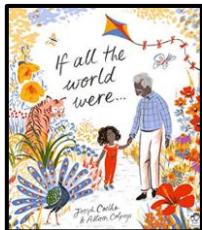
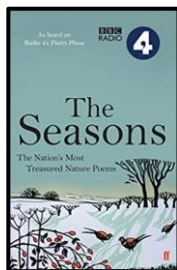


Year 6 English Knowledge Organiser – Autumn 1



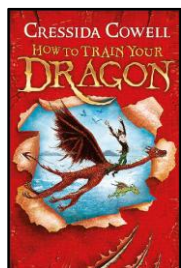
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Core Texts



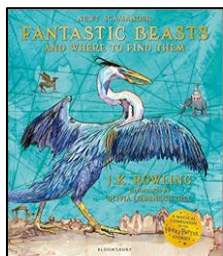
Poetry Please: If All The World Were The Seasons

Various Joseph Coelho



How To Train Your Dragon

Cressida Cowell



Fantastic Beasts and Where to Find Them

JK Rowling

Features of Text Type: Poetry

Rhyme – some poems, including this one, use rhyme to contribute to rhythm and to engage the listener. This poem is using rhyming couplets (AABB, etc).

Punctuation – end of line punctuation can be used to support rhythm and performance and to contribute to meaning.

Language – in poetry, vocabulary is carefully selected to create imagery and for maximum impact on the audience. Poetic language devices can be used to intensify meaning, mood and rhythm. This poem, for example, employs rhyme (*away/day, etc*) and assonance in the repetition of the 'ee' sound in the title word 'leaves' that carries through the poem ('*ee*' sound in *leaves; leaf; speaks, me, tree, wreaths*) as well as repetition of words and phrases (*I shall --- when...*).

Features of Text Type: Creating Narrative

Relative clauses (*using the relative pronouns who, which, where, when, whose and that*), and parenthesis (*using brackets, dashes and commas*) are used to add additional detail.

'Show don't tell' techniques create vivid images for the reader, bringing descriptions to life and inviting them to 'read between the lines' (e.g. through body language and behaviours).

Dialogue contributes to the development of character showing emotions and personality through the words that are spoken and the way in which they are said.

The opinions and reactions of other characters, and the contrast between different characters, can be used to emphasise physical or personality traits, further contributing to the effect on the reader.

Features of Text Type: Informative Writing

Split into five sections, the introduction both **recounts** personal events using a first-person viewpoint and **informs** and **explains** from an impersonal third-person perspective.

Events and information are imparted using past, present and future verb forms.

Split into five sections, the introduction both **recounts** personal events using a first-person viewpoint and **informs** and **explains** from an impersonal third-person perspective.

Each section describes the physical features and behaviours of the creature, its origins, and any other interesting related facts

Events and information are imparted using past, present and future verb forms.



Year 6 Science Knowledge Organiser – Autumn 1



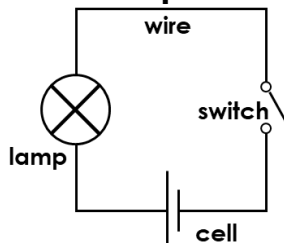
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Key Vocabulary

component	things we use to build our circuit, e.g. bulbs, wires, cells, batteries
complete circuit	a complete loop which allows electricity to flow, making the components in the circuit work
conductor	a material that allows electricity to flow through it
electrical appliance	something that needs electricity to work
finite	describing something that is limited in size or extent
insulator	an insulator is a material that does not allow electricity to flow through it
natural gas	a fossil fuel
non-renewable energy resource	a finite resource that is not replenished.
renewable energy resource	a resource that is replenished as it is being used.

Circuit Symbols and Diagrams

When drawing an electrical **circuit**, use straight lines and symbols to represent the **components** of the circuit.



battery (which is formed when we connect two or more cells. Adding more cells increases the voltage of the circuit.



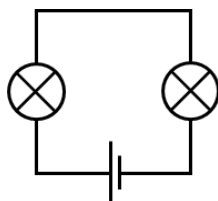
motor



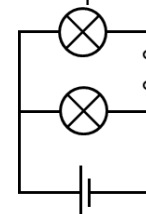
buzzer

Series and Parallel Circuits

More than one lamp (or other component) can be placed in a circuit.



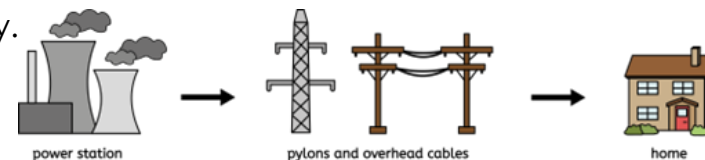
If the lamps are placed in one continuous loop, it is a **series circuit**.



If lamps are placed in separate loops that both connect to the cell, it is a **parallel circuit**.

Generating Electricity

Power stations **generate** mains electricity. The electricity is transferred to our homes and school by overhead cables.



Some power stations burn **fossil fuels** (coal, oil and gas) to generate electricity. These are **non-renewable** sources of energy.

Renewable sources of energy include:



solar



wind



geothermal



tidal



Year 6 History Knowledge Organiser – Autumn 1



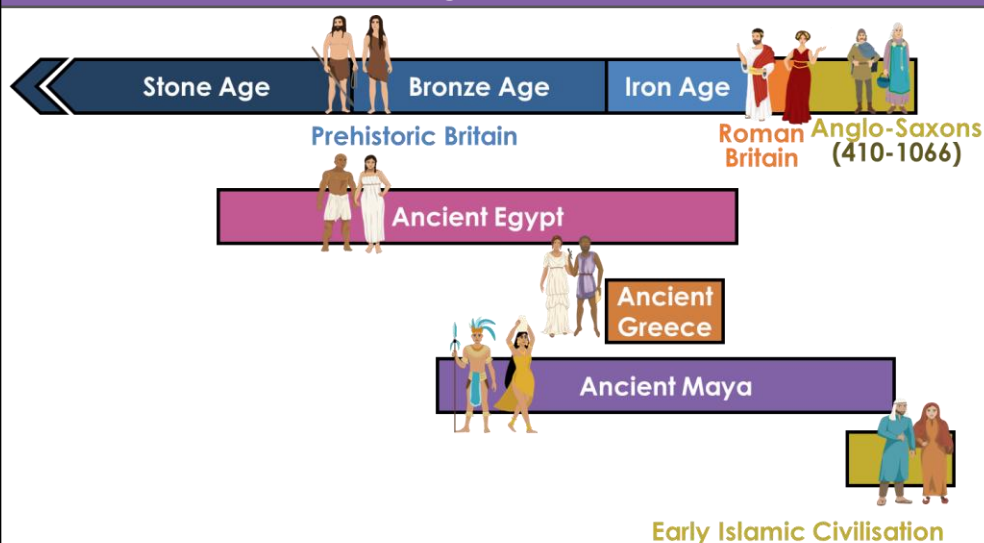
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Key Vocabulary	
Anglo-Saxon	a person who lived in England during the time AD 410 to 1066
archaeology	the scientific study of the remains of past human life and activities
corroborate	to confirm or give support to a theory or idea
economic	describing something that relates to money
excavate	to remove earth from an area in order to find buried remains
heptarchy	a place that it is split into seven independent regions or kingdoms
institutional	describing something that relates to a system
refute	to suggest that a theory or idea is wrong
Sutton Hoo	the location of an Anglo-Saxon ship burial in East Anglia, dating to AD 610-635

Anglo-Saxon Britain



Big Picture



Who were the Anglo-Saxons?

- Anglo-Saxons were people who lived in England from AD 410 to 1066. They were a mix of tribes who settled in England and mixed with Britons.
- They settled in 7 kingdoms (heptarchy) initially, but they fought and took over other kingdoms until there were 5, 3 and then one kingdom of England.
- Gradually, the Anglo-Saxons converted to Christianity (helped by people like Hadrian of Libya and Theodore of Turkey).
- The Anglo-Saxons were skilled craftsmen and made jewellery and other decorative items.
- The Anglo-Saxons' trade network expanded as far as India and Sri Lanka.
- In 1939, archaeologists discovered an Anglo-Saxon burial site at Sutton Hoo. The artefacts found there tell us a lot about the Anglo-Saxon king who was buried there.

