

# Year 5 Maths Knowledge Organiser - Spring 2



Key Vocabulary
fraction
decimal
percentages
perimeter
area
irregular
line graphs
timetables
ascending
descending

## Rounding Decimals

We can round decimals (with up to 2 decimal places) to the nearest whole number by looking at the value of the tenths.

If there are 5 or more tenths, we round to the next whole number.

6.51 → 7

6.41 → 6

If there are 4 or fewer tenths, we round to the previous whole number.

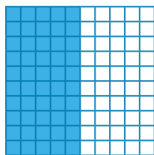
## Order Decimals

Once we can compare decimals, we can place them in ascending and descending order.

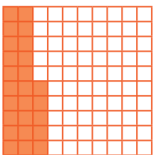
1.503    1.53    1.867    2.001    2.094  
↑  
(ascending order)

8.64    8.509    8.1    7.834    7.805  
↓  
(descending order)

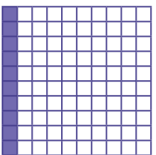
## Equivalent Fractions, Decimals and Percentages



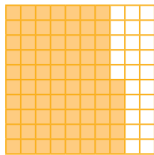
$$\frac{50}{100} = \frac{1}{2} = 0.5 = 50\%$$



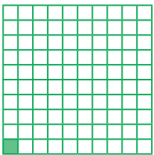
$$\frac{25}{100} = \frac{1}{4} = 0.25 = 25\%$$



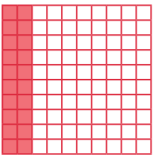
$$\frac{10}{100} = \frac{1}{10} = 0.1 = 10\%$$



$$\frac{75}{100} = \frac{3}{4} = 0.75 = 75\%$$



$$\frac{1}{100} = 0.01 = 1\%$$



$$\frac{20}{100} = \frac{2}{10} = 0.2 = 20\%$$

## Measure Perimeter

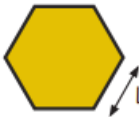
Measure the perimeter of a rectangle:



Measure the length (l) and width (w).

$$\text{Perimeter} = l + w + l + w \text{ or } (l + w) \times 2$$

Measure the perimeter of regular shapes:



Measure the length (l) and count the number of sides (s) on the shape.

$$\text{Perimeter} = l \times s$$

Measure the perimeter of irregular shapes:

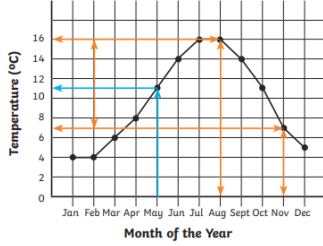


Measure the length of each side and add them together.

## Read and Interpret Line Graphs

The y-axis shows temperature in intervals of 2°C on a scale of 0°C to 16°C.

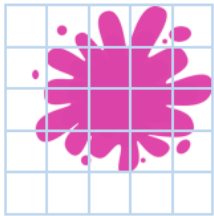
The points show the average temperature for each month.



The x-axis shows the months of the year.

## Area of Irregular Shapes

We can estimate the **area of irregular shapes** on a grid using our Year 4 knowledge of counting squares. We need to look at the number of whole squares which are covered, and the number of part-covered squares.



I can see 3 fully covered squares and 16 part-covered squares.

We can use our knowledge of fractions to add the different part-covered squares to create a rough total estimate.



The area of the irregular shape is approximately 10cm².

## Timetables

Three different buses

Bus stop locations	Mill Road	High Street	Pitsmoor Road	Fulwood
	0726	0729	0759	0845
		0803	0833	0919
				0946

The bus starts at this time and location.

The bus does not stop here.

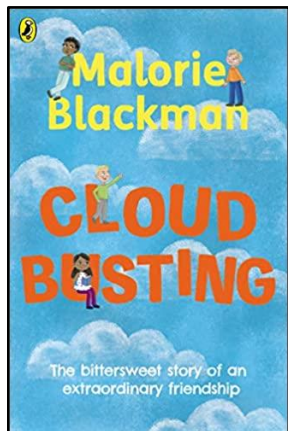
The bus terminates at this time and location.

# Year 5 English Knowledge Organiser - Spring 2

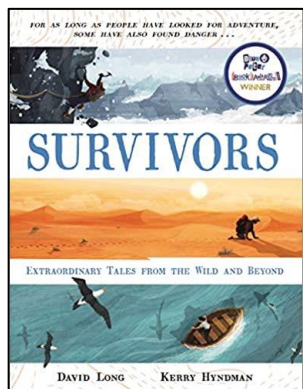


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## Core Texts



**Cloud Busting**  
Malorie Blackman



**Survivors**  
David Long

## Features of a Poetic Narrative

**The story is told through different poetic forms, each matching the differing mood and tone of each chapter.**

- The majority of the story is told using free-flow, fluid poetry to sustain the plot, but different poetic structures, such as limerick, haiku, and shape poetry are used to explore the impact of layout, rhythm and rhyme.
- Imagery is used throughout the narrative to paint vivid images for the reader. Alongside other figurative language devices, such as metaphor, simile and personification, synaesthesia is used to engage all the senses and to show how characters see the world differently.
- Repetition is used as a powerful tool to emphasise key messages in the story and to build rhythm.
- Alliteration, assonance and onomatopoeia are used to engage the audience's ear and focus their attention on particular sections of text.

## Features of Biographies

As **biographical recounts**, the stories within the book are written to both **entertain** and **inform** the reader.

In line with the **dual purpose**, each story contains both detailed facts, including dates, examples and explanations, as well as the thoughts and feelings of the people involved.

Each recount begins with an introduction to explain the context and background of the survival story. The events of the story itself are mostly written **chronologically**. A concluding section details the survivor's life after the significant event(s) occurred.

The main body of the text is written using **past tense verb forms**. Progressive and perfect forms are used to indicate ongoing actions, and to draw attention to consequences respectively.

Material is organised **chronologically** and broken into **paragraphs** around a theme, making it easier for the reader to access. New paragraphs mark a shift in time, place or subject.

A range of devices are used to create **cohesion** within and across paragraphs:

e.g.

- adverbials** signpost and guide the reader through the text
- pronouns/ synonyms/ references** relate back to previous parts of the text
- conjunctions** link ideas within and across sentences.

**Relative clauses** (using the *relative pronouns who, that, which, when, whose*) give the reader further detail about people, places and things.

Brackets, dashes and commas are used to create **parenthesis**, adding additional information, explanation or afterthought to a sentence without affecting its sense or meaning.

# Year 5 Science Knowledge Organiser - Spring 2



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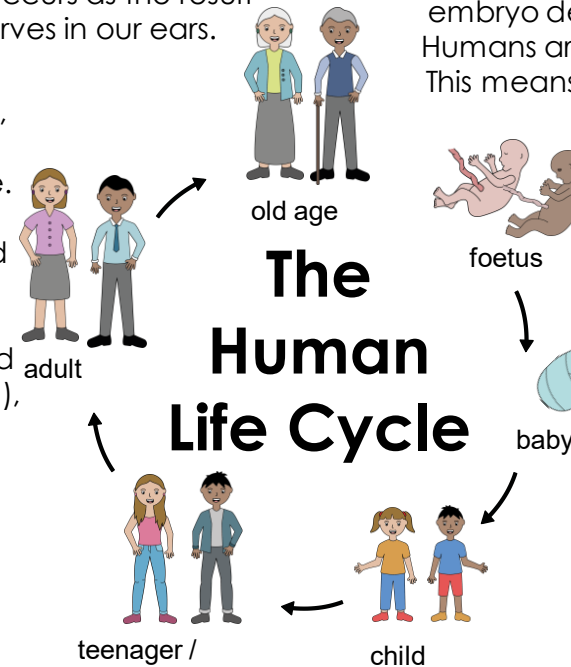
## Key Vocabulary

<b>adolescence</b>	the time between approximately 10 – 20 years old
<b>adulthood</b>	the time between approximately 20 – 65 years old
<b>childhood</b>	the time between approximately 3 – 10 years old
<b>embryo</b>	an unborn baby that is under 8 weeks old
<b>fertilisation (conception)</b>	when the egg and sperm fuse (join)
<b>foetus</b>	an unborn baby that is over 8 weeks old
<b>gestation period</b>	the time the offspring grows inside the womb (the length of the pregnancy)
<b>infancy</b>	the time between birth to approximately 2 years old.
<b>IVF</b>	a type of assisted reproduction where a female egg is fertilised outside the body and the embryo formed is transferred back into the female.
<b>puberty</b>	the process where a child's body changes to the adult body and reaches sexual maturity
<b>sperm</b>	a male sex cell
<b>uterus</b>	the organ in which offspring are conceived and grow before they are born

As we age, our skin loses its elasticity and becomes thinner and more fragile, causing wrinkles. Bones lose their density and strength so become more prone to fractures. Joints become stiff and less flexible. The metabolism also slows down. Hearing loss occurs as the result of changes to the nerves in our ears.

**Adults** can reproduce, and their offspring continue the life cycle. The changes during adulthood are classed into primary and secondary ageing. During early adulthood (from 20 – 40 years old), the body is at its physical peak.

Puberty occurs during **adolescence** and is a period of time when the male and female body undergoes change, pubic hair grows, breasts develop, males produce sperm and females begin to menstruate.



**Gestation** is the period from conception to birth. In humans, this is often 40 weeks. During this time, a ball of cells called an embryo develops into a **foetus**. Humans are viviparous animals. This means the foetus develops inside the female.

At birth, a **baby** is born and will grow into a child. The child begins to develop and grow bigger. Children start to walk at about 1 year old and will begin to use words from about 18 months. Their speech becomes more advanced as they get older.

**Children** develop their speech, and their language becomes more advanced between the ages of 3 and 10.. At around 6 years old, children will begin to lose their milk teeth and their permanent teeth will erupt.



# Year 5 History Knowledge Organiser - Spring 2

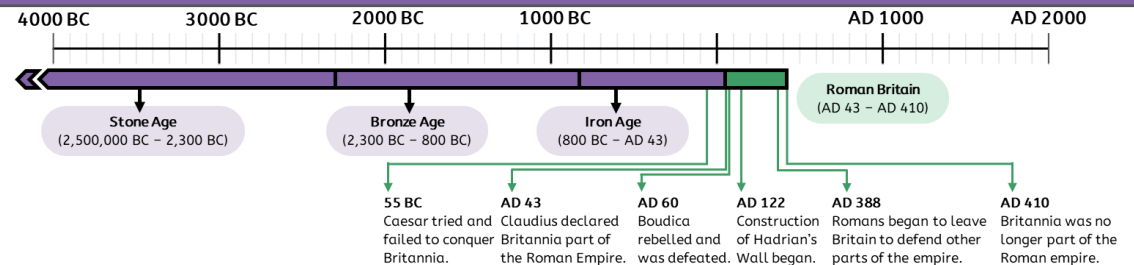


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## Key Vocabulary

<b>Britannia</b>	the Roman name for its territories in Britain.
<b>conquer</b>	to take control of a place by force.
<b>delegate</b>	to give someone more junior the responsibility for something.
<b>economic</b>	relating to money.
<b>fortress</b>	a defensive and fortified structure, usually housing legionaries.
<b>informal</b>	casual or unofficial.
<b>institutional</b>	relating to an organisation or official structure.
<b>intellectual</b>	relating to the mind, knowledge or intelligence.
<b>governor</b>	a person appointed to govern a province.
<b>literate</b>	able to read and write.
<b>province</b>	a smaller part of the Roman empire, which was ruled by the governor who also collected taxes.
<b>tax</b>	money that is collected by governments to pay for the things that the government does.

## Timeline



## Roman Conquest

- Caesar tried to conquer Britain in 55 BC. His ships did not land at Britain and, to save face, he tried again the next year (54 BC). This was more successful, but his victory was quickly forgotten by Britons because he had to leave to fight elsewhere in the empire.
- Claudius successfully invaded in AD 43. He and his soldiers stayed in Britannia for longer and so kept control where Caesar had failed.

## Keeping Control

- Britannia was hard to control because it was far away from Rome, one of many borders that Romans had to control, and because lots of tribes of Britons did not want to be controlled!
- The Romans kept control using different types of power:
  - Physical** – the Romans stationed auxiliary soldiers like the Aurelian Moors in Britannia and built fortresses and Hadrian's Wall to defend it.
  - Institutional** – the Roman governor in Britannia delegated power to local leaders who were British tribe chiefs. This made some Britons less likely to rebel.
  - Economic** – the Roman governor and local leaders collected taxes to send to the emperor. This could pay for the soldiers, fortresses and wall.
  - Informal** – The Romans brought some new things to Britain, and this combined with what Britons were doing to create a shared culture between some Romans and Britons.
  - Intellectual** – more Romans could read and write, which meant they controlled what was said, shared and left behind about the Romans and Britons.