# Year 7 End of Year Knowledge Organiser

HENLEY BANK
HIGH SCHOOL

# Unit 1 Origins– Knowledge Organiser

| Content | |
|---|---|
| The Fall of Man | Adam and Eve lived in the Garden of Eden. The serpent tempted them into eating the forbidden fruit. God expelled them from the Garden. |
| The story of Prometheus | Prometheus felt pity for mankind and stole fire from Zeus so that the humans could survive. Zeus punished him because of it. |
| David and Goliath | David accepted the challenge against the champion of the Philistines. David defeated Goliath by using a slingshot and stones. |
| Pandora's Box/Jar | Pandora was created and given a jar by Zeus. When she opened the jar, evils flew all over the world before she was able to shut it again. |
| Echo and Narcissus | Echo was in love with Narcissus but the love was unrequited. He rejected her and fell in love with his own reflection/himself. |
| King Midas | The king wished that all he touched would turn to gold but he almost starved because food, even his daughter, was also transformed. He was able to get rid of his gift. |
| Theseus and the Minotaur | King Minos sacrificed men to the Minotaur each year. Theseus was distressed by this and travelled to Athens where he slayed the beast and escaped the labyrinth. |
| Daedalus and Icarus | Daedalus, trapped on Crete, crafted wax-and-feather wings for himself and his son Icarus to escape. Despite his father's warning not to fly too high or too low, Icarus soared too near the sun, melting the wax and falling to his death in the sea. |

## Imagery and Implied Meaning

**Noun -** Person, place, object or idea; Concrete nouns can be experienced with your senses; Abstract nouns are ideas, feelings or qualities (love, fear etc.)

**Verb -** A verb is a word that expresses a physical action (jump, swim, write, climb), a mental action (guess, think, consider), or a state of being (exist, appear).

**Adjective -** A word that describes a noun

**Adverb -** A word that describes a verb or adjective; there are adverbs of time, place and frequency

**Preposition -** Words that show the relationship/position of things

**Allegory -** A narrative in which a character, place, or event is used to deliver a broader message about real-world issues and occurrences

**Allusion**. - An allusion is a reference, usually short, to a person, place, thing, event, or other literary work with which the reader is presumably familiar.

**Metaphor -** A figure of speech in which a word/phrase is applied to an object or action which it is not literally applicable

**Personification -** Giving human qualities to something that is inhuman

**Simile -** A comparison of one thing with another thing of a different kind, used to make a description more emphatic or vivid; uses 'as' or 'like'

## Key Vocabulary

| | |
|---|---|
| Antagonist | Character type who is against someone or something. Typically a bad, evil or villainous character. |
| Protagonist | The leading character in the story. |
| Myth | A story which explains something in the world or teaches us a lesson. |
| Moral | To do with right or wrong behaviour. |
| Hubris | Excessive pride or self- confidence. |
| Hamartia | A fatal flaw leading to the downfall of a tragic hero or heroine. |
| Narcissism | Excessive admiration in oneself and one's physical appearance. |
| Temptation | The desire to do something, especially something wrong. |
| Origin | The point or place where something begins. |

## Form and Structure

**Subject -** The thing that is doing or being the verb

**Object -** Receives the verb

**Main Clause -** Requires a subject and a verb

**Simple sentence -** Main clauses are called simple sentences when they are written on their own.

**Compound sentence -** Formed when two or more main clauses are linked together with a coordinating conjunction

**Subordinate clause -** Is formed by adding a subordinate conjunction to the front of a main clause.

**Complex sentence -** Are formed by adding one or more subordinate clauses to a main clause.

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| Content | |
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| The Fall of Man | |
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| David and Goliath | |
| Pandora's Box/Jar | |
| Echo and Narcissus | |
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| Daedalus and Icarus | |

| Imagery and Implied Meaning |
|---|
| **Noun -** |
| **Verb -** |
| **Adjective -** |
| **Adverb -** |
| **Preposition -** |
| **Allegory -** |
| **Allusion**. - |
| **Metaphor -** |
| **Personification -** |
| **Simile -** |

| Key Vocabulary | |
|---|---|
| **Antagonist** | |
| **Protagonist** | |
| **Myth** | |
| **Moral** | |
| **Hubris** | |
| **Hamartia** | |
| **Narcissism** | |
| **Temptation** | |
| **Origin** | |

| Form and Structure |
|---|
| **Subject -** |
| **Object -** Receives the _____ |
| **Main Clause -** Requires a _____ and a _____ |
| **Simple sentence -** |
| **Compound sentence -** |
| **Subordinate clause -** |
| **Complex sentence -** |

# Journeys – Knowledge Organiser

## Plot

| | |
|---|---|
| 1 | An old sailor (**Billy Bones**) comes to stay at the Admiral Benbow Inn during the mid 1700's. He pays the innkeeper's son (**Jim Hawkins**) to keep a lookout for 'a seafaring man with one leg'. **Blind Pew** scares Billy so much that he has a stroke which eventually kills him. Jim and his mother find **a treasure map**. **Squire Trelawney** proposes that they all go and look for the treasure. |
| 2 | Trelawney takes Jim and **Dr Livesey** and introduces them to **Long John Silver** and **Captain Smollett**. On the ship, **Jim overhears Silver talking with two other crewmen about the fact that they are planning to mutiny.** |
| 3 | Silver and some others go ashore and **kill two men who refuse to join the mutiny**. Jim runs away with a **half-crazy Englishman (Ben Gunn)**. |
| 4 | Meanwhile **Smollett, Trelawney, Livesey and others abandon the ship and construct a stockade**. **Silver offers a truce**. Smollett refuses to surrender the map and so **Silver attacks**. **Smollett is badly wounded.** |
| 5 | **Jim runs away** and finds Gunn's boat. Jim falls asleep in the boat and eventually **encounters Hands,** who **attempts to kill Jim but Jim shoots and kills him**. Jim goes back to the stockade and is **caught by Silver.** |
| 6 | **Silver persuades the pirates not to kill Jim**. Jim and the pirates **find the treasure site**, but it's **empty (found by Gunn years ago)**. The sailors ambush the pirates, save Jim, and capture Silver**, who then steals a bag of money and escapes as they sail home** |

## Key Characters/quotes

**Jim Hawkins**

The protagonist. We watch him grow into a man over the course of the novel (bildungsroman)

"My heart was sore for him, wicked as he was." (29).

**Long John Silver**

The antagonist. He challenges some of the stereotypes surrounding pirates.villains.

"Flint his own self was feared of me." (11)

**Squire Trelawney**

Landed gentry – he is portrayed as a fool when he falls for Silver's plot to capture the Hispaniola.

"I declare I think his conduct unmanly, unsailorly, and downright un-English." (9)

**Dr Livesey**

Middle class, educated. He is the doctor and becomes a sympathetic and practical character.

"I don't put much faith in your discoveries." (8).

## Context

Stevenson wrote Treasure Island after drawing a treasure map for his son. The novel was published in instalments from 1881-1882.

Victorian children's novels were usually concerned with a moral allegory first. Stevenson put the plot first as he wanted to write an exciting adventure. "A story for boys; no need of psychology or fine writing."

The novel is set in the early 18th century, a time viewed as the golden age of piracy when pirates sailed the seas, seeking treasure and adventure.

Stevenson based the character Long John Silver on a childhood friend of his who had lost his leg.

## Abstracts and Key Vocabulary

**Narrative Voice-** who is telling the story, the speaker of the text.

**Romanticised –** To deal with or describe in an idealised or unrealistic fashion – making something seem better or more appealing than it really is.

**Bildungsroman-** a story dealing with growing up or 'coming of age' (maturing).

**Role Model-** a person looked to by others as an example to be copied

**Transformation-** a change

**Barbarity** – Savageness or cruelty.

**Justice-** fairness in the way people are dealt with.

**Manipulation** – The act of controlling/using someone or something for selfish purposes.

**Duplicity –** Double-dealing; insincerity.

## Literary Devices/Symbolism

**Personification-** The attribution of human characteristics to something non-human

**Pathetic fallacy –** The use of the weather/ nature to portray a feeling/ mood

**Onomatopoeia-** words which represent sound

**Zoomorphism-** describing human behaviour as being similar to how the animal mentioned would behave

# Journeys – Knowledge Organiser

## Plot

| | |
|---|---|
| 1 | An old sailor _____comes to stay at the Admiral Benbow Inn during the mid 1700's. He pays the innkeeper's son _____to keep a lookout for 'a seafaring man with one leg'. **Blind Pew** scares Billy so much that he has a stroke which eventually kills him. Jim and his mother find **a treasure map**. _____proposes that they all go and look for the treasure. |
| 2 | Trelawney takes Jim and _____and introduces them to _____and _____. On the ship, **Jim overhears Silver talking with two other crewmen about the fact that they are planning to mutiny.** |
| 3 | Silver and some others go ashore and **kill two men who refuse to join the mutiny**. Jim runs away with a **half-crazy Englishman (_____)**. |
| 4 | Meanwhile **_____, Trelawney, Livesey and others abandon the ship and construct a stockade**. _____ **offers a truce**. Smollett refuses to surrender the map and so **Silver attacks**. **Smollett is badly wounded.** |
| 5 | _____**runs away** and finds Gunn's boat. Jim falls asleep in the boat and eventually **encounters Hands,** who **attempts to kill Jim but Jim shoots and kills him**. Jim goes back to the stockade and is **caught by Silver.** |
| 6 | _____ **persuades the pirates not to kill Jim**.Jim and the pirates **find the treasure site**, but it's **empty (found by Gunn years ago**). The sailors ambush the pirates, save Jim, and capture Silver**, who then steals a bag of money and escapes as they sail home** |

## Key Characters/quotes

The protagonist. We watch him grow into a man over the course of the novel ( bildungsroman.)
"My _____ was _____ for him, _____ as he was." (29).

The antagonist. He challenges some of the stereotypes surrounding pirates.villains.
"_____ his own self was _____ of me." (11)

Landed gentry – he is portrayed as a fool when he falls for Silver's plot to capture the Hispaniola.
"I _____ I think his conduct unmanly, _____, and downright un-English." (9)

Middle class, educated. He is the doctor and becomes a sympathetic and practical character.
"I don't put much faith in your _____." (8).

## Context

Who did Stevenson write Treasure Island for and why?

What were Victorian children's novels concerned with?

What was the Golden Age of piracy?

Who did Stevenson base Long John Silver on?

## Abstracts and Key Vocabulary

_____ - who is telling the story, the speaker of the text.

_____ – To deal with or describe in an idealised or unrealistic fashion – making something seem better or more appealing than it really is.

_____ a story dealing with growing up or 'coming of age' (maturing).

_____ - a person looked to by others as an example to be copied

_____ a change

_____ – Savageness or cruelty.

_____ fairness in the way people are dealt with.

_____ – The act of controlling/using someone or something for selfish purposes.

_____ the state of being cruel or vicious

_____ – Double-dealing; insincerity.

## Literary Devices/Symbolism

_____- The attribution of human characteristics to something non-human

_____The use of the weather/ nature to portray a feeling/ mood

_____words which represent sound

_____describing human behaviour as being similar to how the animal mentioned would behave

# Love – Knowledge Organiser

## Plot

Romeo and Juliet' takes place over the span of four days, and teaches us about the power of love, consequences of hatred, and misunderstandings.

The story is about two families in the city of Verona, Italy; the two families are called the Montagues and the Capulets. The two families have a strong dislike for one another.

Romeo Montague meets Juliet Capulet at a party, and they fall in love instantly. Despite their families' feud, Romeo and Juliet decide to get married in secret. Tybalt, a hot-headed Capulet and Juliet's cousin, challenges Romeo to a fight. Romeo refuses, so Tybalt kills Romeo's friend Mercutio – causing Romeo to take his revenge.

As a result of Romeo killing Tybalt, Romeo is banished from Verona and has to leave Juliet in Verona as a result. Juliet is then told by her mother, who does not know of her marriage to Romeo, that she is to marry a suitor called Paris.

Juliet wants to be with Romeo and leave Verona, so she forms a plan to drink a potion that makes her appear dead. Someone would then inform Romeo that she is actually alive and on her way to him. This plan would result in Juliet escaping her wedding to Paris and also ensure she can live with Romeo. However, Romeo is not told about Juliet's 'death' being staged, and he returns to Verona believing that she is really dead. As a result of his grief over losing Juliet, Romeo takes his own life. Juliet wakes up, sees that Romeo is dead, and takes her own life as well to be with him in the afterlife.

The tragic deaths of Romeo and Juliet make their families realise the consequences of their feud, so they decide to reconcile and end their conflict.

## Key Characters

| | |
|---|---|
| **Romeo** | *A young, impulsive, and passionate Montague. His forbidden love for Juliet leads to tragic consequences.* |
| **Juliet** | *A beautiful and intelligent young Capulet, torn between her loyalty to her family and her love for him.* |
| **Tybalt** | *Juliet's hot-headed cousin who is fiercely loyal to his family.* |
| **Mercutio** | *A close friend of Romeo who is known for his wit and sense of humor.* |

## Form and Structure

**Rhyming couplets** - a rhyming pair of successive lines of verse of the same length.

**Sonnet -** A 14 line poem that has a tightly structured rhythm, rhyme and structure.

**Shakespearean sonnet** - a poem comprised of three quatrains and a concluding couplet, rhyming abab cdcd efef gg

**Petrarchan sonnet -** a poem that divides the 14 lines into two sections: an eight-line stanza (octave) rhyming ABBAABBA, and a six-line stanza (sestet) rhyming CDCDCD or CDECDE.

**Caesura -** Punctuation that breaks a line of poetry

**Enjambment -** The running-on of a line of verse.

**Volta -** A 'turn' that marks the change of mood in a poem.

**Oxymoron-** two words or phrases used together that have, or seem to have, opposite meanings

**Onomatopoeia-** words which represent a sound

**Extended Metaphor-** a metaphor (comparison to something else) which runs through a text

## Abstracts and Key Vocabulary

**Melancholy -** sadness that lasts for a long period of time, often without any obvious reason

**Fate-** events outside a person's control

**Antithesis-** a person or thing that is direct opposite to someone or something else.

**Tragedy:** a play about death and suffering with a sad ending.

**Fate** - a power that some people believe causes and controls all events, so that you cannot change or control the way things will happen

**Conflict-** a serious disagreement or argument

**Feud-** an argument which has been going on for a very long time

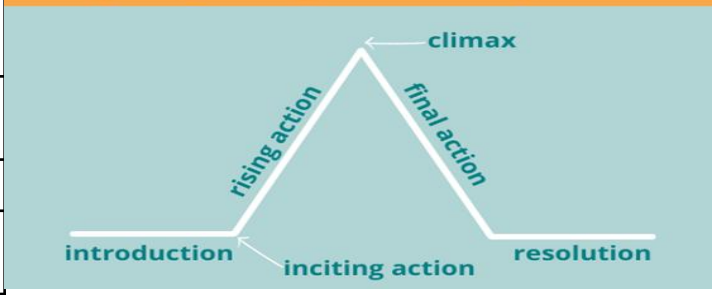
**Idealistic-** aiming for perfection where nothing bad can happen

**Turmoil:** A state of disturbance, confusion or uncertainty.

**Unrequited:** love that is not returned

**Prologue -** a part that comes at the beginning of a play, story, or long poem, often giving information about events that happened before the time when the play, story, or poem begins

## Freytag's Updated Pyramid



# Love – Knowledge Organiser

## Plot

Romeo and Juliet' takes place over the _____, and teaches us about the _____and _____. The story is about two families in the _____; the two families are called the _____ and the _____. The two families have a _____.

_____meets _____at a party, and they fall in love instantly .Despite their families' f_____, _____and _____ decide to get _____._____, a hot-headed Capulet and _____'s cousin, challenges _____ to a fight. R_____ refuses, so _____ kills R_____ friend _____ – causing R_____ to take his _____.

As a result of R_____ killing T_____, R_____ is _____from V_____and has to leave J_____ in V_____as a result. _____ is then told by her mother, who does not know of her m_____ to R_____, that she is to marry a suitor called _____.

_____ wants to be with _____ and leave _____, so she forms a plan to _____makes her appear _____. Someone would then inform Romeo that she is actually _____ and on her way to him. This plan would result in Juliet escaping her _____and also ensure she can live with Romeo. However, Romeo is not told about Juliet's 'death' being _____, and he returns to Verona believing that she is really dead. As a result of his grief over losing Juliet, Romeo _____. Juliet wakes up, sees that Romeo is _____, and takes her own life as well to be with him in _____

The _____of Romeo and Juliet make their families realise the consequences of their _____, so they decide to _____ and_____.

## Key Characters

| | |
|---|---|
| **Romeo** | |
| **Juliet** | |
| **Tybalt** | |
| **Mercutio** | |

## Form and Structure

**Rhyming couplets** -

**Sonnet -**

**Shakespearean sonnet -**

**Petrarchan sonnet -**

**Caesura –**

**Enjambment –**

**Volta –**

**Oxymoron –**

**Extended Metaphor -**

## Abstracts and Key Vocabulary

**Melancholy -**

**Fate-**

**Antithesis-**

**Tragedy-**

**Fate** -

**Conflict-**

**Feud-**

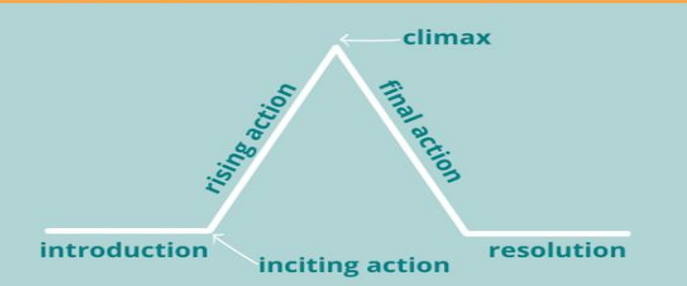
**Idealistic-**

**Turmoil-**

**Unrequited-**

**Prologue -**

## Freytag's Updated Pyramid



# Year 7 Number

## Time

60 seconds in a minute
60 minutes in an hour

12 hour – am in the morning, pm in the afternoon

24 hour – if a time is pm then add 12 hours


## Factors & Multiples

**Factors** are the integers that divide a number – they 'go into'
**Multiples** are the result of multiplying a number by integers – they are that numbers times tables

## HCF/LCM

**HCF** (highest common factor) is the largest number that is a factor of both numbers
**LCM** (lowest common multiple) is the smallest number in both numbers list of multiples

## Place Value

| Thousands | Hundreds | Tens | Ones | Tenths | Hundredths | Thousandths |
|---|---|---|---|---|---|---|

## Fractions

$\frac{3}{5}$ - Numerator
- Denominator

Shows how many parts out of the whole
Can be simplified by dividing both numerator and denominator by the same number

## Ratio

Simplify ratio like fractions

$\div 2$ ( $4 : 10$ / $2 : 5$ ) $\div 2$

Draw out boxes and split total into the number of boxes given

*Share £42 in the ratio 2:5*

| | | | | | |
|---|---|---|---|---|---|
| 2 | 6 | 6 | | | |
| 5 | 6 | 6 | 6 | 6 | 6 |

$342 \div 7 = 6$

£12 : £30

## Rounding/estimation

0, 1, 2, 3, 4 round down
5, 6, 7, 8, 9 round up
To estimate, first round all numbers to 1sf

13.679
1sf 1dp

sf – significant figure
dp – decimal place

## FDP

Decimal $\overset{\times 100}{\underset{\div 100}{\rightleftarrows}}$ Percentage

$$34\% = \frac{34}{100} \overset{\div 2}{=} \frac{17}{50}$$

$$\frac{3}{4} \overset{\times 25}{=} \frac{75}{100} = 75\%$$

## Percentages

Means 'out of 100'

| | | |
|---|---|---|
| $\div 10$ | 100% | 320 |
| | 10% | 32 |
| $\times 2$ | 20% | 64 |

You can add percentages together.
E.g. if 10% = 4 and 5%=2 then
15% = 10% + 5 % = 4+2 =6

## Squares and Cubes

| X | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 12 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 |

$0^3 = 0$
$1^3 = 1$
$2^3 = 8$
$3^3 = 27$
$4^3 = 64$
$5^3 = 125$
$6^3 = 216$
.
.
.
$10^3 = 1000$

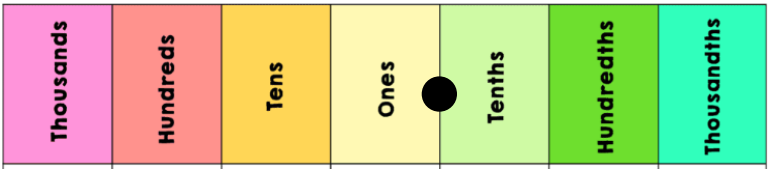
## Time

___ seconds in a minute
___ minutes in an hour


12 hour – am in the morning, pm in the afternoon

24 hour – if a time is pm then add 12 hours

## Place Value




## Rounding/estimation

0, 1, 2, 3, 4 round ____
5, 6, 7, 8, 9 round ____
To estimate, first round all numbers to ___

247.81

3rd sf =
1st dp =

## FDP

Decimal ⇄ Percentage

$20\% =$

$\frac{1}{4} =$

## Factors & Multiples

List the **Factors** of 18
List the first 6 **Multiples** of 4

# Year 7 Number Quiz

## Fractions

$\frac{3}{5}$ - Numerator
- Denominator

Shows how many parts out of the whole
Can be simplified by _____ both numerator and denominator by the same number

## Percentages

Means 'out of 100'

| **100%** | **160** |
|---|---|
| **10%** | |
| **5%** | |

You can add percentages together.
E.g. if 10% = 12 and 5%= 6 then
15% =

## HCF/LCM

**HCF** (highest common factor) is the

_____

**LCM** (lowest common multiple) is the

_____

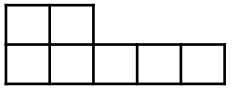
## Ratio

Simplify ratio like fractions

4 : 10

Draw out boxes and split total into the number of boxes given

*Share £70 in the ratio 2:5*



## Squares and Cubes

| X | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
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| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
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$1^3 = 1$
$2^3 = 8$
$3^3 = 27$
$4^3 = 64$
$5^3 = 125$
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.
.
.
$10^3 = 1000$

# Year 7 Algebra

## Algebraic Notation

We do not use multiplication signs: $3 \times a = 3a$

We do not use division signs: $3 \div a = \frac{3}{a}$

To collect like terms we add/subtract terms with the same coefficient and power

$3x^2 + 4x - 5 + 2x + 10x^2 - 1$

$13x^2 + 6x - 6$

## Substitution

Substitution means **replace**

If $x = 5$ we replace $x$ with 5

So $3x - 1$ becomes $3(5) - 1$

$15 - 1$

$14$

## Inverse Operations

| Operation | Inverse |
|---|---|
| Adding | Subtracting |
| Subtracting | Adding |
| Multiplying | Dividing |
| Dividing | Multiplying |

## Operations

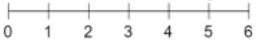
| | |
|---|---|
| Adding | *Sum, total, plus, more, …* |
| Subtracting | *Difference, fewer, less than, below, …* |
| Multiplying | *Product, lots of, times, …* |
| Dividing | *Split into, equally shared, goes into, …* |

## Inequalities

- $x < 3$ "$x$ is less than 3"
- $7 \leq y$ "7 is less than or equal to $y$"
- $e > f$ "$e$ is greater than $f$"
- $14 \geq t$ "14 is greater than or equal to $t$"

$\leq \geq$ $< >$

$x \leq 5$




$x > 3$


## Solving

- Draw a line through the equals sign
- Get rid of numbers by doing the inverse operation
- Whatever you do to one side you MUST do to the other!

$2x + 5 = 17$

$-5 \quad -5$

$2x = 12$

$\div 2 \quad \div 2$

$x = 6$

## Expanding

Opposite things

Multiplying out brackets

$3(x + 5)$ means 3 multiplied by all of $x + 5$

| × | $x$ | +5 |
|---|---|---|
| 3 | $3x$ | +15 |

Start on the outside and multiply to get the middle

**Always** write your answer separately

$3x + 15$

## Factorising

Putting into brackets

You need to to identify common factors

| × | $x$ | +7 |
|---|---|---|
| 5 | $5x$ | +35 |

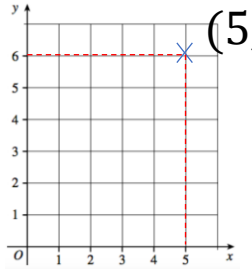
Start in the middle and get the outside

**Always** write your answer separately

$5(x - 7)$

## Coordinates

Along the corridor, up the stairs - $(x, y)$




$(5, 6)$

Midpoints:

To find the midpoint of two coordinates you need to find halfway between the $x$ values and halfway between the $y$ values.

## Sequences

$2 \quad 5, \quad 8, \quad 11, \quad 14,$

$-3 \quad +3 \quad +3 \quad +3$

Working backwards gets us to 2 which is what we add on the end

It goes up by 3 so the nth term is $3n$

$3n + 2$

# Year 7 Algebra Quiz

## Algebraic Notation

We do not use multiplication signs: $3 \times a = 3a$

We do not use division signs: $3 \div a = \frac{3}{a}$

To collect like terms we add/subtract terms with the same coefficient and power

$$5a - 7b + 2a + 10b$$

## Substitution

Substitution means **replace**

If $x = 5$ we replace $x$ with __

So $4x + 2$ becomes _____

## Inverse Operations

| Operation | Inverse |
|---|---|
| Adding | |
| Subtracting | |
| Multiplying | |
| Dividing | |

## Operations

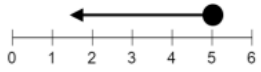
| | |
|---|---|
| Adding | |
| Subtracting | |
| Multiplying | |
| Dividing | |

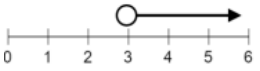
## Inequalities

- $x < 3$ "$x$ is ____ than 3"
- $7 \leq y$ "7 is less than _____ $y$"
- $e > f$ "$e$ is _____ than $f$"
- $14 \geq t$ "14 is _____ $t$"

● ≤ ≥

○ < >



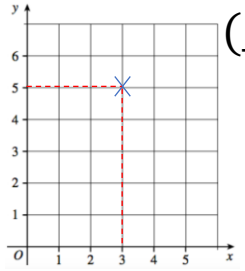

## Solving

- Draw a line through the equals sign
- Get rid of numbers by doing the inverse operation
- Whatever you do to one side you MUST do to the other!

$$5x - 11 = 4$$

## Coordinates

Along the corridor, up the stairs - $(x, y)$




(__, __)

Midpoints:

To find the midpoint of two coordinates you need to find _____ between the $x$ values and _____ between the $y$ values.

## Sequences

6, 10, 14, 18,

## Expanding

Opposite things

Multiplying out brackets

$7(x - 2)$ means __ multiplied by all of $x - 2$

| × | $x$ | $-2$ |
|---|---|---|
| $7$ | | |

Start on the outside and multiply to get the middle

**Always** write your answer separately

## Factorising

Putting into brackets

You need to to identify common factors

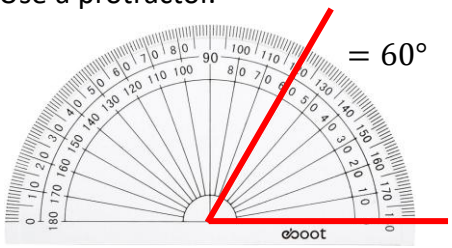
| × | | |
|---|---|---|
| | $6x$ | $+24$ |

Start in the middle and get the outside

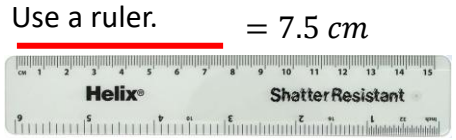
**Always** write your answer separately

# Year 7 Geometry

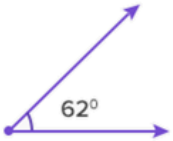
## Measuring Angles
Use a protractor.



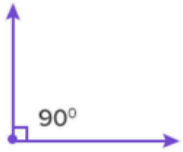

## Measuring Lines
Use a ruler.



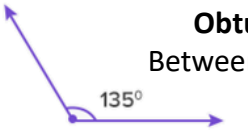

## Types of Angle



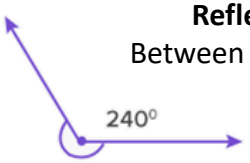

**Acute Angle**
Less than 90°




**Right Angle**
90°

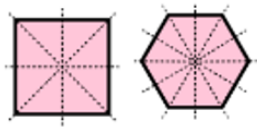



**Obtuse Angle**
Between 90° & 180°




**Reflex Angle**
Between 180° & 360°

## Symmetry



**Lines of Symmetry:**
Straight Lines that divide shapes into 2 equal parts.

**Rotational Symmetry:** The number of times a shape can 'fit into itself' when it is rotated 360° about its centre.

## Unit Conversions

1 cm = 10 mm
1 m = 100 cm
1km = 1000 m
1 litre = 1000 ml
1 kg = 1000 g

## Shapes

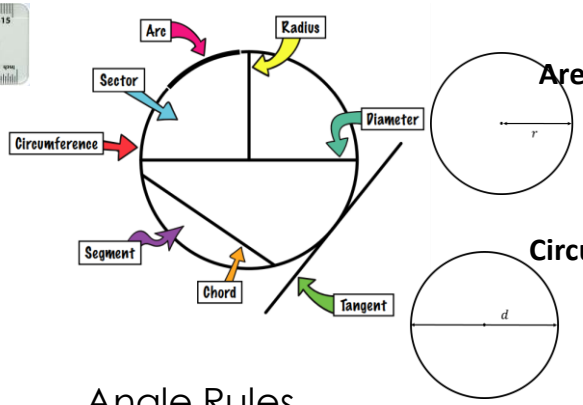
**Parallelogram:**
2 pairs of equal sides.
2 pairs of parallel sides.
2 pairs of equal angles.

**Rhombus:**
All sides equal length.
2 pairs of parallel sides.
2 pairs of equal angles.

**Trapezium:**
1 pair of parallel sides.

## Perimeter
The distance around a 2D shape.
Add all side lengths together.

## Circles



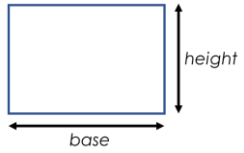

**Area of a circle:**
$A = \pi r^2$



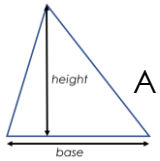

**Circumference of a circle:**
$C = \pi d$



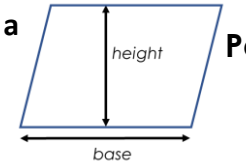

## Area
The space within a 2D shape.



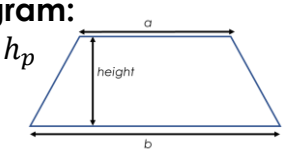

**Square/ Rectangle:**
$A = b \times h_p$




**Triangle:**
$A = \frac{1}{2} \times b \times h_p$

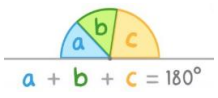



**Parallelogram:**
$A = b \times h_p$

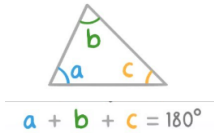



**Trapezium:**
$A = \frac{(a+b)}{2} \times h$

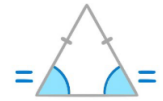
## Angle Rules



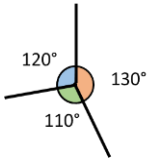

Angles on a straight line sum to 180°



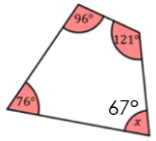

Angles in a triangle sum to 180°



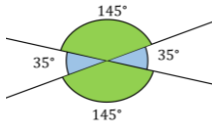
Base angles in an isosceles triangle are equal.




Angles around a point sum to 360°

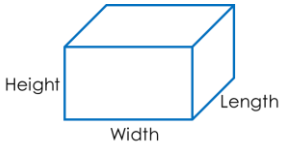



Angles in a quadrilateral sum to 360°

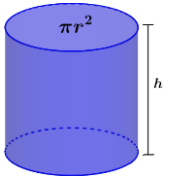



Vertically opposite angles are equal.

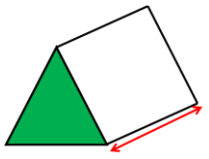
## Volume
The space within a 3D shape.

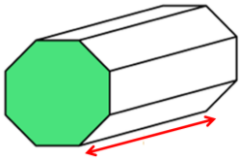



**Cuboid/Cube:**
$V = l \times w \times h$




**Cylinder:**
$V = \pi r^2 \times h$





**Prism:**
V = Area of Cross-Section x Length

## Surface Area

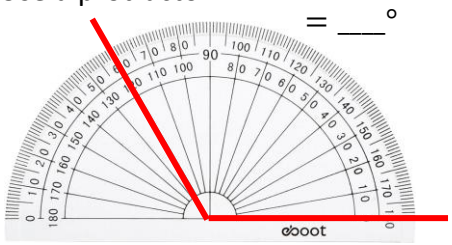
The total area of all faces of a 3D shape.

1. Find area of each face.
2. Add the areas together.

# Year 7 Geometry Quiz

## Measuring Angles

Use a protractor.



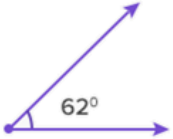

= ___°

## Measuring Lines

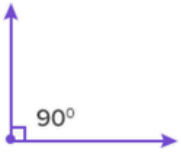
Use a ruler.

= ___ $cm$


## Types of Angle

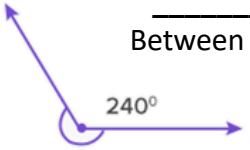



_____ **Angle**
Less than 90°



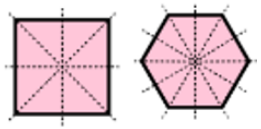

_____ **Angle**
90°


_____ **Angle**
Between 90° & 180°




_____ **Angle**
Between 180° & 360°

## Symmetry



**Lines of Symmetry:**
Straight Lines that
_____
_____.

**Rotational Symmetry:** The number of times a shape can '_____' when it is rotated 360° about its centre.

## Unit Conversions

1 cm = ___ mm
1 m = ____ cm
1km = _____ m
1 litre = ____ ml
1 kg = _____ g

## Shapes

**Parallelogram:**
__ pairs of equal sides.
__ pairs of parallel sides.
___ pairs of equal angles.

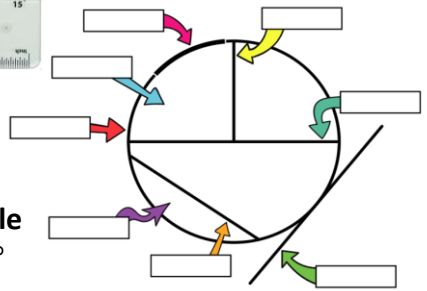
**Rhombus:**
___ sides equal length.
__ pairs of parallel sides.
__ pairs of equal angles.

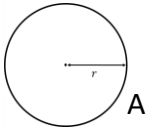
**Trapezium:**
__ pair of parallel sides.

## Perimeter

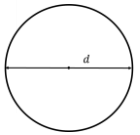
The _____ around a 2D shape.
Add all side lengths together.

## Circles





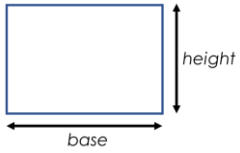
**Area of a circle:**
A =



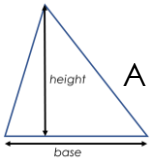
**Circumference of a circle:**
C =

## Area

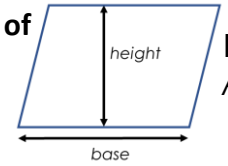
The space within a 2D shape.



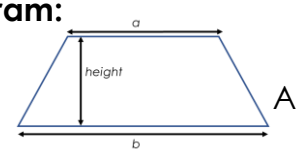

**Square/ Rectangle:**
A =




**Triangle:**
A =

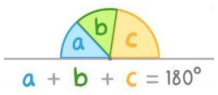



**Parallelogram:**
A =

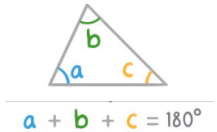



**Trapezium:**
A =

## Angle Rules

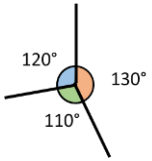



Angles on a straight line
_____°

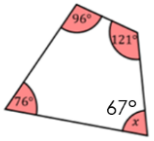



Angles in a triangle
_____°

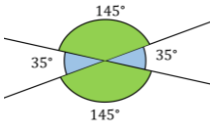
Base angles in an isosceles triangle are
_____.




Angles around a point
_____°



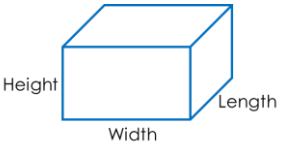

Angles in a quadrilateral
_____°



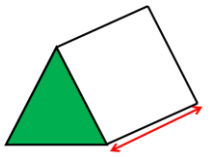

Vertically opposite angles are
_____

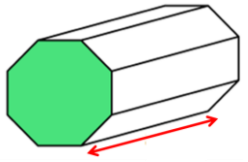
## Volume

The space within a 3D shape.

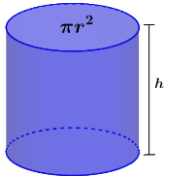



**Cuboid/Cube:**
$V$ =





**Prism:**
V =




**Cylinder:**
$V$ =

## Surface Area

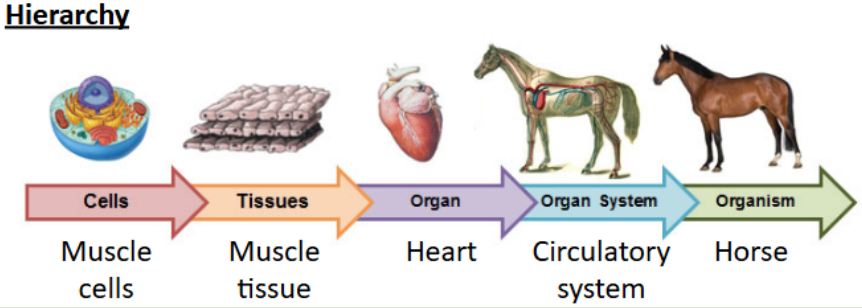
The total area of all faces of a 3D shape.

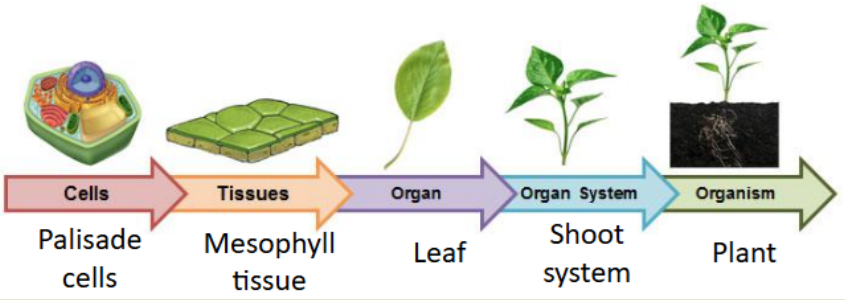
1. Find area of each face.
2. Add the areas together.

# Y7 Biology - Organisation

Cells are the building blocks of life. Cells rarely work alone.

## Hierarchy

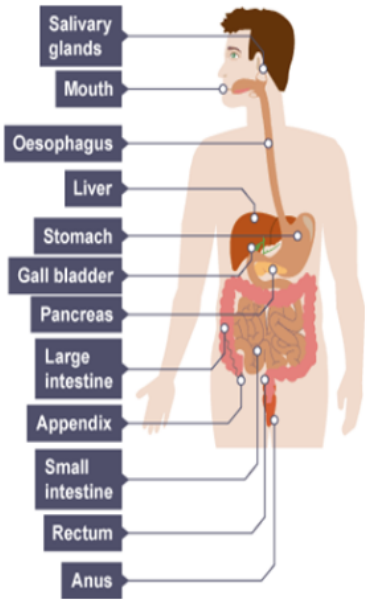



## The digestive system

Food is digested in the digestive system, this is an organ system.

- The mouth has teeth that mechanically digest the food
- The mouth also has a salivary gland that releases enzymes to break the food down.
- The oesophagus is a muscular tube that pushes the food into the stomach.
- The stomach churns the food up, while also adding acid and enzymes to break the food down.



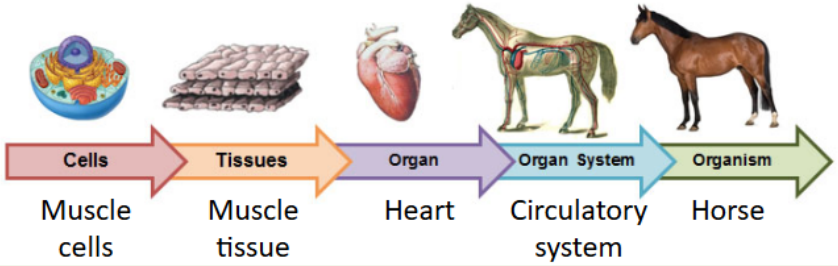

- In the small intestine, food is broken down further and is absorbed thorough the walls of the intestine into the blood.
- The large intestine absorbs any remaining water
- Finally the food passes through the anus as faeces

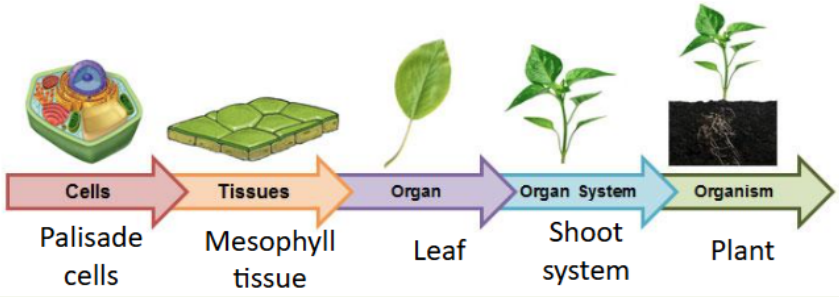
| Key Terms | Definitions |
|---|---|
| Cell | The building block of life and the smallest structural unit of an organism |
| Tissue | A group of cells working together to perform a particular function |
| Organ | A group of tissues working together to perform a particular function |
| Organ system | A group of organs working together to perform a particular function |
| Organism | An individual animal, plant, or single-celled life form |
| Digestive System | The organ system that breaks down food into small pieces |
| Mechanical Digestion | When large pieces of food are broken down into smaller ones (e.g. by chewing) |
| Chemical Digestion | When food is broken down into small, soluble chemicals, enzymes help with this |
| Enzymes | Proteins that break large pieces of food into smaller pieces |

# Y7 Biology - Organisation

Cells are the building blocks of life. Cells rarely work alone.

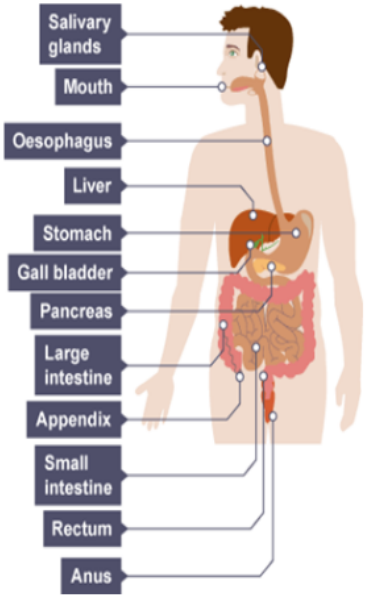
## Hierarchy




## The digestive system

Food is digested in the digestive system, this is an ..... .....




- The mouth has teeth that mechanically digest the food
- The mouth also has a salivary gland that releases enzymes to break the food down.
- The ..... is a muscular tube that pushes the food into the .....
- The stomach churns the food up, while also adding acid and enzymes to break the food down.
- In the small intestine, food is broken down further and is ..... through the ..... of the intestine into the .....
- The large intestine absorbs any remaining .....
- Finally the food passes through the anus as faeces

| Key Terms | Definitions |
|---|---|
| | The building block of life and the smallest structural unit of an organism |
| Tissue | A group of ..... working together to perform a particular function |
| Organ | A group of ..... working together to perform a particular function |
| ..... | A group of organs working together to perform a particular function |
| Organism | An individual animal, plant, or single-celled life form |
| Digestive System | The organ system that breaks down ..... into small pieces |
| Mechanical Digestion | When ..... pieces of food are broken down into ..... ones (e.g. by chewing) |
| Chemical Digestion | When food is broken down into ....., ..... chemicals, enzymes help with this |
| ..... | Proteins that break large pieces of food into smaller pieces |

# Y7 Biology - Organisation

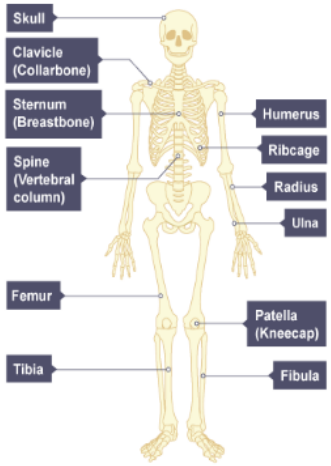
## The skeletal system

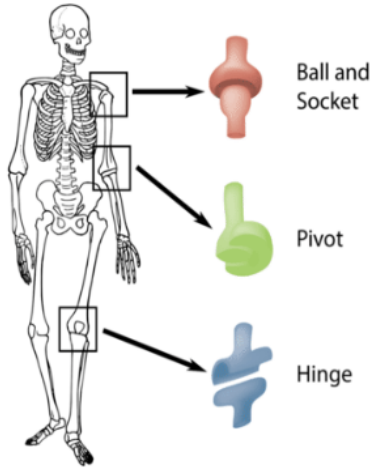
The skeletal system is made of bones and joints.

It is sometimes called the skeleton

The skeletal system has 4 main functions:

- ❑ To allow movement
- ❑ To provide support
- ❑ To protect
- ❑ To produce blood cells.




## Joints

Joints can consist of connective tissues :

Cartilage protects the ends of bones

Tendons connect muscle to bone

Ligaments connect bone to bone

Synovial fluid provides lubrication within the joint

There are different types of joints, for example:

- ❑ **Ball and socket joint**s (in your hip or shoulder)
- ❑ **Pivot joints** (let you turn your neck or rotate your forearm)
- ❑ **Hinge joints** (in your elbow or knee)
- ❑ **Fixed joints** ( found in your skull)

| Key Terms | Definitions |
|---|---|
| Connective Tissue | Tissue that connects or supports other tissues or organs e.g. ligaments, cartilage or tendons |
| Ligaments | Stabilises joints, connects bones to other bones |
| Cartilage | Connective tissue which is found at the end of bones to cover and protect them. |
| Tendons | Connects muscles to the skeletal system. |
| Antagonistic Pairs | Pairs of muscles where each opposes the movement of the other e.g. biceps and triceps |
| Stimulus | A specific event which leads to a reaction. |
| Central Nervous System (CNS) | The brain and the spinal cord. |

Nervous system:

- Muscles are controlled by nerves.
- Nerves are stimulated by changes in the environment .
- Nerve cells then carry electrical signals to and from the central nervous system.
- Some responses are automatic (reflexes) and others are conscious.

A Balanced diet includes :

- Carbohydrates
- Minerals
- Vitamins
- Proteins
- Fibre
- fats

# Y7 Biology - Organisation

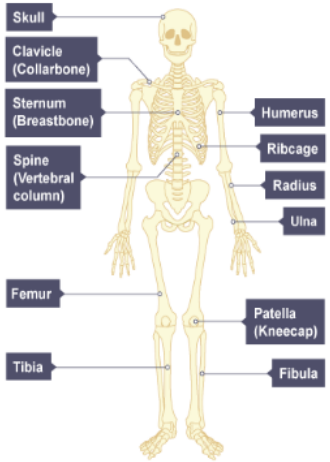
## The skeletal system

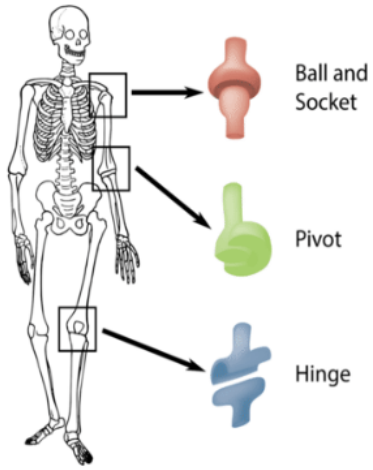
The skeletal system is made of ..... and .....

It is sometimes called the skeleton

The skeletal system has 4 main functions:

- ❑ To allow .....
- ❑ To provide .....
- ❑ To .....
- ❑ To produce .....

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Tendons connect muscle to bone

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- ❑ **Ball and socket joint**s (in your ..... or .....)
- ❑ ..... **joints** (let you turn your neck or rotate your forearm)
- ❑ **Hinge joints** (in your ..... Or .....)
- ❑ ..... **joints** ( found in your skull)

| Key Terms | Definitions |
|---|---|
| ..... ..... | Tissue that connects or supports other tissues or organs e.g. ligaments, cartilage or tendons |
| Ligaments | Stabilises ....., connects ..... to other ..... |
| Cartilage | ..... which is found at the end of ..... to cover and protect them. |
| Tendons | Connects ..... to the ..... system. |
| ..... ..... | Pairs of muscles where each opposes the movement of the other e.g. ..... and ..... |
| Stimulus | A specific event which leads to a reaction. |
| ..... ..... ..... (CNS) | The brain and the spinal cord. |

Nervous system:

- ..... are controlled by .....
- Nerves are stimulated by ..... in the environment .
- Nerve cells then carry ..... ..... to and from the central nervous system.
- Some responses are ..... (reflexes) and others are .....

A Balanced diet includes :

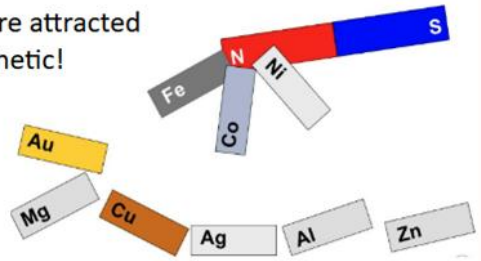
- C.....
- M.....
- V.....
- P.....
- F.....
- f.....

# Year 7 Physics Knowledge Organiser - Electricity and magnetism

**Magnetic materials**: Not many materials are attracted to magnets and most metals are NOT magnetic!

**Iron**, **cobalt** and **nickel** are magnetic metal elements.

**Steel** is also magnetic as it is a mixture containing mostly iron.




**Magnetic poles:** All magnets have a north pole and a south pole.

Opposite poles attract.

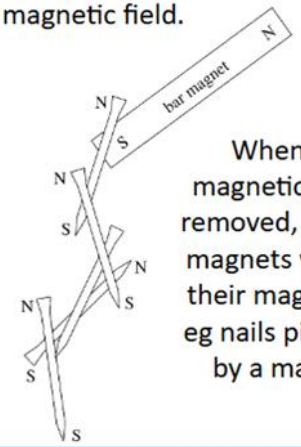

Like poles repel.


| Key Terms | Definitions |
|---|---|
| **Magnetism** | A property of some materials to exert a force on other magnetic materials. |
| **Attract** | Force that pulls two objects together. |
| **Repel** | Force that pushes two objects apart. |
| **Magnetic poles** | All magnets have a north pole and a south pole. |
| **Permanent magnet** | Permanent magnets always have magnetic properties. |
| **Induced magnet** | Induced magnets only act as magnets when they are in a magnetic field. |
| **Magnetic field** | The area around a magnet that the force acts. |
| **Magnetic compass** | A magnetic compass always points along field lines in the direction of north. |

A magnetic **compass** contains a small bar magnet (the needle). A nearby magnet field will cause the needle to move in line with the magnetic field.

**Permanent magnets** always have magnetic properties.

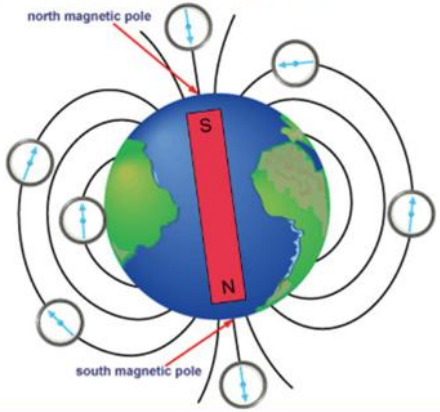
Magnetic materials become **induced magnets** when they are in a magnetic field.




When the magnetic field is removed, induced magnets will lose their magnetism, eg nails picked up by a magnet.

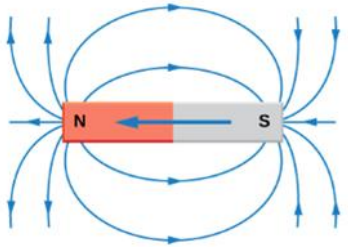
The earth has a molten iron core which causes a magnetic field.

If there are no other magnets nearby, a compass needle points in the direction of the **Earth's magnetic field**.

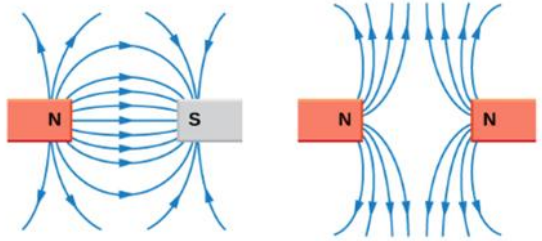



The area around a magnet where its force can affect other magnetic objects is called the **magnetic field**.

The magnetic field is invisible but we can use a compass or iron filings to view the shape of the field.




Field lines always point from north to south.




The magnet fields of attracting magnets line up, while the magnetic fields of repelling magnets do not.

# Year 7 Physics Knowledge Organiser - Electricity and magnetism

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....., ..... and ..... are magnetic metal elements.

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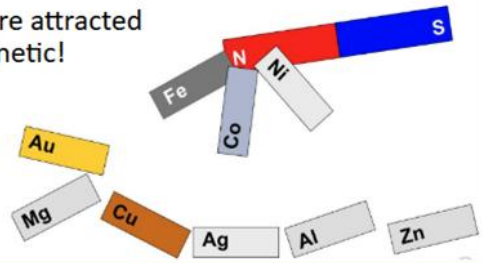



**Magnetic poles:** All magnets have a ..... pole and a ..... pole.

Opposite poles ..... 



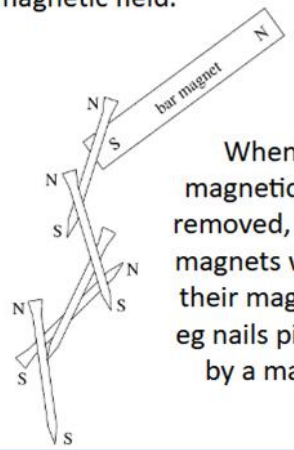
..... poles repel.


| Key Terms | Definitions |
|---|---|
| **Magnetism** | A property of some materials to exert a ..... on other magnetic materials. |
| ..... | Force that pulls two objects together. |
| ..... | Force that pushes two objects apart. |
| **Magnetic poles** | All magnets have a ..... pole and a ..... pole. |
| ..... **magnet** | ..... magnets always have magnetic properties. |
| **Induced magnet** | Induced magnets only act as magnets when they are in a ..... ..... |
| **Magnetic field** | The ..... around a magnet that the force acts. |
| **Magnetic compass** | A magnetic compass always points along field lines in the direction of ..... |

A magnetic **compass** contains a small ..... ..... (the needle). A nearby magnet field will cause the needle to move in line with the magnetic field.

**Permanent magnets** ..... have magnetic properties.

Magnetic materials become ..... **magnets** when they are in a magnetic field.

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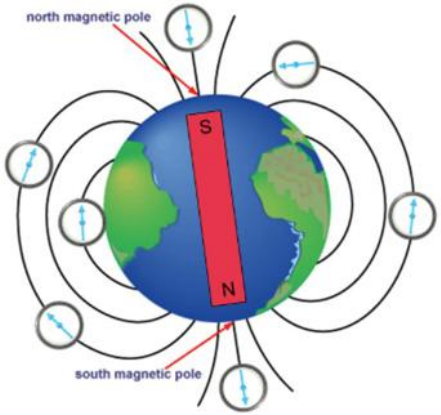
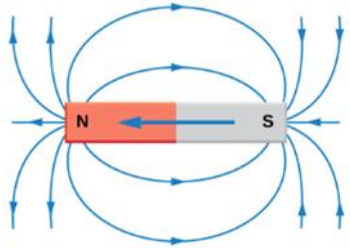
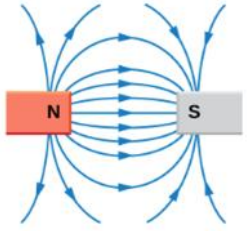


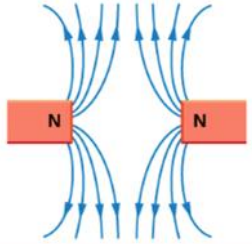

The area around a magnet where its ..... can affect other ..... objects is called the **magnetic field**.

The magnetic field is invisible but we can use a ..... or ..... ..... to view the shape of the field.




Field lines always point from ..... to .....




The magnet fields of ..... magnets line up, while the magnetic fields of ..... magnets do not.

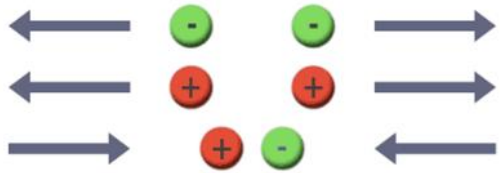
# Year 7 Physics Knowledge Organiser - Electricity and magnetism

Some particles are charged.

**Charge** can be positive (+), negative (-), or neutral (0).

Like charges repel.

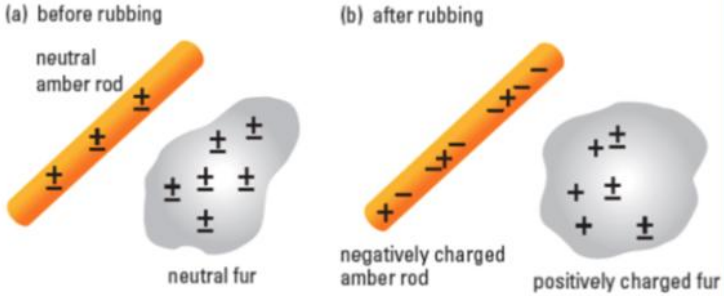
Opposite charges attract.



## Charging objects with friction:

**Electrical insulators** can become charged.

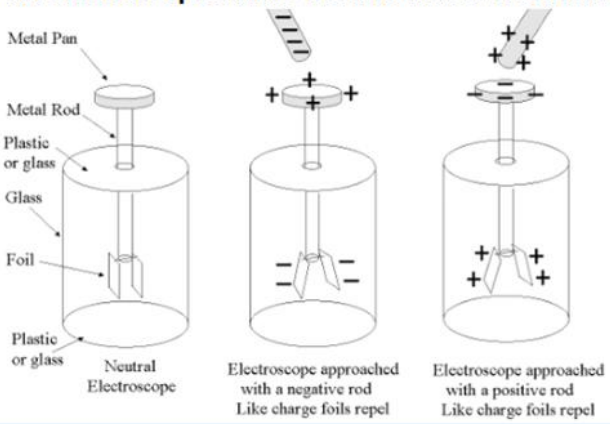
An object that is rubbed can become charged **by gaining OR losing electrons** because of the friction force.




An object that loses electrons becomes positive (+)

An object that gains electrons becomes negative (-)

An **electroscope** can be used to detect electrical charge on objects.




A positively charged object will attract electrons from the foil leaves and onto the metal pan.

This makes the foil leaves positively charged so they repel each other.

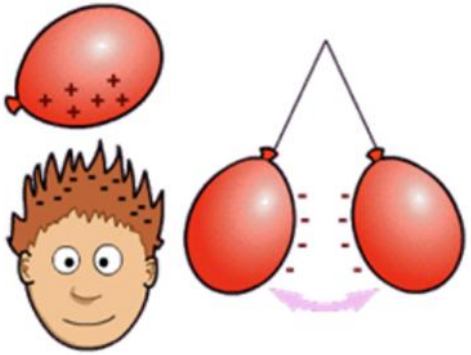
The bigger the charge, the more the foil leaves repel each other.

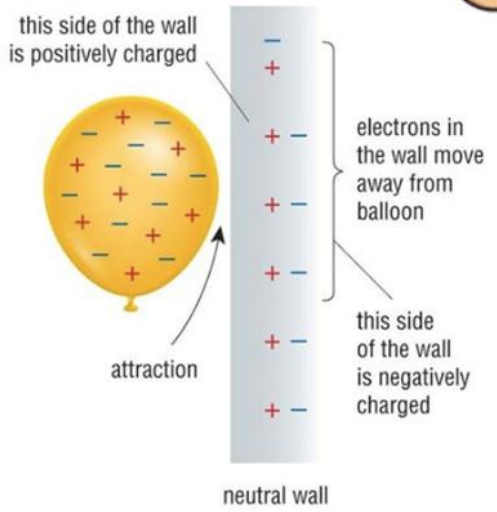
| Key Terms | Definitions |
|---|---|
| **Charge** | A property of some particles, which causes them to experience a force when they are near others. Charge can be **positive**, **negative** or **neutral**. |
| **Electron** | A particle with a **negative charge**. |
| **Electrical insulator** | A material that prevents the flow of electrons. |
| **Electrical conductor** | A material that allows the flow of electrons. |
| **Static electricity** | This occurs when the positive and negative charges on an electrical insulator are unbalanced. |
| **Electroscope** | An instrument that can be used to detect electrical charge. |

## Charged objects and forces

Objects with opposite charges are attracted to one another.

Objects with the same static charge will repel each other.






A charged object can be attracted to a neutral object.

Electrons near the surface of the neutral object move when the charged object is brought near it.

This causes the surface of the neutral object to be charged so that attraction can occur.

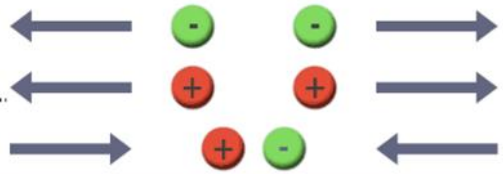
# Year 7 Physics Knowledge Organiser - Electricity and magnetism

Some particles are charged.

**Charge** can be ..... (+), ..... (-), or ..... (0).

Like charges .....

Opposite charges .....



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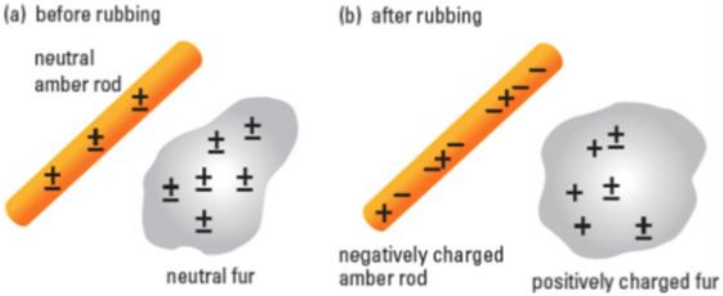


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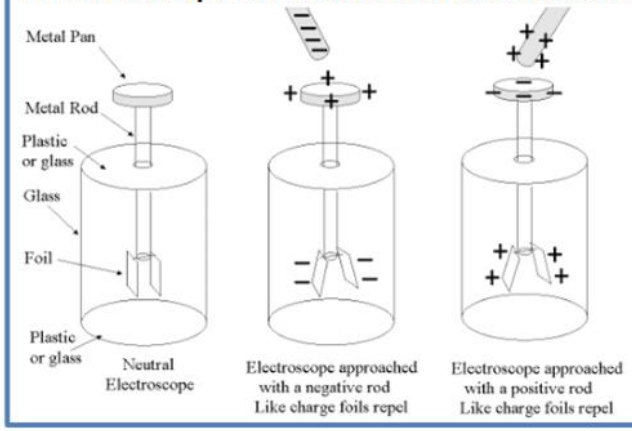


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The ..... the charge, the more the foil leaves repel each other.

| Key Terms | Definitions |
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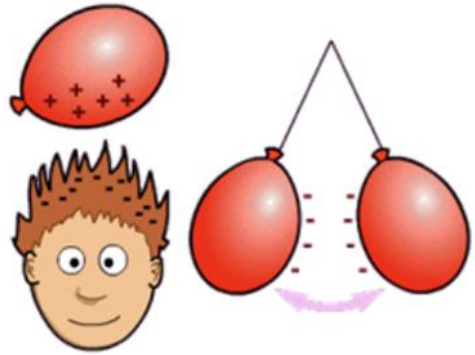
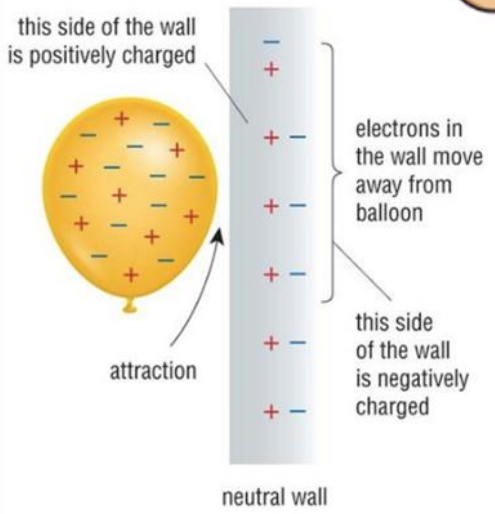





A charged object can be attracted to a neutral object.

Electrons near the surface of the neutral object move when the charged object is brought near it.

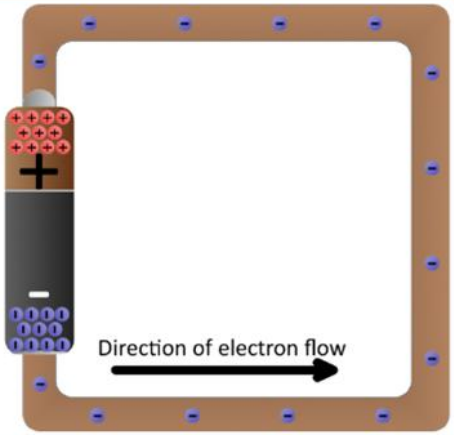
This causes the surface of the neutral object to be charged so that attraction can occur.

# Year 7 Physics Knowledge Organiser - Electricity and magnetism

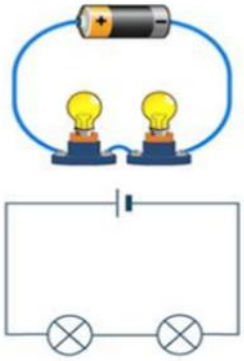
**Electrical current** is a flow of electrical charge.

Electrical conductors allow electrons to flow through them.

A cell or battery sets up the difference in charge in the circuit, which causes electrons to flow from the negative charge towards the positive charge.



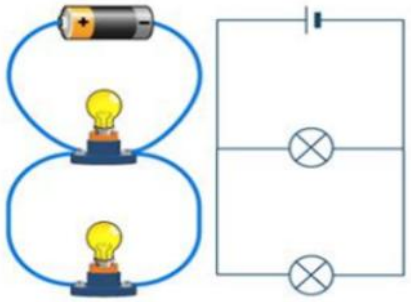

**Drawing circuit diagrams**: to make circuits easier to understand, we use symbols for the components that are recognised across the world and draw the connecting wires as straight lines.



**Series circuits** contain only one loop or path for the current to flow.

The more bulbs you put in the circuit, the dimmer the bulbs get.

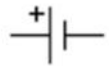
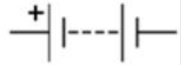
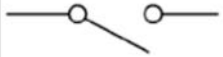
If one bulb breaks, the whole circuit stops working.



**Parallel circuits** contain more than one loop or path for the current to flow.

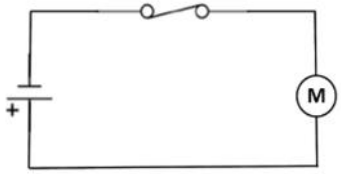
Adding new bulbs to the circuit in their own loop (connected in parallel) does not affect the brightness of other bulbs in the circuit.

If one bulb breaks, the rest of the circuit still works!

| Key Terms | Definitions |
|---|---|
| **Electrical current** | A flow of electrical charge. |
| **Cell**  | A chemical store of energy that can cause an electrical current to flow in a circuit. |
| **Battery**  | Two or more electrical cells working together. |
| **Connecting lead** | A metal wire that allows current to flow through it easily. |
| **Lamp / bulb**  | A filament lamp contains a tiny wire that heats up when a current flows through it which emits light. |
| **Open switch**  | This provides a break in an electrical circuit so that current cannot flow. |
| **Closed switch**  | This connects the electrical circuit and allows current to flow. |
| **Series circuit** | An electrical circuit where all the components are connected in one loop. |
| **Parallel circuit** | An electrical circuit containing more than one loop or path for the current to flow. |
| **Energy pathway** | A way of transferring energy from one store to another, for example electrical current. |

Electrical current is an **energy pathway** – it transfers or shifts energy from one store to another. We call this electrical working (or electrical work done).

eg this circuit transfers energy from the cell (a chemical store) to the motor (a kinetic store)

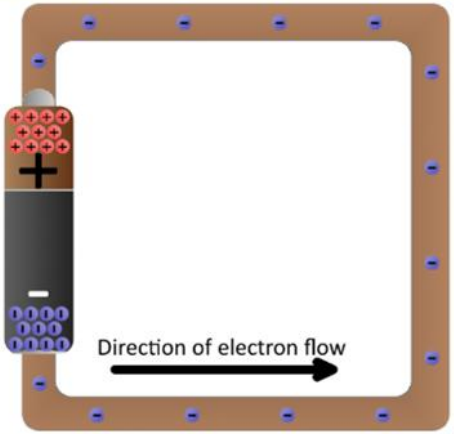


# Year 7 Physics Knowledge Organiser - Electricity and magnetism

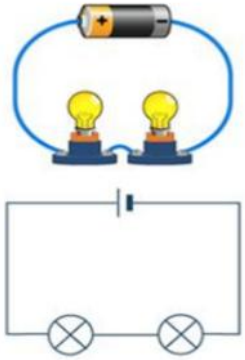
**Electrical current** is a flow of electrical charge.

Electrical conductors allow electrons to flow through them.

A cell or battery sets up the difference in charge in the circuit, which causes electrons to flow from the negative charge towards the positive charge.



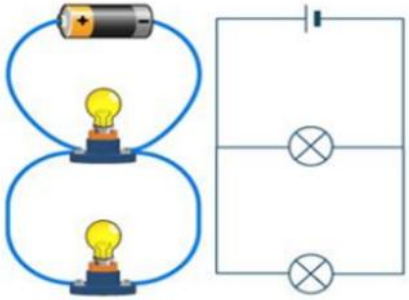

**Drawing circuit diagrams**: to make circuits easier to understand, we use symbols for the components that are recognised across the world and draw the connecting wires as straight lines.



**Series circuits** contain only one loop or path for the current to flow.

The more bulbs you put in the circuit, the dimmer the bulbs get.

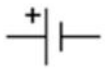
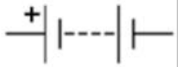
If one bulb breaks, the whole circuit stops working.



**Parallel circuits** contain more than one loop or path for the current to flow.

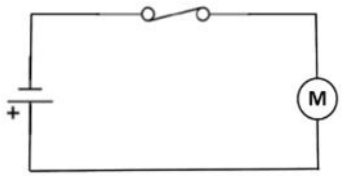
Adding new bulbs to the circuit in their own loop (connected in parallel) does not affect the brightness of other bulbs in the circuit.

If one bulb breaks, the rest of the circuit still works!

| Key Terms | Definitions |
|---|---|
| **Electrical current** | A ..... of electrical charge. |
| **Cell**  | A ..... store of energy that can cause an electrical current to flow in a circuit. |
| **.....**  | Two or more electrical cells working together. |
| **Connecting lead**  | A metal wire that ..... current to flow through it easily. |
| **Lamp / bulb**  | A filament lamp contains a tiny wire that ..... ..... when a current flows through it which emits ..... |
| **Open switch**  | This provides a ..... in an electrical circuit so that current cannot flow. |
| **Closed switch**  | This connects the electrical circuit and allows current to flow. |
| **..... circuit** | An electrical circuit where all the components are connected in one loop. |
| **Parallel circuit** | An electrical circuit containing more than one l..... or p..... for the current to flow. |
| **Energy .....** | A way of ..... energy from one store to another, for example electrical current. |

Electrical current is an **energy .....** – it transfers or shifts energy from one store to another. We call this electrical .....(or electrical ..... .....).

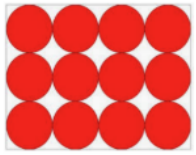
eg this circuit transfers energy from the ..... (a chemical store) to the ..... (a kinetic store)



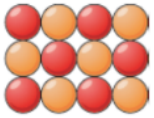
# Year 7 Chemistry Knowledge Organiser – Elements and Compounds

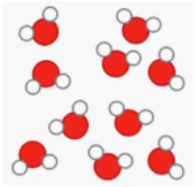
The atoms in the diagram are all the same **colour** and **size**, showing that they are the same type of element.

The diagram shows a solid element, such as sodium, carbon or copper.



The diagram shows a gaseous element, such as oxygen, nitrogen or chlorine.





Both diagrams show compounds because the atoms are different **colours** and, on the lower diagram, different **sizes**.

The properties of **metals** are:

- High melting point
- Conductor of electricity and heat
- Malleable

The properties of **nonmetals** are:

-low melting and boiling point

-insulator

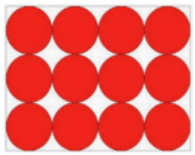
-brittle

| Key Terms | Definitions |
|---|---|
| **Atom** | Atoms are the smallest units of matter that have the properties of an element. |
| **Element** | - Elements are substances made of one type of atom. |
| **Compound** | Compounds are substances made of two or more different elements chemically bonded together. |
| **Scientific model** | A way of understanding a scientific concept that usually involves simplifying the concept. |
| **Property** | A way of describing how a chemical acts or behaves. |
| **Malleable** | Can be hammered or pressed into shape without breaking or cracking. |
| **Conductor** | Allow electricity or heat to pass through. |
| **Atomic mass** | The number of protons and neutrons in an atom |
| **Atomic weight** | How much an atom of that element weighs |

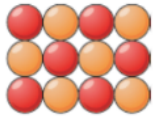
# Year 7 Chemistry Knowledge Organiser – Elements and Compounds

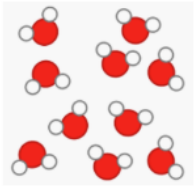
The atoms in the diagram are all the same ..... and **.....**, showing that they are the same type of .....

The diagram shows a solid ....., such as sodium, carbon or copper.



The diagram shows a ..... element, such as oxygen, nitrogen or chlorine.





Both diagrams show .....because the atoms are different **colours** and, on the lower diagram, different **sizes**.

The properties of **metals** are:

- ..... melting point
- Conductor of ..... and .....
- M.....

The properties of **nonmetals** are:

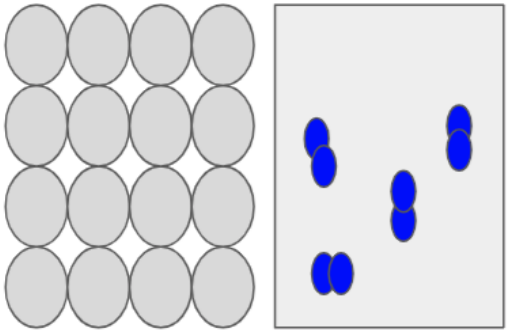
-low ..... and boiling point

-.....

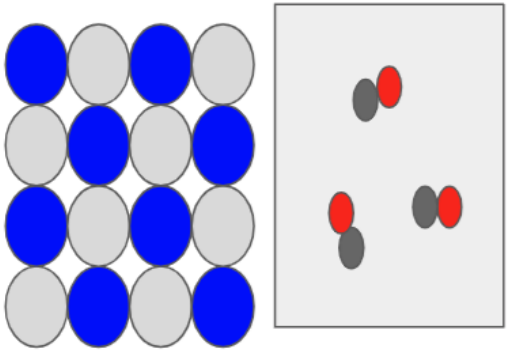
-b.....

| Key Terms | Definitions |
|---|---|
| ..... | ..... are the smallest units of matter that have the properties of an element. |
| **Element** | Elements are substances made of ..... of atom. |
| **Compound** | Compounds are ..... made of two or more different ..... chemically bonded together. |
| **S.....** | A way of understanding a scientific concept that usually involves simplifying the concept. |
| ..... | A way of describing how a chemical acts or behaves. |
| **Malleable** | Can be hammered or pressed into shape without ..... or ..... |
| **C.....** | Allow electricity or heat to pass through. |
| **Atomic mass** | The mass of an atom. Each element has a different mass. |

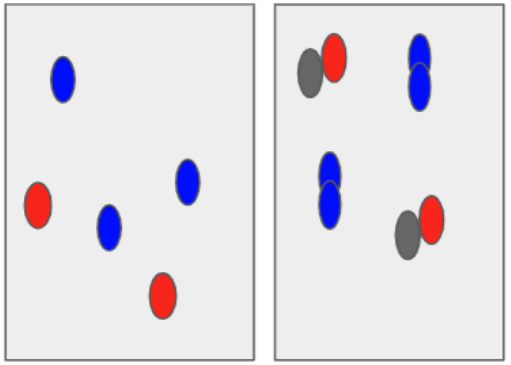
- An element is made up of only one type of atom
- All the atoms have the same number of protons
- Can be many atoms bonded together but all are the same kind of atom
- Example: Carbon, Hydrogen, $O_2$



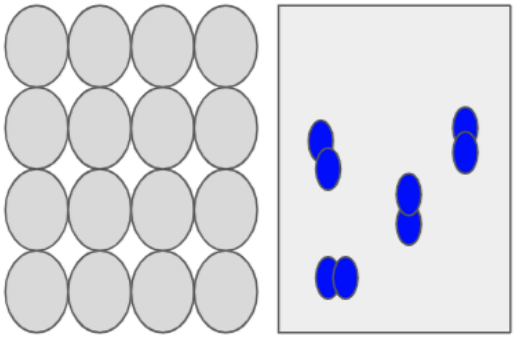
- A compound is two or more elements chemically joined together
- Example: Sodium Chloride NaCl



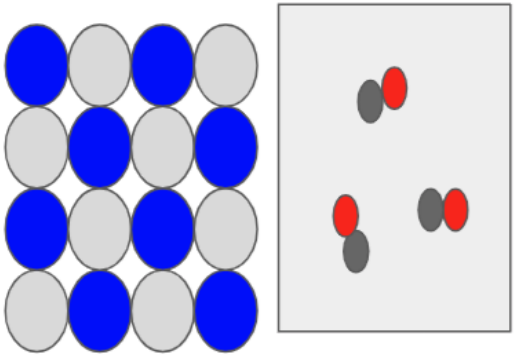
- A mixture is two or more different substances not chemically joined together
- Can be mixtures of compounds, elements, elements and compounds.
- Example: Steel, Orange juice, Wood



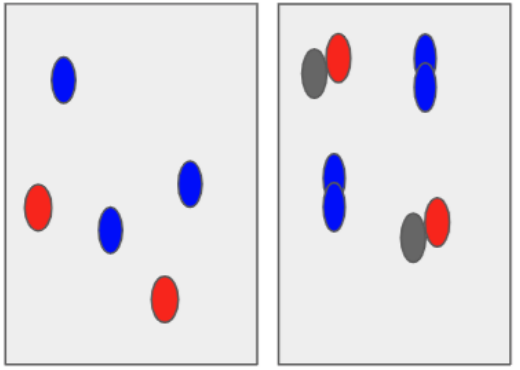
- An ……. is made up of only one type of …….
- All the atoms have …… ……. number of protons
- Can be many atoms bonded together but all are the same kind of atom
- Example: Carbon, H……., $O_2$



- A compound is ……. or more elements ……. joined together
- Example: Sodium Chloride NaCl



- A mixture is two or more ……. substances not ……. ……. …….
- Can be mixtures of ……., ……., ……. ….. …….
- Example: Steel, Orange juice, Wood

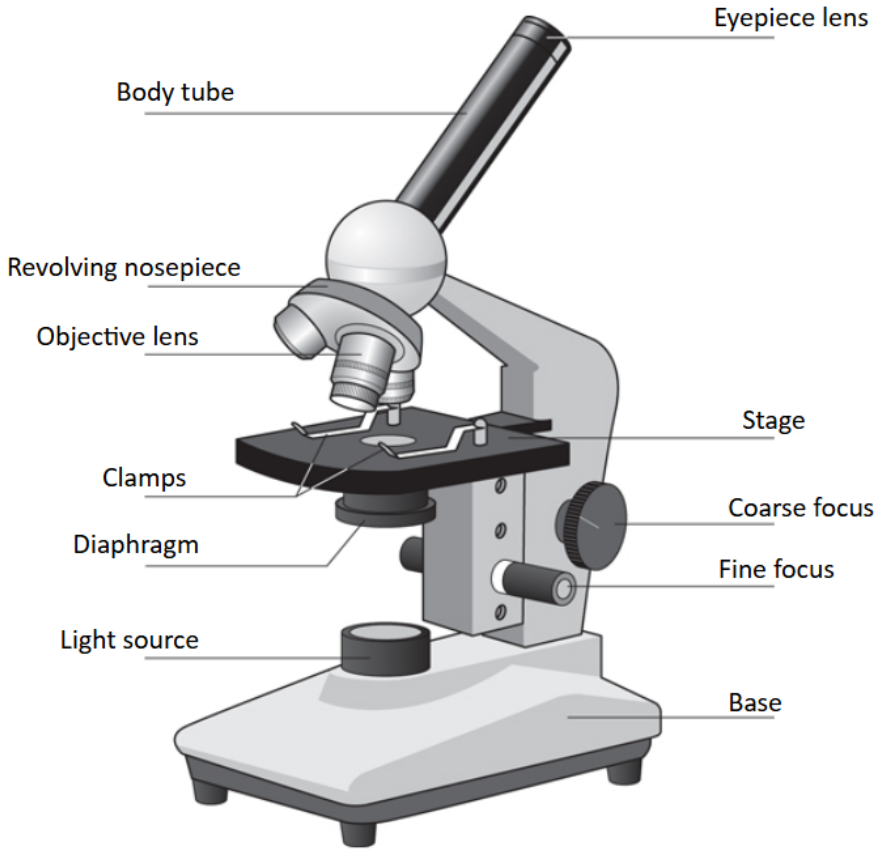


| Name | Explanation |
| --- | --- |
| Chromatography | Different substances have different solubilities , the more soluble a substance the more it will move up the chromatography paper |
| Distillation | Separating a solvent from a solution through evaporation followed by condensation |
| Fractional distillation | Different substances have different boiling points, by heating a substance to a variety of temperature you can separate liquids by evaporating them. |
| Crystallisation | Separating a solvent from a solution by evaporating away the solvent |
| filtration | Insoluble solids will be left on top of filter paper but the solvent and soluble solids will pass through |
| soluble | Substance that will dissolve |
| insoluble | Substance that will not dissolve |
| solution | A mixture of a solute and solvent |
| solute | A solid that has been dissolved in a liquid |
| solvent | A liquid that had been used to dissolve a solid |

| Name | Explanation |
|---|---|
| | Different substances have different ……., the ……. soluble a substance the more it will move up the chromatography paper |
| Distillation | Separating a solvent from a solution through …….followed by …… |
| | Different substances have different boiling points, by heating a substance to a variety of temperature you can separate liquids by evaporating them. |
| Crystallisation | Separating a solvent from a solution by ……. away the …… |
| | ……. ……. will be left on top of filter paper but the solvent and soluble solids will pass through |
| | Substance that will dissolve |
| insoluble | Substance that ……. ……. dissolve |
| solution | A mixture of a ……. and ……. |
| solute | A solid that has been …….in a liquid |
| solvent | A ……. that had been used to dissolve a ……. |

# Year 7 Biology Knowledge Organiser
# The Cell

## Parts of a microscope




| Key Terms | Function |
|---|---|
| Stage | Area where specimen is placed |
| Clamps | Hold the specimen still whilst it is being viewed |
| Light source | Illuminates the specimen |
| Objective lens | Magnifies the image of the specimen |
| Eyepiece lens | Magnifies the image of the specimen |
| Coarse/fine focus | Used to focus the specimen so it can be seen clearly |
| Revolving nosepiece | Holds 2 or more objective lenses |

## Magnification

Image size = Actual size **x** Magnification

## Using a microscope

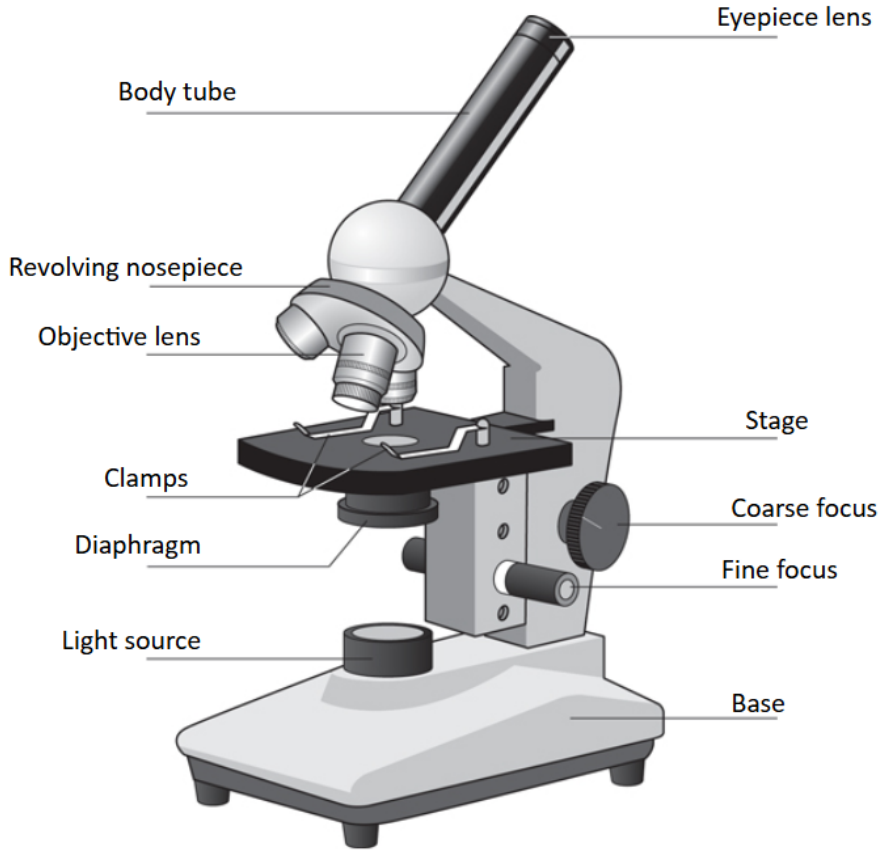
To view an object down the microscope we can use the following steps:

1. Plug in the microscope and turn on the power
2. Rotate the objectives and select the lowest power
3. Place the specimen to be viewed on the stage and clamp in place
4. Adjust the coarse focus until the specimen comes into view
5. Adjust the fine focus until the specimen becomes clear
6. To view the specimen in more detail repeat the process using a higher power objective

# Year 7 Biology Knowledge Organiser
# The Cell

| Key Terms | Function |
|---|---|
| ……. | Area where specimen is ……. |
| ……. | Hold the specimen still whilst it is being viewed |
| ……. ……. | Illuminates the specimen |
| Objective lens | Magnifies the image of the specimen |
| Eyepiece lens | …… …….. …… …… …….. |
| Coarse/fine focus | Used to …… the specimen so it can be seen clearly |
| …… nosepiece | Holds 2 or more objective lenses |

## Parts of a microscope




## Magnification

Image size = …… …… **x** ……

## Using a microscope

To view an object down the microscope we can use the following steps:

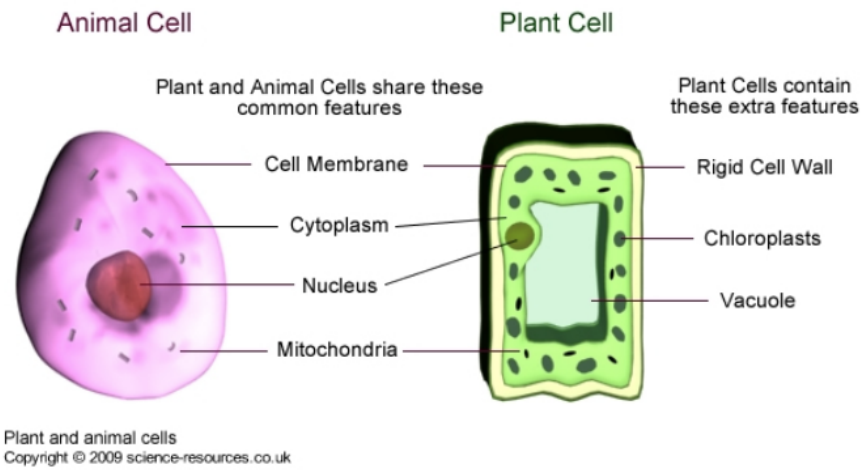
1. Plug in the microscope and turn on the power
2. Rotate the rotating nosepiece' and select the …… magnification …… lens
3. Place the specimen to be viewed on the ……. and ……in place
4. Adjust the …… …… until the s…… comes into view
5. Adjust the …… …… until the …… becomes clear
6. To view the specimen in more detail repeat the process using a higher power objective

# Year 7 Biology Knowledge Organiser
# The Cell

| Key Terms | Definition |
|---|---|
| Cell wall | Made of cellulose, which supports the cell |
| Cell membrane | Controls movement of substances into and out of the cell |
| Cytoplasm | Jelly-like substance, where chemical reactions happen |
| Nucleus | Contains genetic information and controls what happens inside the cell |
| Vacuole | Contains a liquid called cell sap, which keeps the cell firm |
| Mitochondria | Where most respiration reactions happen (glucose + oxygen → carbon dioxide + water) |
| Chloroplast | Where photosynthesis happens (carbon dioxide + water → glucose + oxygen) |

## Cells

Cells are the building blocks of all living organisms



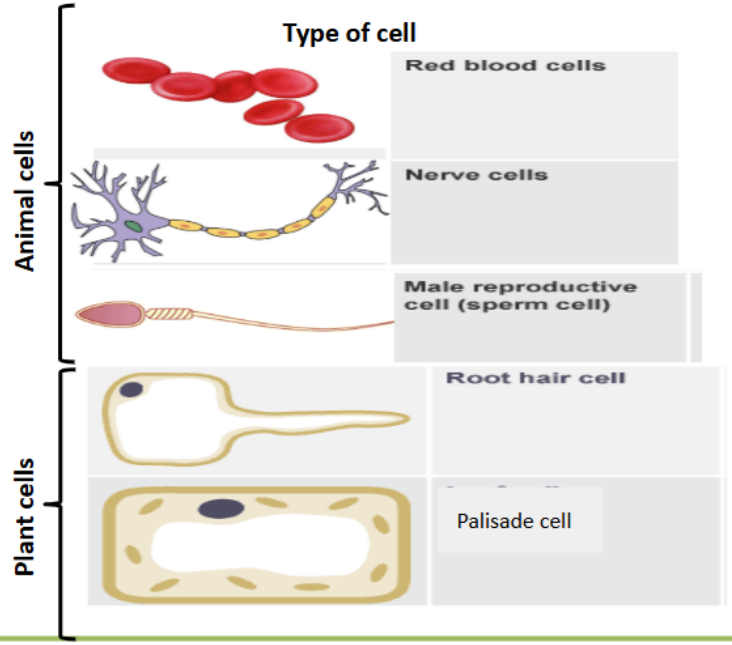

## Preparing a microscope slide

To prepare a slide to view onion cells we can use the following steps:

1. cut open an onion
2. use forceps to peel a thin layer from the inside
3. spread out the layer on a microscope slide
4. add a drop of iodine solution to the layer
5. carefully place a cover slip over the layer

## Specialised cells

Specialised cells are found in multicellular organisms. Each specialised cell has a particular function within the organism.

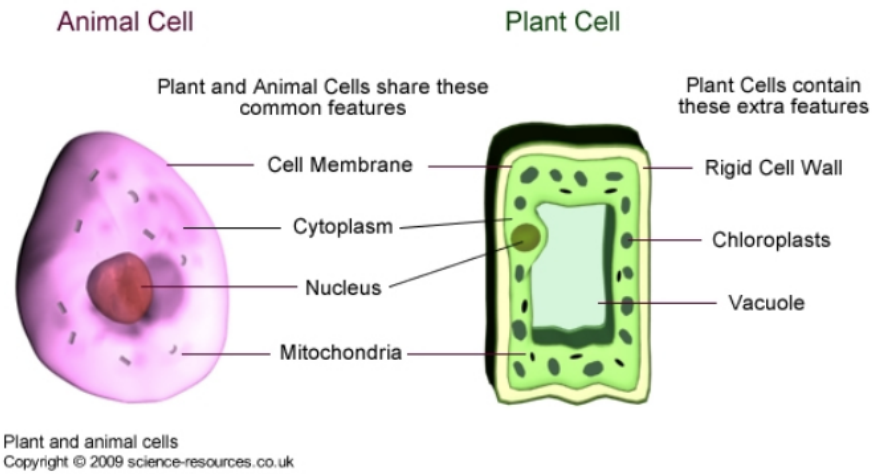


# Year 7 Biology Knowledge Organiser
# The Cell

| Key Terms | Definition |
|---|---|
| Cell wall | Made of ……., which supports the cell |
| ……. ……. | Controls ……. ….of substances into and out of the cell |
| ……. | Jelly-like substance, where chemical reactions happen |
| Nucleus | Contains ……. information and ……. what happens inside the cell |
| Vacuole | Contains a liquid called ….. ……., which keeps the cell firm |
| ……. | Where most respiration reactions happen (glucose + oxygen → carbon dioxide + water) |
| Chloroplast | Where ……. happens (carbon dioxide + water → glucose + oxygen) |

## Cells

Cells are the building blocks of all living organisms




Plant and animal cells

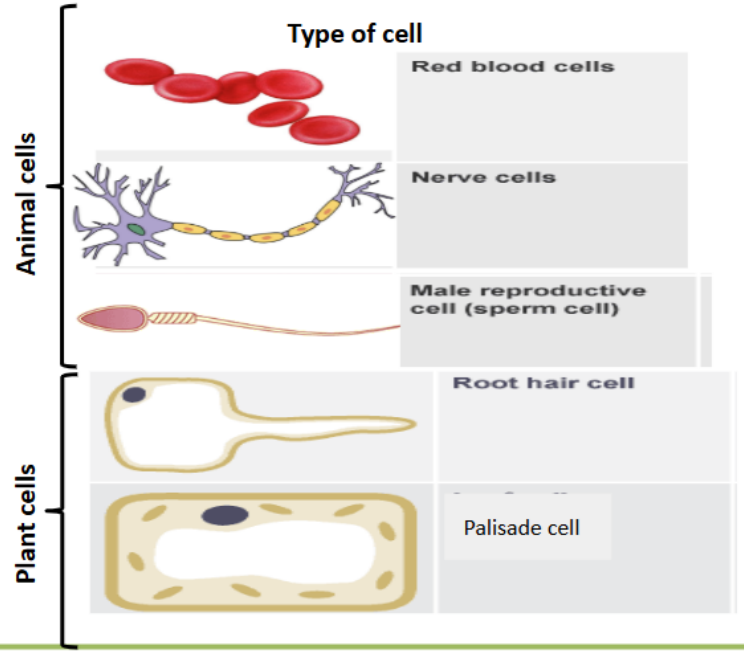

## Preparing a microscope slide

To prepare a slide to view onion cells we can use the following steps:

1. cut open an onion
2. use forceps to peel a ……. layer from the inside
3. spread out the layer on a microscope …….
4. add a drop of ……. solution to the layer
5. carefully place a ……. ……. over the layer to avoid ……. …….

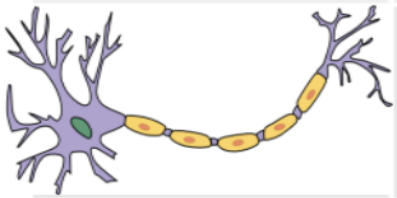
## Specialised cells

Specialised cells are found in multicellular organisms. Each specialised cell has a particular ……. within the organism.



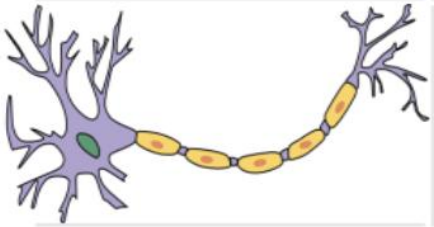
**Specialised cells**

Specialised cells are found in multicellular organisms. Each specialised cell has a particular function within the organism.

| | | Type of cell | Function | Special features |
|---|---|---|---|---|
| Animal cells |  | **Red blood cells** | To carry oxygen | • Large surface area, for oxygen to pass through<br>• Contains haemoglobin, which joins with oxygen<br>• Contains no nucleus |
| |  | **Nerve cells** | To carry nerve impulses to different parts of the body | • Long<br>• Connections at each end<br>• Can carry electrical signals |
| |  | **Male reproductive cell (sperm cell)** | To reach female cell, and join with it | • Long tail for swimming<br>• Head for getting into the female cell |
| Plant cells |  | **Root hair cell** | To absorb water and minerals | • Large surface area |
| |  | Palisade cell | To absorb sunlight for photosynthesis | • Large surface area<br>• Lots of chloroplasts |

**Specialised cells**

Specialised cells are found in multicellular organisms. Each specialised cell has a particular function within the organism.

| | | Type of cell | Function | Special features |
|---|---|---|---|---|
| Animal cells |  | **Red blood cells** | To carry ..... | • ..... urface area, for oxygen to pass through<br>• Contains haemoglobin, which joins with oxygen<br>• Contains no ..... |
| |  | **Nerve cells** | To carry nerve impulses to different parts of the body | • Long<br>• Connections at each end<br>• Can carry ..... signals |
| |  | **Male reproductive cell (sperm cell)** | To reach female cell, and join with it | • Long tail for .....<br>• Head for getting into the female cell |
| Plant cells |  | **Root hair cell** | To absorb ..... and minerals | • Large ..... |
| |  | Palisade cell | To absorb sunlight for photosynthesis ..... | • Large surface area<br>• Lots of ..... |

# Year 7 Geography Knowledge Organiser - Topic 1: Introduction to Geography

## The 7 Continents and 5 Oceans of the World


## Key Geographical Concepts

| | |
|---|---|
| **Social** | To do with society, people or a community that come into contact with each other. |
| **Economic** | To do with jobs, business and money. |
| **Environmental** | To do with aspects of the natural world, such as the land, air, water, plants and animals. |
| **Interactions** | Direct involvement with someone or something, e.g. cause and effect. |
| **Management/ Sustainability** | Controlling problems and looking after the things we have on Earth, so they are there for future generations. |

## Capital Letters

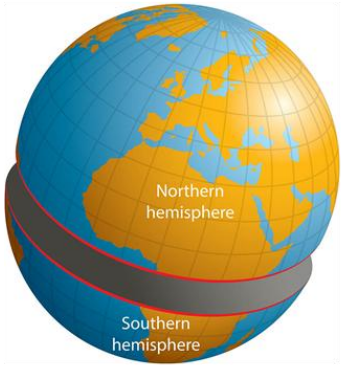
Proper nouns like cities, continents, oceans, lines of latitude and countries all need capital letters on their names.

South America ✔
south america ✘

Arctic Ocean ✔
arctic ocean ✘

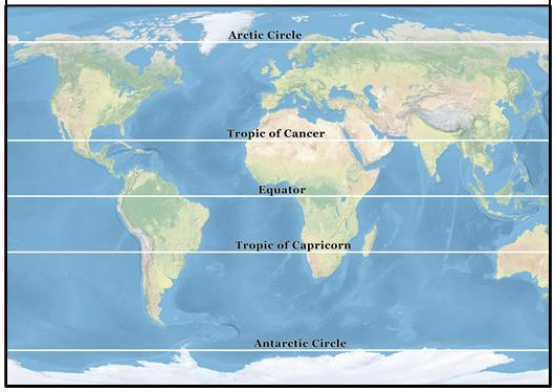
## Northern and Southern Hemispheres

The north and south halves of the world.




## Lines of Latitude

These go horizontally around the world. We find similar climates along lines of latitude.




## Political and Physical Maps

**Physical maps** show landscapes, e.g. uplands, lowlands, forests etc.

**Political maps** show borders of countries, counties etc.



## Words for Map Scales

| | | |
|---|---|---|
| Biggest area | **Global map** | Whole world |
| | **International map** | Lots of countries |
| | **National map** | One country |
| Smallest area | **Regional map** | Part of one country |

# Year 7 Geography Knowledge Organiser - Topic 1: Introduction to Geography

## The ___ Continents and ___ Oceans of the World


## Key Geographical Concepts

| | |
|---|---|
| **Social** | To do with... |
| **Economic** | To do with... |
| **Environmental** | To do with... |
| _____ | Direct involvement with someone or something, e.g. cause and effect. |
| _____ _____ | Controlling problems and looking after the things we have on Earth, so they are there for future generations. |

## Capital Letters

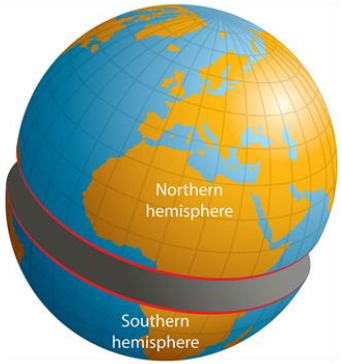
Proper nouns like cities, continents, oceans, lines of latitude and countries all need capital letters on their names.

_____ ✔
south america ✘

_____ ✔
arctic ocean ✘

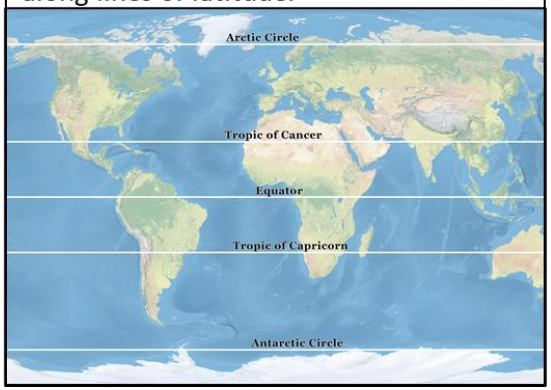
## Northern and Southern Hemispheres

The north and south _____ of the world.



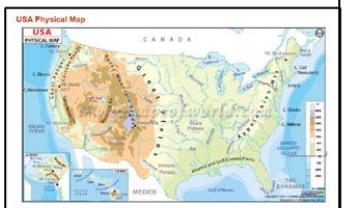

## Lines of Latitude

These go _____ around the world. We find similar _____ along lines of latitude.




## Political and Physical Maps

**Physical maps** show...




**Political maps** show...


## Words for Map Scales

Biggest area — _____ — Whole world

**International map** — _____ _____

_____ — One country

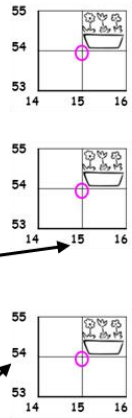
Smallest area — **Regional map** — _____ _____

# Year 7 Geography Knowledge Organiser - Topic 1: Introduction to Geography

**Distribution**= spread and pattern where something is located

## 4 Figure Grid References

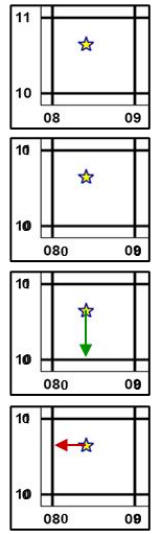
These identify a **whole grid square.**




1. Identify [e.g. circle] the bottom left corner of the grid square.
2. Go along the bottom to find the line that goes through your circle.
3. That line gives you the first 2 digits: **15**_ _
4. Go up the side to find the line that goes through your circle.
5. That line gives you the final 2 digits: **1554**

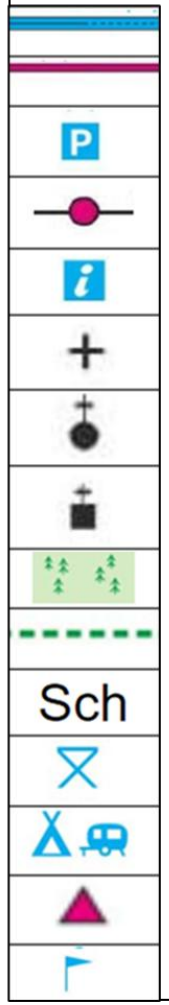
## 6 Figure Grid References

These identify **a smaller area within a grid square** (e.g. the star), so are more specific.




1. Add [or imagine] a zero onto the end of every line number, so each line number is 3 digits. Now you have 2 number lines.
2. Go along the bottom "number line" to find the first 3 numbers, e.g: **084** _ _ _ for the star.
4. Go up the side "number line" to find the last 3 numbers, e.g: **084107** for the star.

## OS Map Symbols




- Motorway
- Main road or A-road
- Car park or parking
- Railway + train station
- Information centre
- Place of worship
- Place of worship with spire, dome or minaret
- Place of worship with a tower
- Coniferous forest
- Public footpath
- School
- Picnic site
- Camping and caravan site
- Youth hostel
- Golf course

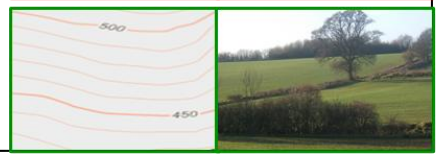
## Height and Relief on OS Maps

**Relief** = the height and shape of the land.

**Contour lines** are orange/brown lines which show the height above or below sea level.

**Close together** contour lines show **steeper relief**.


**Spread out** contour lines show **flatter relief**.

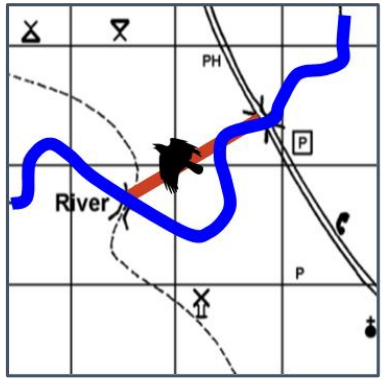



## Measuring Distance on Maps

Each grid line is 1km apart.

**As the Crow Flies**
Measure the simple straight line distance from point A to B.

**Along Transport Links** *(e.g. roads, footpaths, and rivers)*
Measure the actual curved line distance you would need to travel between points A and B.



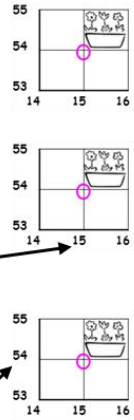
# Year 7 Geography Knowledge Organiser - Topic 1: Introduction to Geography

**distribution**= spread and pattern where something is located

## 4 Figure Grid References

These identify _____.

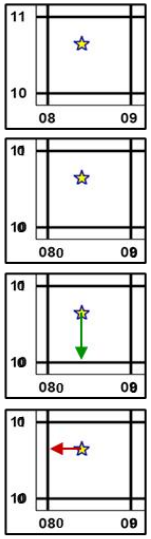
1. Identify [e.g. circle] the bottom left corner of the grid square.
2. Go along _____ to find the line that goes through your circle.
3. That line gives you the first 2 digits: _ _ _ _
4. Go up _____ to find the line that goes through your circle.
5. That line gives you the final 2 digits: _ _ _ _



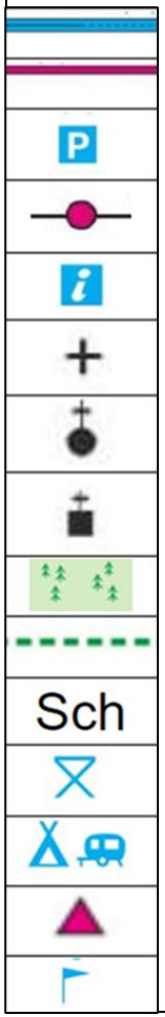

## 6 Figure Grid References

These identify _____ (e.g. the star), so are more specific.

1. Add [or imagine] a zero onto the end of every line number, so each line number is 3 digits. Now you have 2 number lines.
2. Go along the bottom "number line" to find the first 3 numbers, e.g: _ _ _ _ _ _ for the star.
4. Go up the side "number line" to find the last 3 numbers, e.g: _ _ _ _ _ _ for the star.




## OS Map Symbols



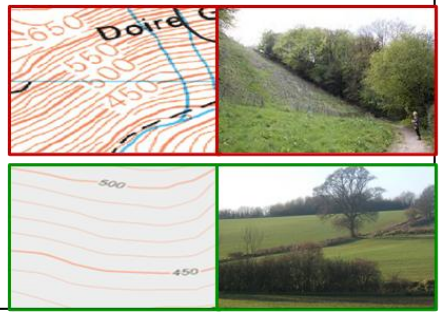

## Height and Relief on OS Maps

**Relief** =

_____ are orange/brown lines which show the height above or below sea level.

**Close together** contour lines show...

**Spread out** contour lines show...

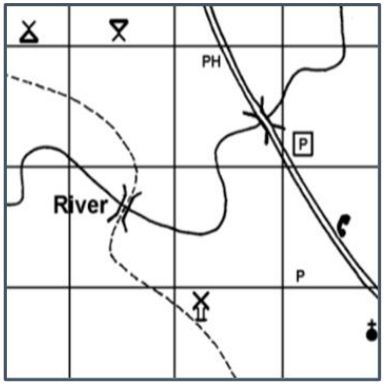



## Measuring Distance on Maps

Each grid line is _____ apart.

**As the Crow Flies**
Measure...

**Along Transport Links** *(e.g. roads, footpaths, and rivers)*
Measure...



# Year 7 Geography Knowledge Organiser - Topic 2: Development

**Development** = countries and areas becoming healthy and wealthy.

**Standard of living** = how good life is in an area for people living there.

- **HIC** = Higher income country (more developed).
- **NEE** = Newly emerging economy (developing quickly).
- **LIC** = Lower income country (less developed).

| Development Indicators | |
|---|---|
| **GNI** | A country's total income (all the money earned). |
| **GNI per capita** | The country's total income divided by the number of people living there. |
| **Life Expectancy** | How long the average person lives for. |
| **Birth rate** | The number of births per year per 1000 people. |
| **Death rate** | The number of deaths per year per 1000 people. |
| **Literacy rate** | The percentage (%) of adults in the country that can read and write. |
| **HDI** (Human | A composite (joint) measure of health (*life expectancy*), th (*GNI per capita*), and education (*average years of oling*). |

## Danger of a Single Story

**Fact** = a thing that is known or proved to be true.

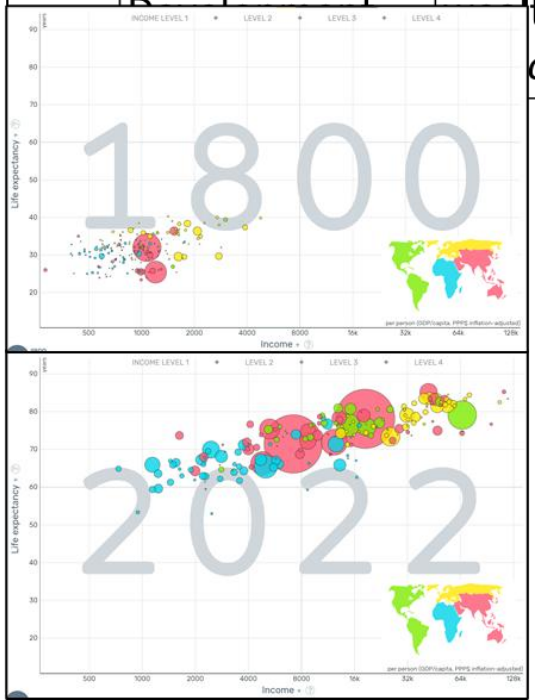
**Opinion** = a view or judgement about something, not necessarily based on fact or knowledge.

**Misconception** = a view or opinion that is incorrect because based on faulty thinking or understanding.

To avoid misconceptions:

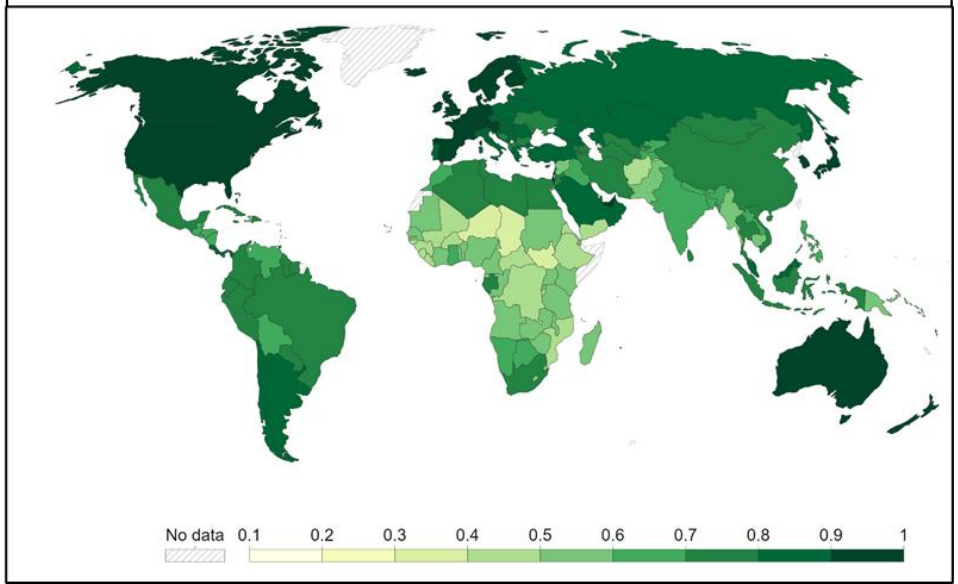
1. Look at a **range of sources**.
2. Look at **up to date sources**.

## All Countries Have Developed




## Human Development Index (HDI) Map in 2021

Development is uneven around the world. Darker shaded areas have a HDI of nearer 1, showing they are more developed.



# Year 7 Geography Knowledge Organiser - Topic 2: Development

**Development =**

_____ = how good life ☺😐☹ is in an area for people living there.

- **HIC** = (_____ developed).
- **NEE** = (_____ quickly).
- **LIC** = (_____ developed).

## Development Indicators

| | |
|---|---|
| **GNI** | |
| **GNI per** _____ | The country's total income divided by the number of people living there. |
| | How long the average person lives for. |
| **Birth rate** | The number of… |
| **Death rate** | The number of… |
| | The percentage (%) of adults in the country that can read and write. |
| **HDI** (Human Development Index) | A composite (joint) measure of… |

## Danger of a Single Story

_____ = a thing that is known or proved to be true.

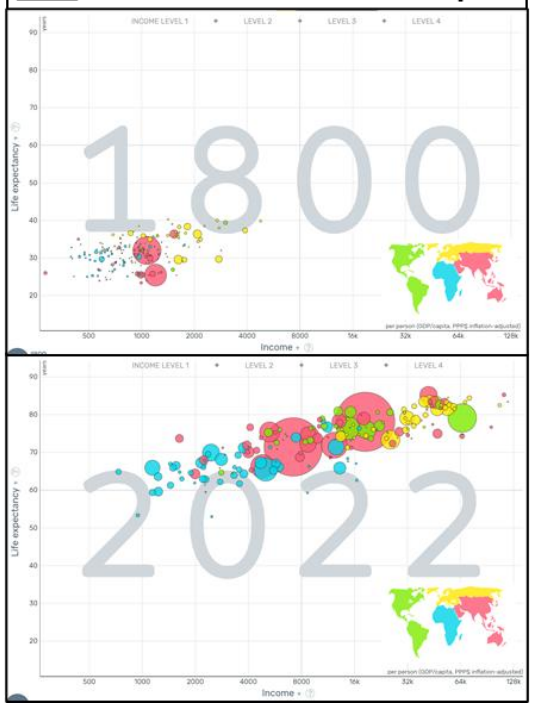
_____ = a view or judgement about something, not necessarily based on fact or knowledge.

_____ = a view or opinion that is incorrect because based on faulty thinking or understanding.

To avoid misconceptions:

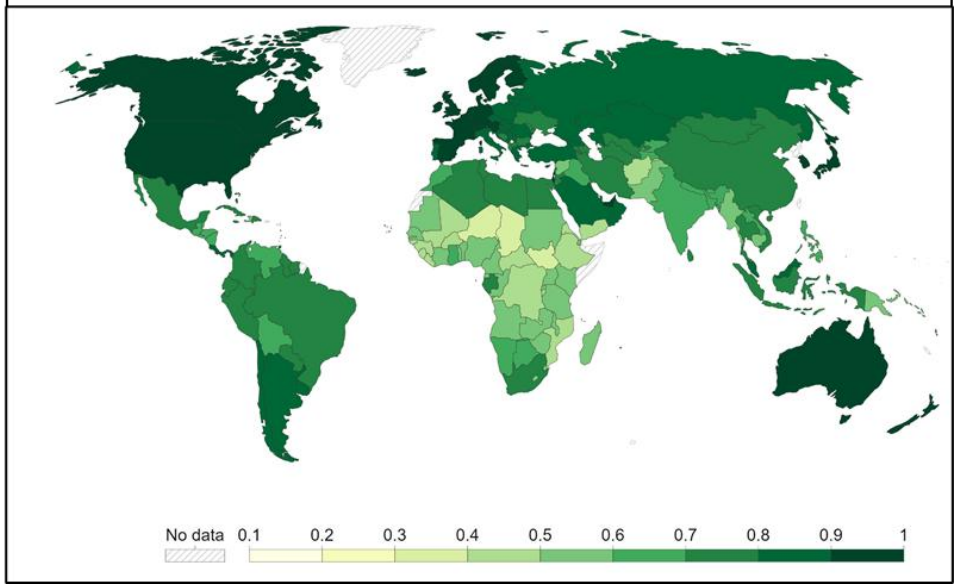
1. Look at…
2. Look at…

## ___ Countries Have Developed




## Human Development Index (HDI) Map in 2021

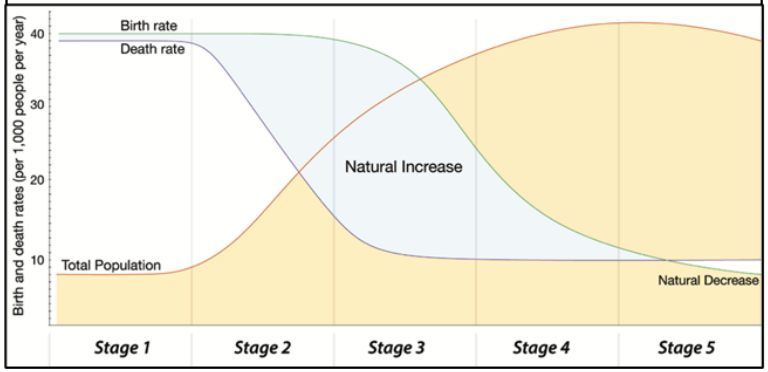
Development is _____ around the world. Darker shaded areas have a HDI of nearer __ , showing _____.



# Year 7 Geography Knowledge Organiser - Topic 2: Development

## The Demographic Transition Model (DTM)

This line graph shows how birth rate, death rate, and total population change as a country develops.




## Examples of Uneven Development

**Within A Continent: North America**

US (HIC) vs Guatemala (NEE) both in North America.

**Within A Country: The US**

Hawaii (HDI 0.945) vs Louisiana (HDI 0.893) both states in the United States (an HIC).

**Within A City: New Orleans, US**

Life expectancy ranges from 71 years to 82 years depending on which neighborhood people live in.

## The Aral Sea, Kazakhstan

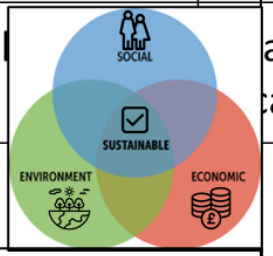
Overuse of water to irrigate (water) cotton crops caused the Aral Sea to shrink by over 90%, leaving the area arid.


## Causes of Uneven Development

| Barriers | Fuels |
|---|---|
| Few natural resources. | Lots of natural resources. |
| Extreme climates (e.g. very hot or very cold, very rainy or very arid). | Moderate climates (not extreme) good for growing plants. |
| Higher chance of natural disasters. | Lower change of natural disasters. |
| War and conflicts | Peace |
| Landlocked and/or upland location. | Coastal and/or lowland location. |

## Sustainable Development

Sustainable development is improving health & wealth in a way that is **socially**, **economically**, and **environmentally** good.

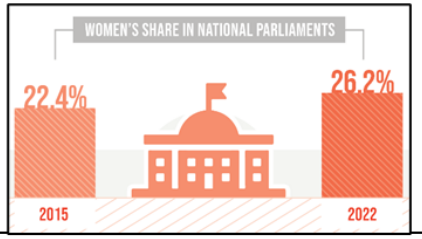




## Gender Inequality as a Barrier to Development

UN Sustainable Development Goal #5 is to achieve gender equality and empower all women and girls.

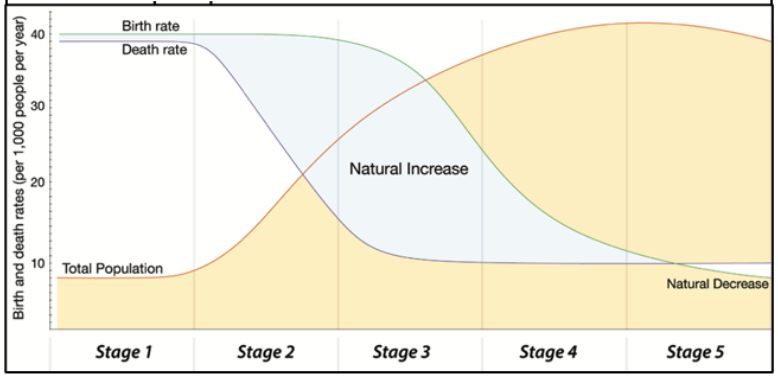
Women and girls represent half of the world's population and therefore also half of its potential; however, today gender inequality persists everywhere as barrier to social progress and development.



# Year 7 Geography Knowledge Organiser - Topic 2: Development

## The _____ _____ _____ (DTM)

This line graph shows how _____, _____, and _____ change as a




## Causes of Uneven Development

| Barriers | Fuels |
|---|---|
| Few natural resources. | |
| | Moderate climates (not extreme) good for growing plants. |
| Higher chance of natural disasters. | |
| | Peace |
| Landlocked and/or upland location. | |

## Examples of Uneven Development

**Within A Continent: North America**

_____ vs _____ both in North America.

**Within A Country: The US**

_____ vs _____ both states in the United States (an HIC).

**Within A City: _____, US**

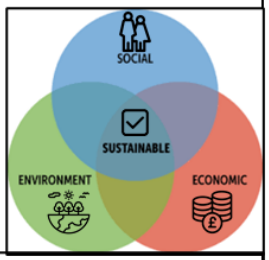
Life expectancy ranges from ___ years to ___ years depending on which neighborhood people live in.

## The Aral Sea, Kazakhstan

Overuse of _____ to irrigate (water) cotton crops caused...


## Sustainable Development

Sustainable development is...



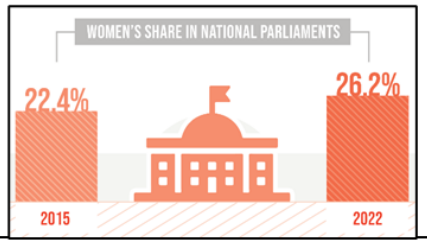


## Gender Inequality as a Barrier to Development

UN Sustainable Development Goal #5 is _____

_____

Women and girls represent _____ of the world's population and therefore also half of its _____; however, today gender inequality persists _____ as barrier to _____.



# Year 7 Geography Knowledge Organiser - Topic 3: Weather and Climate

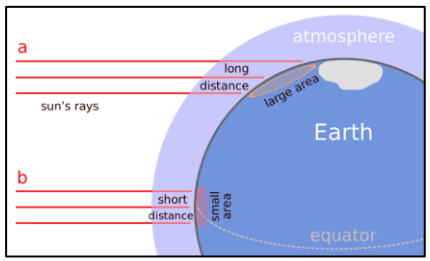
## Weather and Climate

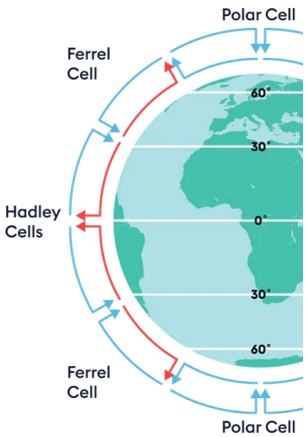
- **Weather** = the short term changes in the atmosphere.
- **Climate** = the long term average weather.

## Global Atmospheric Circulation

a. The **Poles** receive the **least direct solar radiation**, cooling the air there and causing **polar air to sink**.

b. The **Equator** receives the **most direct solar radiation**, warming the air there and causing **equatorial air to rise**.




This results in **3 cells** of moving air in each hemisphere.

## Seasons

The Earth spins on a **tilted axis**. As a result, the UK gets 4 seasons throughout the year:

1. **Spring** - Warmer days, but cold nights.
2. **Summer** - Hottest & drier, but can see heavy rain.
3. **Autumn** - Shorter days and weather turns stormier.
4. **Winter** - Coldest, wettest and windiest. Some snow.

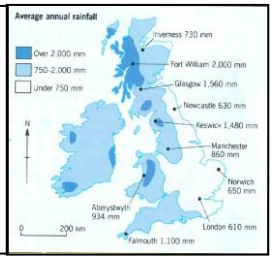
**Summer solstice** = Longest daylight (21/22 June in N.Hemisphere)

**Winter solstice** = Shortest daylight (21/22 December N.Hemisphere)

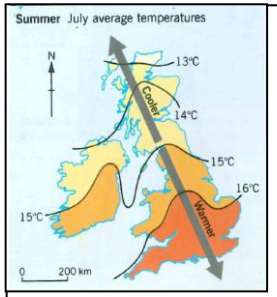
## Precipitation Across the UK

The **Northwest and West** receives the **most precipitation** due to the upland areas there.

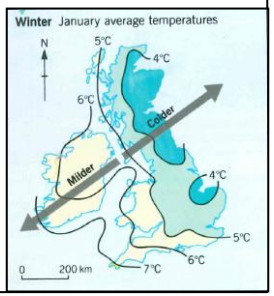
The **Southeast** of the UK receives the **least precipitation** as this area is mostly lowlands.




## Temperature Across the UK

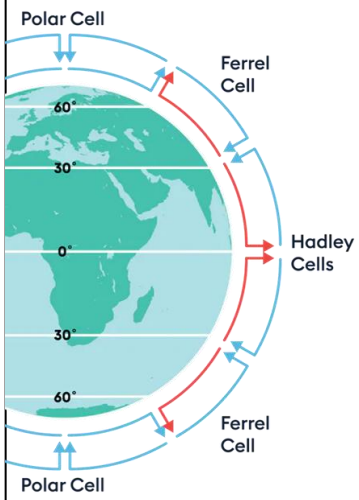


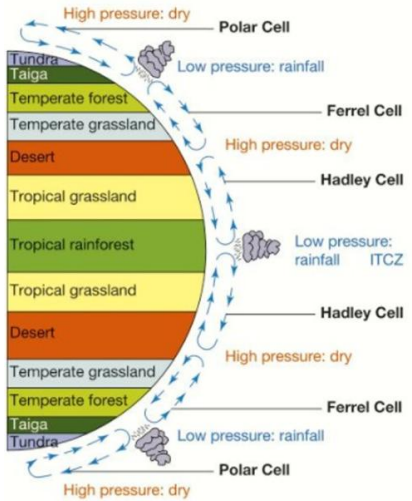

In the summer, the **South** of the UK is the **warmest**, as it receives **more direct solar radiation**.




In the winter, the **Southwest** of the UK is **milder** (not as cold) as the **North Atlantic drift** (a warm ocean current) keeps the coastline warm.

## Similar Climates at Similar Latitudes



# Year 7 Geography Knowledge Organiser - Topic 3: Weather and Climate

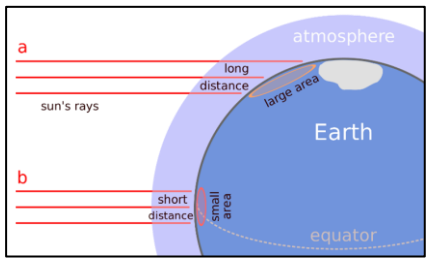
## Weather and Climate

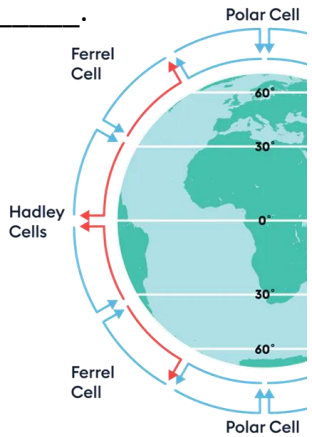
- **Weather** = _____
- **Climate** = _____

## Global Atmospheric Circulation

a. The _____ receive the **least direct solar radiation**, cooling the air there and causing **polar air to** _____..

b. The _____ receives the **most direct solar radiation**, warming the air there and causing **equatorial air to** _____.




This results in **3 cells** of _____ in each hemisphere.

## Seasons

The Earth spins on a **tilted** _____. As a result, the UK gets 4 seasons throughout the year:

1. **Spring** - _____.
2. **Summer** - _____.
3. **Autumn** - _____.
4. **Winter** - _____.

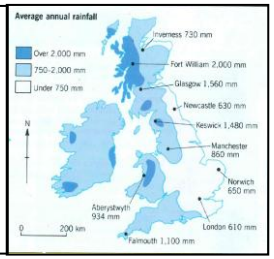
_____ = Longest daylight (21/22 June in N.Hemisphere)

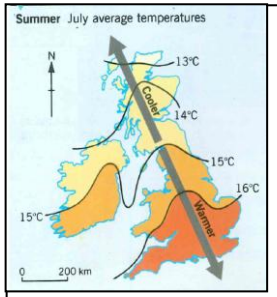
_____ = Shortest daylight (21/22 December N Hemisphere)

## Precipitation Across the UK

The _____ and _____ receive the **most precipitation** due to the _____ there.

The **Southeast** of the UK receives the _____ **precipitation** as this area is mostly

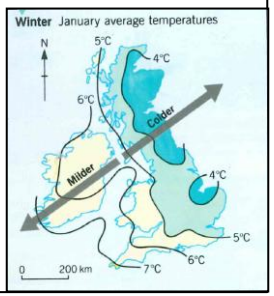


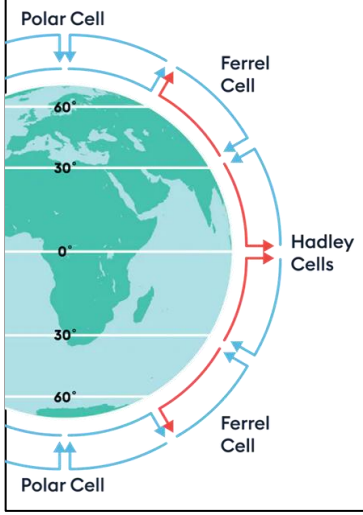

## Temperature Across the UK

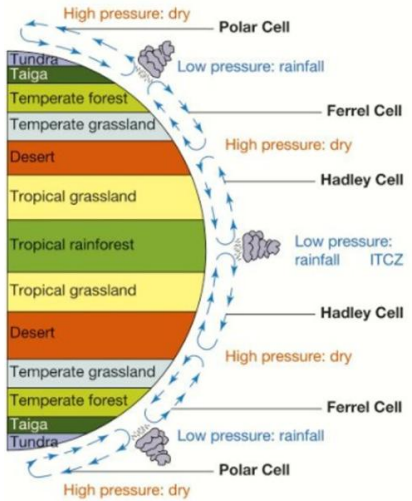
In the summer, the _____ of the UK is the **warmest**, as it receives **more** _____ _____.

In the winter, the **Southwest** of the UK is _____ (not as cold) as the _____ (a warm ocean current) keeps the coastline warm.




## Similar _____ at Similar _____

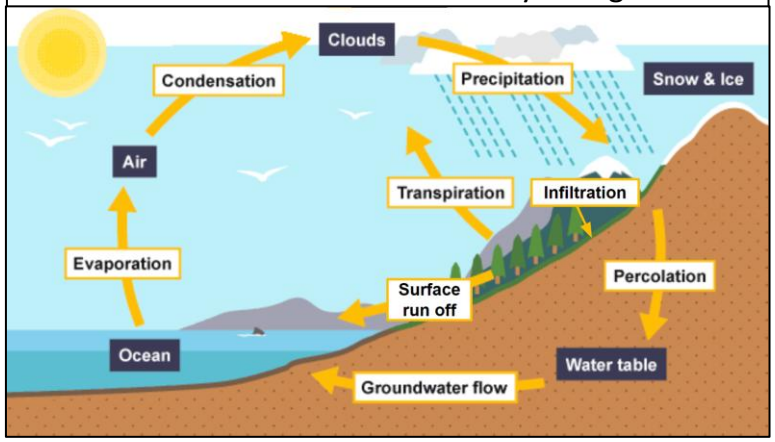


# Year 7 Geography Knowledge Organiser - Topic 3: Weather and Climate

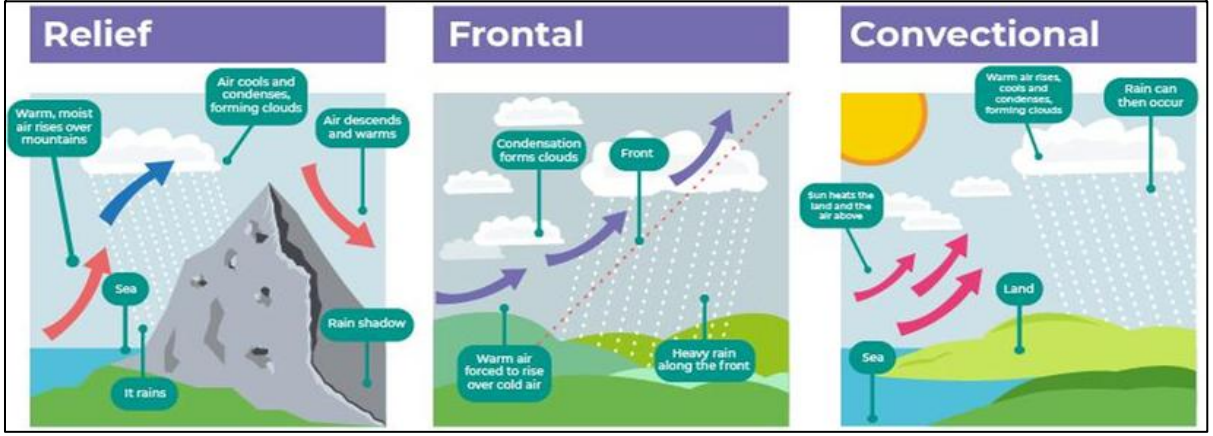
## The Hydrological Cycle

The amount of water in the world is fixed. Water is **transferred** between **stores** in the hydrological




## Three Types of Precipitation

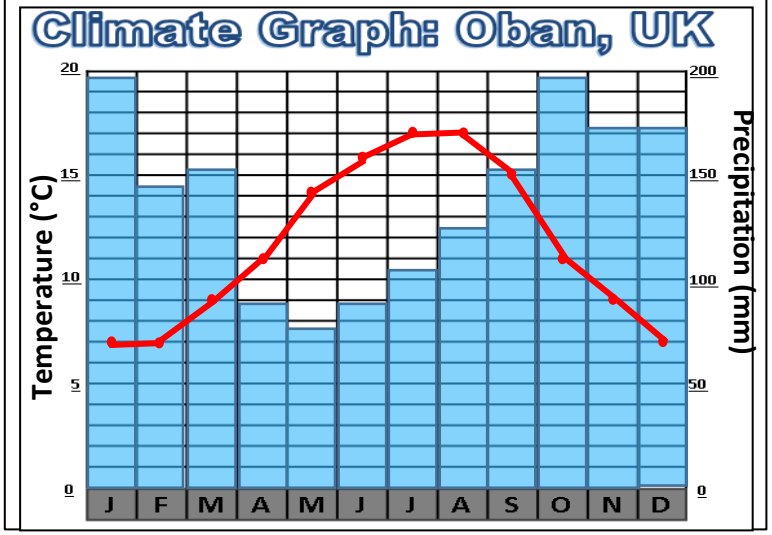
**Condensation** happens to create clouds **when warm, moist air is forced to rise**. There are three reasons the air will rise, so there are three types of rainfall.



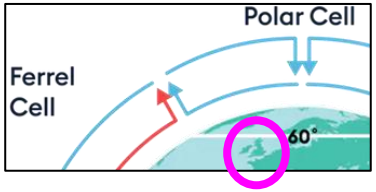

## Climate Graphs

The **bar graph** shows **precipitation**, measured in mm.

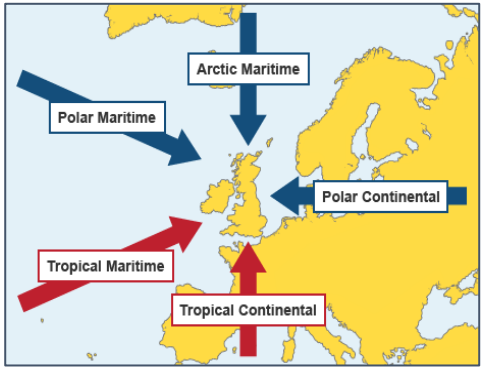
The **line graph** shows **temperature**, measured in °C.




## Air Masses and Weather in the UK




The UK is an island nation, surrounded by water and is located near the border of the polar cell and the ferrel cell. As a result, we get **different weather conditions depending on the wind direction** (where our weather is coming from).




**Maritime** = damp air → precipitation

**Continental** = dry air → dry weather

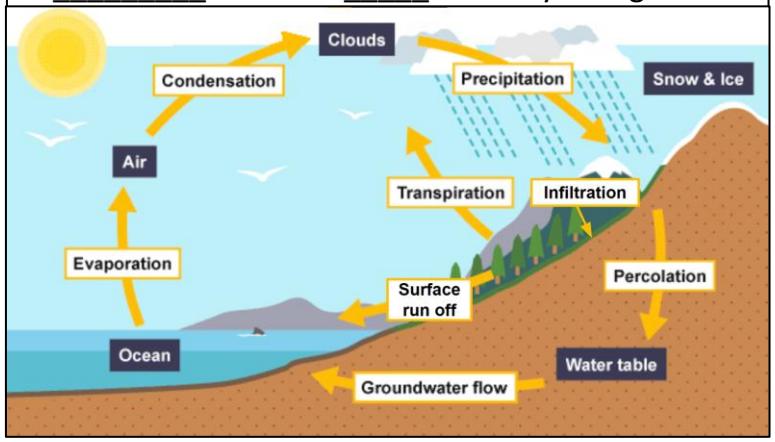
**Tropical** = warm air → warmer/milder weather

**Polar/Arctic** = cold air → colder/cooler weather

# Year 7 Geography Knowledge Organiser - Topic 3: Weather and Climate

## The Hydrological Cycle

The amount of water in the world _____ . Water is _____ between _____ in the hydrological




## Three Types of Precipitation

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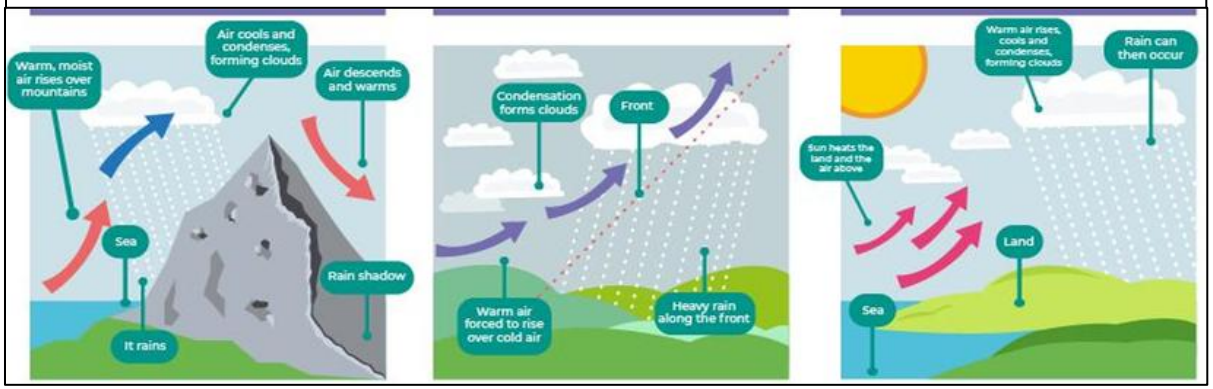
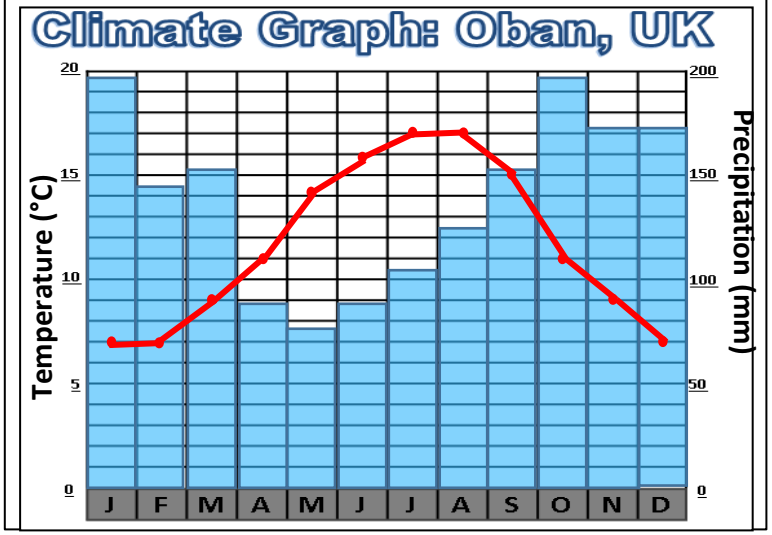



## Climate Graphs

The _____ shows **precipitation**, measured in ___

The _____ shows **temperature**, measured in ___

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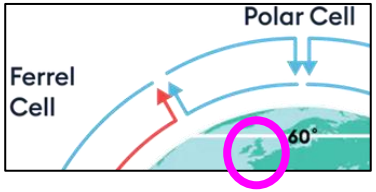


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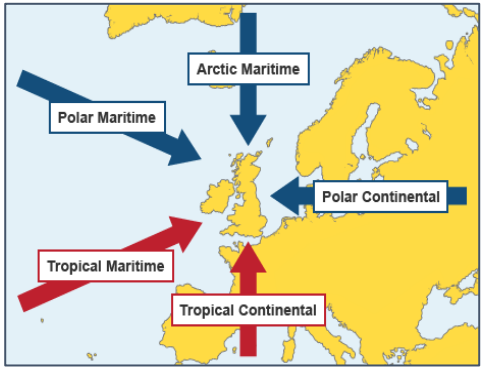



**Maritime** = _____

**Continental** = _____

**Tropical** = _____

**Polar/Arctic** = _____

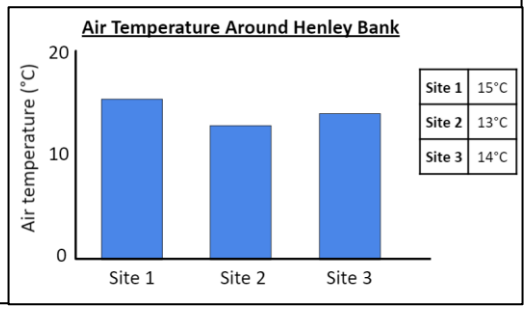
# Year 7 Geography Knowledge Organiser - Topic 3: Weather and Climate

**Microclimate** = the specific climate of a local place.

| Microclimate Factor.... | Meaning | How will it affect the local climate? |
|---|---|---|
| **Aspect** | The direction a place faces. | Places which face south are warmer than places which face north. |
| **Buildings** | Whether there are buildings in the local area and how tall they are. | Buildings absorb heat so they can make nearby places warmer. They can also speed up the wind. |
| **Surface colour** | Whether the surface is a dark colour (like tarmac) or a light colour (like grass). | Darker colour surfaces absorb more heat so tend to be warmer. Lighter colours reflect heat so tend to be cooler. |
| **Shelter** | Whether a place has protection from the wind. | Sheltered places have lower wind speeds and tend to be slightly warmer than unsheltered spots. |
| **Physical features** | Whether there are natural features such as woods, lakes or hills nearby. | Wooded areas tend to be cooler and less windy, areas near lakes tend to be cooler and hilltop locations are windier and colder than valleys. |

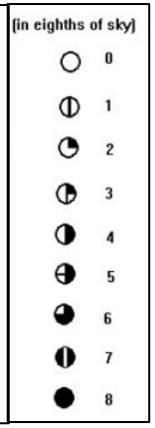
## Microclimates Fieldwork

We used our knowledge of microclimates to predict which areas of Henley Bank would be warmer to create our **hypothesis**. We collected **primary data** and presented our data in a **bar graph**, which allows us to **conclude** that site 1 was the warmest.




## Oktas

We can estimate cloud cover in oktas (eights of the sky).




## Measuring Weather

| Equipment | What does it do? |
|---|---|
| **Anemometer** | Measures the speed of wind |
| **Rain Gauge** | Measures precipitation |
| **Wind Vane** | Measures wind direction |
| **Barometer** | Measures air pressure |
| **Thermometer** | Measures the temperature |

## Estimating Wind Speed

### Beaufort Scale

| Beaufort number | Wind Speed (mph) | Seaman's term | | Effects on Land |
|---|---|---|---|---|
| 0 | Under 1 | Calm |  | Calm; smoke rises vertically. |
| 1 | 1-3 | Light Air |  | Smoke drift indicates wind direction; vanes do not move. |
| 2 | 4-7 | Light Breeze |  | Wind felt on face; leaves rustle; vanes begin to move. |
| 3 | 8-12 | Gentle Breeze |  | Leaves, small twigs in constant motion; light flags extended. |
| 4 | 13-18 | Moderate Breeze |  | Dust, leaves and loose paper raised up; small branches move. |
| 5 | 19-24 | Fresh Breeze |  | Small trees begin to sway. |
| 6 | 25-31 | Strong Breeze |  | Large branches of trees in motion; whistling heard in wires. |
| 7 | 32-38 | Moderate Gale |  | Whole trees in motion; resistance felt in walking against the wind. |
| 8 | 39-46 | Fresh Gale |  | Twigs and small branches broken off trees. |
| 9 | 47-54 | Strong Gale |  | Slight structural damage occurs; slate blown from roofs. |
| 10 | 55-63 | Whole Gale |  | Seldom experienced on land; trees broken; structural damage occurs. |
| 11 | 64-72 | Storm |  | Very rarely experienced on land; usually with widespread damage. |
| 12 | 73 or higher | Hurricane Force |  | Violence and destruction. |

# Year 7 Geography Knowledge Organiser - Topic 3: Weather and Climate

**Microclimate** = _____

| Microclimate Factor.... | Meaning | How will it affect the local climate? |
|---|---|---|
| | The direction a place faces. | |
| | Whether there are buildings in the local area and how tall they are. | |
| | Whether the surface is a dark colour (like tarmac) or a light colour (like grass). | |
| | Whether a place has protection from the wind. | |
| | Whether there are natural features such as woods, lakes or hills nearby. | |

## Measuring Weather

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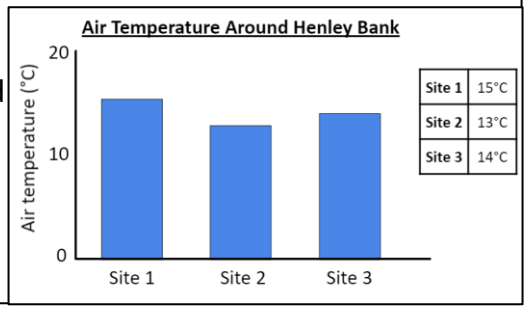


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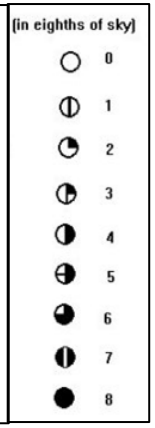
We can estimate cloud cover in oktas (_____ of the sky).



# Year 7 Geography Knowledge Organiser - Topic 4: Urban Change

## Urban and Rural

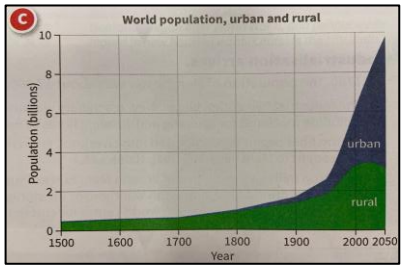
**Urban =** A built up area (town or city) where there are many buildings and services close together. Eg Gloucester, Cheltenham, London Densely populated (lots of people in an area).

**Rural =** An area of countryside that is not built up, so less buildings and services in the area. Eg the area surrounding Brockworth, The Cotswolds, The Malvern Hills. Sparsely populated (not many people living in an area).

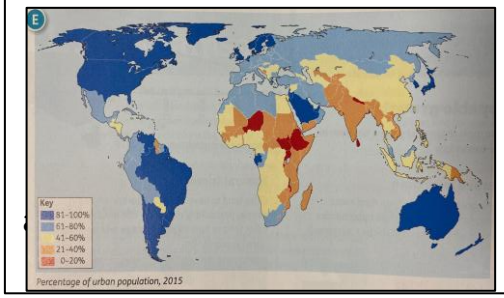
## How Urban Areas Have Grown Over Time

1. About 10000 years ago, there were no towns and cities.
2. Our ancestors roamed the land hunting and gathering.
3. Our ancestors began to plant seeds and rear animals, this was the beginning of farming.
4. Farming meant people could settle in one place, this was the beginning of **settlements** (a place where people live).
5. As farming developed, people had extra to sell and markets began. **Villages** started to grow around the markets.
6. Over time, villages grew into **towns**, with more services.
7. The Industrial Revolution began in the 18th century. Factories set up in towns and people moved from rural areas for higher paid jobs in the factories. Towns grew and some grew into **cities.**
8. Industry spread to other European countries and the USA, their urban areas (towns and cities) grew.
9. Today, urban areas are growing fastest in NEEs and LICs, with people moving in from rural areas to the towns/cities.

## Distribution of Urban Areas Globally




Across the world, more people used to live in rural areas, but as time has gone on, more people are moving to and living in urban areas. This process is called **urbanisation.**




**In General:**
**HICs** have higher proportions of people living in urban areas.
**NEEs** have roughly equal proportions. of people living in urban and rural

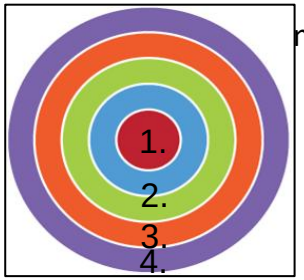
**LICs** have higher proportions of people living in rural areas.

## Urban Land Use Model (The Burgess Model)

Using the city of Chicago in 1923, Mr Burgess made this simplified model showing that there were different parts/zones to an urban area and that they developed over time.

1. The Central Business District
Inner area, no regular street pattern, high density of buildings. Now the centre for shops and offices.

2. The Inner City
Rectangular grids of streets. Often high density, terraced housing. Built near to the factories for workers.




3. The Inner Suburbs
Residential housing estates, often filling gaps between main roads, widely spaced. Often semi detached housing.

4. The Outer Suburbs
Modern housing estates, curved roads, cul de sacs, widely spaced. Often detached housing. Outer edge of urban area and beginning of rural area.

# Year 7 Geography Knowledge Organiser - Topic 4: Urban Change

## Urban and Rural

**Urban = _____**

_____

Eg _____

_____ populated (lots of people in an area).

**Rural = _____**

_____

_____

Eg _____

_____ populated (not many people living in an area).

## How Urban Areas Have Grown Over Time

1. About 10000 years ago_____.
2. Our ancestors roamed the land hunting and gathering.
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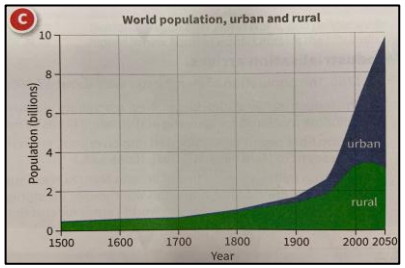
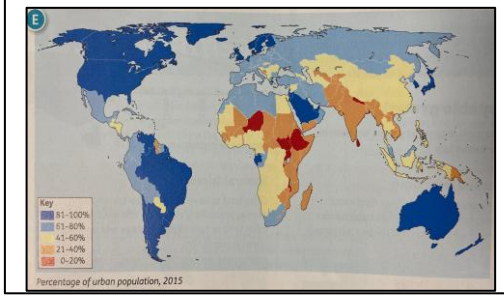
8. Industry spread to _____, their urban areas (towns and cities) grew.
9. Today, urban areas are growing fastest in _____ and _____, with people moving in from rural areas to the towns/cities.

## Distribution of Urban Areas Globally




Across the world, _____ people used to live in rural areas, but as time has gone on, _____ people are moving to and living in urban areas. This process is called _____.




**In General:**

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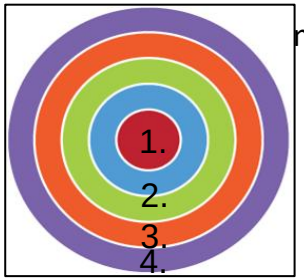



3.

Residential housing estates, often filling gaps between main roads, widely spaced. Often semi detached housing.

4.

Modern housing estates, curved roads, cul de sacs, widely spaced. Often detached housing. Outer edge of urban area and beginning of rural area.

## Causes of Urbanisation

The two main causes of urbanisation are **Rural to Urban Migration (Push and Pull)** and **Natural Increase.** This is usually done by the working population who have higher fertility, so help naturally increase the population in the urban areas.

### Key Terms

**Birth Rate:** The amounts of babies born, per year, per 1000
**Death Rate:** The amount of people dying, per year, per 1000
**Natural Increase:** When birth rate is higher than death rate which increases the population.
**Urbanisation:** The increase in the proportion of people living in towns and cities.
**Rural-Urban Migration:** When people permanently move from rural areas to urban areas**.**
**Push Factor:** A reason why somebody would want to leave the rural area. Eg: Lack of work, natural disasters, poor housing.
**Pull Factor:** A reason why somebody would want to move to an urban area. Eg: More jobs, better education and healthcare.

## Causes and Impacts of Urbanisation in an NEE: China

**Location:** Eastern Asia, borders Pacific Ocean to the East.
**Background:** Largest population in world (1.4 billion), one of largest economies in world, urbanised and developed East.


**Causes:** In 1960, only 16% of China's population lived in urban areas. In 2017, this had risen to 58%. China has urbanised rapidly due to factories setting up on the South East coast which has led to high levels of rural to urban migration and natural increase.
**Impacts:** Higher wages, higher standards of living, better quality of life, overcrowding, air pollution, traffic congestion.
**How the rural area is affected:** Brain drain, not enough workers, not enough to look after the elderly and young, not enough food grown, levels of poverty will increase.

## Impacts of Urbanisation

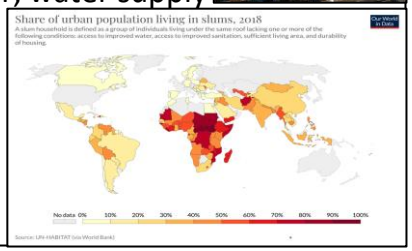
| Benefit | Cost | Social | Economic | Environmental |
|---|---|---|---|---|

| | | | |
|---|---|---|---|
| Entertainment facilities such as museums, cinemas, concerts and clubs Social | Lots of jobs available Economic | Buildings everywhere reduces green spaces and can destroy animal habitats Environmental | Overcrowding Social |
| Services such as dentists and hospitals Social | Lots of shops Social | Water Pollution Environmental | Waste disposal Environmental |
| Restaurants of varying cuisines serving different types of food from around the world Social | Higher paying jobs Economic | Lack of community spirit as people do not know their neighbours which can lead to segregation Social | Shortage of housing Social |
| High performing colleges, sixth forms and universities Social | Competition for jobs Economic | Air Pollution Environmental | Traffic Congestion Environmental |
| Effective public transport Social | Noise Pollution Social | More expensive than living in rural areas Economic | Crime, vandalism and graffiti Social |

## Squatter Settlements



**What:** An area of poor quality housing with no or limited services such as water supply, sewerage and electricity.
**Where:** Inner City areas. Mostly found in LIC urban areas and in some NEE urban areas.
**Other names given:** Slums, shanty towns, favelas, bidonvilles
**Reasons why they are there:** Unregulated land, no choice, lack of money, better than rural areas they have come from.
**Opportunities:** More jobs, higher wages, shelter, water supply more food supply, better standard of living.
**Challenges:** Overcrowding, pollution, disease, jobs with long hours and low pay, unsanitary conditions, open sewers, unsafe
*Often seen as negative, but could be a better life than they had previously*



## Causes of Urbanisation

The two main causes of urbanisation are _____ _____ and _____**.** This is usually done by the working population who have higher fertility, so help naturally increase the population in the urban areas.

**Key Terms**

_____ = The amounts of babies born, per year, per 1000

_____ = The amount of people dying, per year, per 1000

_____ = When birth rate is higher than death rate which increases the population.

_____ = The increase in the proportion of people living in towns and cities.

_____ = When people permanently move from rural areas to urban areas**.**

_____ = A reason why somebody would want to leave the rural area. Eg: Lack of work, natural disasters, poor housing.

_____ = A reason why somebody would want to move to an urban area. Eg: More jobs, better education and healthcare.

## Impacts of Urbanisation

| | Benefits | Costs |
|---|---|---|
| Social | | |
| Economic | | |
| Environmental | | |

## Causes and Impacts of Urbanisation in an NEE: China

**Location:** _____.

**Background:** Largest population in world (_____), one of largest economies in world, _____ East.


**Causes:** In 1960, only 16% of China's population lived in urban areas. In 2017, this had risen to 58%. China has urbanised rapidly due to factories setting up on the South East coast which has led to high levels of _____ and _____ .

**Impacts:** _____

_____.

**How the rural area is affected:** _____

_____

_____.

## Squatter Settlements

**What:** _____

_____

**Where:** _____

_____

**Other names given:** _____

**Reasons why they are there:** _____

_____

**Opportunities:** _____

_____

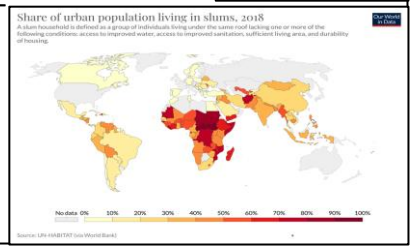
**Challenges:** _____

_____

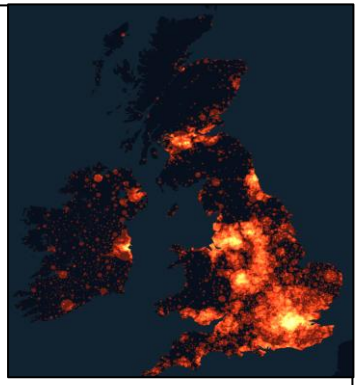
_____

*Often seen as negative, but _____

_____*



## Urban Areas in the UK



**Densely Populated Areas in the UK:**
- South East UK
- England
- By the coast

**Sparsely Populated Areas in the UK:**
- North and West UK
- Scotland and Wales
- Mountainous land

**Densely populated** areas tend to be on flatter land, near the coast, near a river, with a good climate and a closer proximity to mainland Europe.

## Counter-urbanisation

Process of people moving out of urban areas, into rural areas. This has been occurring in many HICs since the mid 1900s.

**Causes:** (These can be push or pull factors)
- Increased car ownership, people can commute
- Increased working from home
- Unpleasant urban areas (pollution, congestion, crime)
- Out of town shopping centres and online shopping

**Impacts:**

| Positives | Negatives |
|---|---|
| - Saves local rural services<br>- Increases rural population<br>- Creates greater social mix<br>- Old properties can be converted and modernised<br>- Industrial units set up which creates more jobs | - Loss of community spirit<br>- Conflict with new residents<br>- House prices rise means young locals can't buy<br>- Building on greenfield sites<br>- Commuters create more pollution and congestion |

## Case Study: Urban Change in Manchester

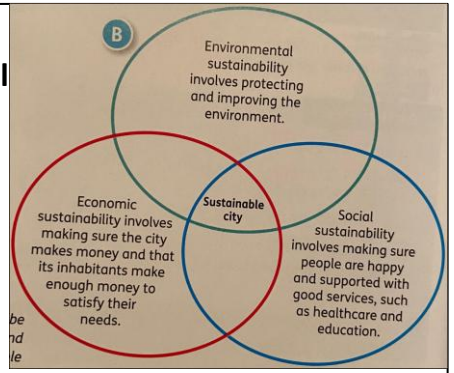
**Location:** North West England, East of Liverpool and connected by rivers.

**Industrial Growth:**
- Settlement develops in a good location on river Medlock
- Industrialisation, world's first industrial city factories/mills/warehouses
- World centre of cotton/textiles trade with good transport/trade links
- Young working population who want higher levels of wealth
- Urbanisation (rural to urban migration and natural increase)
- Urban Sprawl, city grew outwards as more houses and services built

**Deindustrialisation:**
- Industry declined due to outdated machinery and competition from other countries who could make products cheaper or more efficiently
- Manchester's mills and factories closed, deindustrialisation
- Population fell as people moved away. Deprivation became a problem

**Urban Regeneration:**
- Began in 1980s and is still happening now
- Aims to bring jobs (economy) and make it a good place to live (social)
- Media City offers more jobs in media and science, improved transport systems (trams, buses and light rail connect to rest of Greater Manchester), old warehouses made into housing, promoting culture.

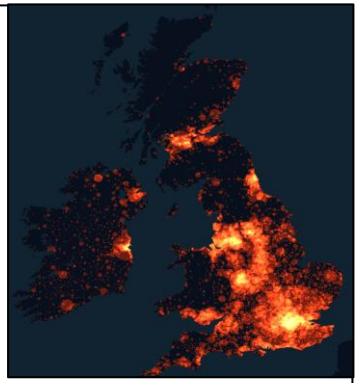
## Future Urban Change: Sustainable Cities




- A **sustainable city** is one that has the **social economic** and **environmental** needs in balance and must be **long lasting**, without causing problems for future generations.
- Sustainable cities are associated with **HICs** as NEEs and LICs are still trying to improve, advance and develop.

**Features of a Sustainable City:**
- Transport (more public transport, more walking and cycling, charges)
- New homes built on brownfield sites and that are more energy efficient
- Wasting less water and sending less of our waste to landfill by recycling
- Urban Greening (planting more trees, roof gardens, living walls, growing food)

## Urban Areas in the UK



**Densely Populated Areas in the UK:**

- _____
- _____
- _____

**Sparsely Populated Areas in the UK:**

- _____
- _____
- _____

**Densely populated** areas tend to be on _____ land, near _____, near a _____, with a _____ climate and a closer proximity to _____..

## Counter-urbanisation

Process of _____.
This has been occurring in many _____ since the mid 1900s.

**Causes:** (These can be push or pull factors)

- _____
- _____
- _____
- _____

**Impacts:**

| Positives | Negatives |
|---|---|
| | |

## Case Study: Urban Change in Manchester

**Location:**

_____

**Industrial Growth:**

- Settlement develops in a good location on river Medlock
- Industrialisation, world's first _____
- World centre of _____ trade with good transport/trade links
- Young _____ who want higher levels of wealth
- Urbanisation (_____)
- Urban Sprawl, city _____ as more houses and services built

**Deindustrialisation:**

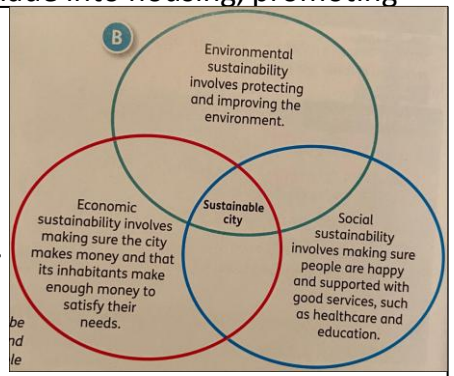
- Industry declined due to _____ _____
- Manchester's _____ closed, deindustrialisation
- Population _____. Deprivation became a problem

**Urban Regeneration:**

- Began in 1980s and is still happening now
- Aims to _____
- _____ offers more jobs in media and science, improved transport systems (trams, buses and light rail connect to rest of Greater Manchester), old warehouses made into housing, promoting culture

## Future Urban Change: Sustainable Cities

- A **sustainable city** is one that _____ _____ _____ _____




- Sustainable cities are associated with ____ as NEEs and LICs are still trying to improve, advance and develop.

**Features of a Sustainable City:**

- _____
- _____
- _____
- _____

# Y7 History Knowledge Organiser: The ‘Golden Age’ of Islamic Science

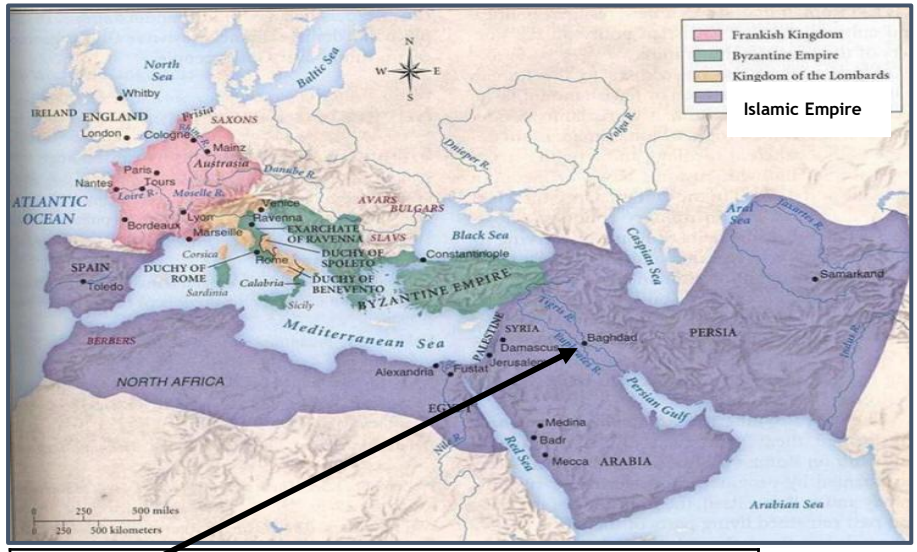
## Timeline

| | |
|---|---|
| **630** | The prophet Muhammad captures Mecca and starts Islam, the religion of Muslims |
| **750** | The Abbasid Empire begins. It stretches from India to Spain. |
| **751** | Arabs learn the art of papermaking from the Chinese |
| **765** | First school of medicine set up in Baghdad |
| **810** | The largest library in the world is set up in Baghdad |
| **820** | First recorded use of algebra |
| **920** | Modern numbering system, from 0 to 9, used for the first time |

## The Islamic ‘Golden Age’

The Islamic ‘Golden Age’ ran from 650 to 1300. It is ‘golden’ because of the advancements in technology, science and philosophy.
We can describe it as:

- Advanced
- Religious
- Knowledgeable
- Technological
- Learning
- Scientific
- Progress




## Baghdad

Baghdad was founded in 762 by the al-Mansur. It developed into a center of religious, political, cultural, scientific and commercial influence.

Significance of Baghdad:

- Strategic location – it was on the Tigris River and close to the Euphrates River, making it a crossroads of trade routes between the East and West.
- Achievement in urban design – it was a round city, inspired by Euclid (the Greek father of geometry).
- Populous – Baghdad had a population of over 1.5 million people by the 9th century.
- Center of learning – Baghdad had many libraries, schools, hospitals and the House of Wisdom.

Baghdad’s prominence came to an end in 1258, when the Mongol army invaded, killed the Caliph, destroyed this city and threw all of the books from the House of Wisdom into the Tigris River.

## How did Islam cause the ‘Golden Age’?

| Feature of Islam… | Impact on science… |
|---|---|
| **Prayer**  Muslims **pray** towards **Mecca** 5 times a day, at dawn, midday, afternoon, sunset, and night | Muslims needed to know the time of day and the location of **Mecca**. This led to the development of the **astrolabe** and **astrology**. |
| **Qu’ran**  The **Qu’ran** is the Muslim holy book. It is written in **Arabic**. | Muslims speak **Arabic**, the language of the **Qu’ran**. This made it easier to share ideas across different areas of the **Middle East**. |
| **Eid and Ramadan**  **Eid** is an important religious holiday, following the month of **Ramadan**, when a Muslim fasts. **Eid** begins on a different day each year, depending on the moon. | Muslims needed to understand the cycle of the moon. This led to the development of the **lunar calendar**, an estimate of the **axial tilt of the earth**, and the use of the **astrolabe**. |
| **Ha**  The **Hajj** is a yearly pilgrimage to Mecca, which takes place at the end of the Islamic | Muslims needed to know which direction to travel in and when to travel, using astronomy. This also led to **…ods regularly being traded**, leading to ideas travelling quickly. |

Look for knowledge/learning from birth to death.

***‘Seek knowledge from the cradle to the grave’***

***‘Seek knowledge and wisdom; whatever the vessel from which it flows, you will never be the loser’***

Look for facts and experiences. Wherever they come from (positive or negative), you will always have learnt something.

# Y7 History Knowledge Organiser: The 'Golden Age' of Islamic Science

## Why was the written word important to the Islamic 'Golden Age'?

Introduction of paper

**Papermaking** was introduced to the Muslim world by China in the 8th century. Paper quickly replaced papyrus and parchment for the recording of written information.

Advantages of paper:

- It can be produced anywhere.
- It is difficult to erase, so **documents and records** were more secure from being faked.
- Replaced coins in the economy, leading to a **paper economy**.
- Used to copy scientific and philosophical texts.

House of Wisdom

The **House of Wisdom** was set up by Caliph al-Mansur in the 8th century. It was built to house all of the **knowledge collected** in Baghdad, and contained translated texts from Hindi, Arabic, Greek and Roman, along with further new knowledge.

Scholars were encouraged to submit their work to the House of Wisdom by being **paid the weight of their book in gold**. This led to more knowledge and discoveries being recorded and shared.

Translators

**Translators** would travel far and wide to bring back unique texts, which they submitted to the House of Wisdom. This led to the work of many important philosophers being saved. This also meant that many translators, such as **Hunayn ibn Ishaq**, becoming very rich.

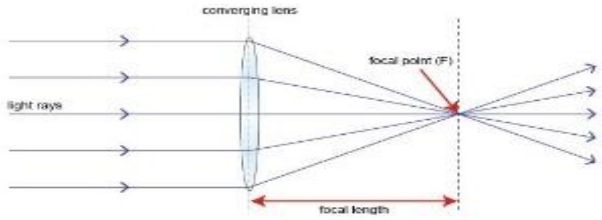
**Averroes**, or ibn Rushd, was an important philosopher. He believed that the search for science and truth would always lead to God. He was heavily influenced by Aristotle, a Greek philosopher. Averroes believed that natural laws governed the universe, meaning that events happen because of causes you can see and test, not because God wills it. He was not believed during his lifetime.

## How did science advance in the Islamic 'Golden Age'?

Scientific Method

**Ibn al-Haytham** was a scientist who practiced the **scientific method**. This is the process of **observing, recording, testing, repeating and then drawing conclusions** about what has been seen.

Ibn al-Haytham used this in his research about **optics** to discover that **eyes reflect light**, rather than produce it. This discovery has led to the development of glasses and c




Astrolabe

The **astrolabe** was a handheld device developed in the **Islamic World** during the Middle Ages.

**How does it work?**

The **astrolabe** works by **stereographic projection** – this means the stars are projected onto the brass plate.

During the day time, the **astrolabe** can be lined up with the sun in order to measure the exact time.

During the night, the **astrolabe** can be lined up with the stars for **navigation**.

Significant uses:

- Calculate when to pray and which direction Mecca is in
- Calculate the date for important festivals, such as **Eid**
- Navigate when travelling, in both the day and night.
- Survey the height of buildings.

## How did maths develop in the Islamic 'Golden Age'?

Al-Khwarizmi

**Al-Khwarizmi** was a **mathematician** who was the director of the House of Wisdom during the 9th Century.

In his book, **Al-Jebr** (820), he introduced the idea of:

- **Algebra** - simplifying mathematical problems by using symbols and rules.
- **Algorithms** - breaking down complicated processes into simple steps.

| ٠ | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | ٨ | ٩ |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

He replaced the **Roman numeral** system, used in Europe, with a new **Arabic numbering system**, as well as the **decimal point**.

## Vocabulary

| | |
|---|---|
| **Astronomy** | The study of the stars |
| **Arabic** | The language of Islam |
| **Baghdad** | The capital of the Abbasid Caliphate |
| **Caliphate** | An Islamic Empire |
| **Caliph** | The ruler of an Islamic Empire |
| **Eid** | Important Islamic festival |
| **Hadith** | The sayings of the prophet Muhammad |
| **Intricate** | Small and complicated |
| **Lunar calendar** | A calendar based on the movement of the moon |
| **Mecca** | The holiest city in Islam |
| **Muhammad** | The most important prophet in Islam |
| **Navigation** | Finding your way somewhere |
| **Optics** | The study of light |
| **Philosophy** | The study of knowledge and existence |
| **Pilgrimage** | A religious journey |
| **Prophet** | An important religious figure who shares the word of God |
| **Qu'ran** | The holy book in Islam |
| **Roman numerals** | I, II, III, IV, V, VI, VII, VIII, IX, X, etc |
| **Scholars** | People who study and research for a living |
| **Scientific method** | Basing ideas on proof from experiments |
| **Surveying** | Measuring accurately the dimensions of a building or piece of land |

1. **During which time period did the Islamic ‘Golden Age’ take place?**
2. **Which empire, beginning in 750, stretched all the way from India to Spain?**
3. **In 751, from which civilization did Arabs learn the art of papermaking?**
4. **Why was the city of Baghdad significant in terms of its urban design?**
5. **How did the religious requirement of 'Prayer' lead to scientific advancement?**
6. **Which language became the common medium for sharing ideas across the Middle East because of the Qu'ran?**
7. **The development of the lunar calendar and an estimate of the earth's axial tilt was driven by the need to understand which religious events?**
8. **What was the 'House of Wisdom'?**
9. **What event in 1258 brought Baghdad’s prominence to an end?**
10. **What does the Islamic teaching ‘Seek knowledge from the cradle to the grave’ imply?**
11. **Why was paper considered more "secure" than previous materials for recording information?**
12. **How were scholars at the House of Wisdom incentivised to submit their work?**
13. **Which scientist is credited with practicing the scientific method and discovering that eyes reflect light?**
14. **The study of optics by Islamic scientists eventually led to the development of which modern technologies?**
15. **In his book Al-Jebr (820), what mathematical concept did Al-Khwarizmi introduce?**
16. **What significant change did Al-Khwarizmi make to the numbering system used in Europe?**
17. **How does an astrolabe work during the day?**
18. **Which philosopher believed that "natural laws governed the universe" and was heavily influenced by Aristotle?**
19. **What is the definition of 'Surveying'?**
20. **What was the primary role of translators like Hunayn ibn Ishaq in the House of Wisdom?**

**Why did religion change in Tudor England?**

**Key Chronology**

**1509** - Henry VIII King of England

**October 1517** - Martin Luther's 95 theses nailed to Wittenburg Church

**1521** - Henry VIII titled Fidei Defensor

**1534** - Act of Superiority makes Henry VIII the Supreme Head of the Church

**1536** - Smaller monasteries were dissolved

**1539** - Larger monasteries dissolved

**1539** - Bible translated to English

**1539** - Act of Six Articles

**1547** - Edward VI becomes King

**1553** - Edward VI dies, Mary I becomes Queen

**1558** - Mary I dies, Elizabeth I Queen

**1558** - Elizabeth's the Act of Uniformity and the Act of Supremacy

**1586** - Babington Plot against Elizabeth by Mary QoS and Babington

**1587** - Mary Queen of Scots executed

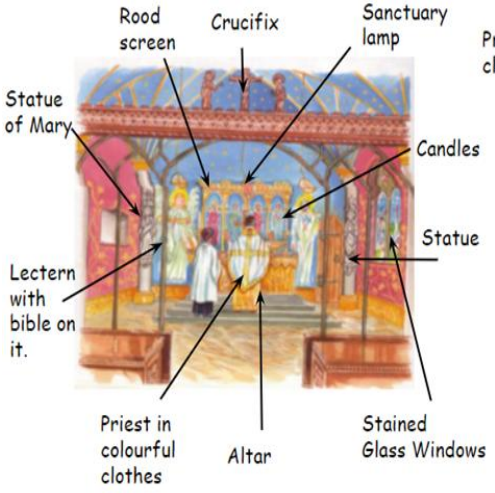
**Martin Luther**, a priest from Germany, did not agree with the **Catholic Church.**

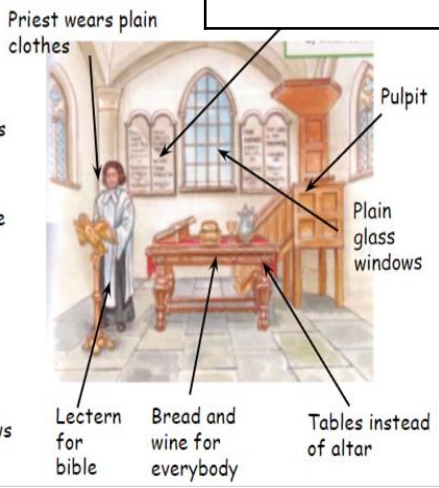
- They were getting rich from **indulgences**.
- They were not focused on being **pious**.
- The Pope had become like a King with lots of political control.

In **1517**, Luther nailed his **95 Theses** to a church in Wittenburg, proposing changes.

- Bible translated so that ordinary people could understand.
- Churches should be plain.
- Money should go to the poor and needy.
- Sins can only be forgiven through prayer.

This was **Protestantism**, in protest of the Catholic Church




Why did Henry VIII break from Rome?

Henry VIII was a devout Catholic. He even defended Catholicism against Luther's ideas, earning him the title **Fidei Defensor** from the Pope in 1521.

However, Henry had a **Great Matter** – he needed to divorce Catherine of Aragon. This led to him **breaking from Rome** (leaving the Catholic Church).

| | | |
|---|---|---|
| Henry needs a male heir<br><br>Him and Catherine have one daughter - Mary<br><br>By breaking with Rome, Henry can divorce and marry Anne Boleyn. | Catholic Church has a lot of power.<br><br>Henry wants all of the power to himself<br><br>If Henry breaks with Rome, the Pope cannot control the **clergy** in England. | Henry needs money to fund for his wars in France<br><br>The Church owned 1/3 of the land in England, and their monasteries were very rich.<br><br>Henry can destroy the monasteries and take the land and their riches for himself. |

| | |
|---|---|
| **Catholic** | Someone who follows the Catholic faith. |
| **Clergy** | People who belong to and work in the Church. |
| **Fidei Defensor** | Defender of the faith |
| **Indulgences** | Payments made to the Catholic Church to forgive sins. |
| **Monastery** | A religious building where monks live. |
| **Pious** | Religious or humble. |
| **Protestant** | A Christian who does not follow the Catholic faith. |
| **Puritan** | An extreme Protestant. |
| **Reform** | A change |
| **Reformation** | The period of religious changes from Catholic to Protestant. |
| **Sacraments** | Catholic holy ceremony |

## Edward VI continues Reformation

Edward VI becomes king in 1547
Help to rule by a royal council led by Duke of Somerset, who was also Protestant.

1. A new Protestant Prayer Book in English was made in 1552.
2. Church services were in English.
3. **Transubstantiation** (belief that wine and bread at Communion literally turns into blood and body of Christ) was said not to take place.
4. Priests were allowed to marry.
5. Land was taken from the Church.
6. Churches were ordered to be plain and simple – no statues, ornaments or images.
7. **The Act of Six Articles of 1539** (outlawing Protestant beliefs) was abolished.

## Mary I counters Reformation

Mary was raised Catholic.
determined to make England Catholic again.
Mary reversed all of the changes made under Henry VIII and Edward V
Known as the counter reformation

- Protestant preachers were banned.
- Priests had to split up from their wives.
- Latin Mass was brought back.
- The Protestant Prayer Book was banished.
- Those who denied transubstantiation, were burned at the stake.

Mary burned 300 Protestants at the stake during her 5 year reign, gaining her the nickname 'Bloody Mary'.

**Bloody Mary?**

- Burned to death almost 300 Protestants in 5 years
- Killed important people in the Church, such as Archbishop Thomas Cranmer
- One person was burned every 5 days

**Not Bloody Mary?**

- Executing people for a crime was common in the 16th century.
- Mary's father-in-law, the King of Spain, had executed 30,000 Protestants during his reign
- Mary allowed 800 Protestants to leave the country.

## How did Elizabeth I deal with opposition?

**Catholic threats e.g. Babington Plot**.

- Catholic Mary, Queen of Scots had a claim to the English throne.
- Elizabeth I kept her under guard for 19 years.
- Too risky for Elizabeth to let her be free, but bad to execute her
- Babington plotted in 1586 to have Elizabeth killed and Mary QoS become the next monarch.
- Elizabeth's spymaster discovered plot.
- Babington arrested and executed in September 1586.
- Mary QoS put on trial and found guilty. Elizabeth unwilling to kill her cousin, but signed the death warrant in February 1587.

**Protestant threats: e.g. Puritans**

**Puritans** felt that England had not gone anti-Catholic enough.

- People should study the Bible closely.
- People should return to simple ways of life.
- They rejected the Book of Common Prayer as too simplistic.
- The hated ritual and celebration.

Elizabeth was going to marry a Catholic French prince, John Stubbs wrote an open letter saying how terrible this would be. Elizabeth had his hand cut off.

## How did Elizabeth I solve religious tensions?

Elizabeth I had to be careful. Compromise between Catholics and Protestants in England was called the **Religious Settlement**.

1) **The Act of Supremacy** (1558) made Elizabeth the Supreme Governor of the Church of England.

2) **The Act of Uniformity** (1558) made Protestantism the official religion of England, which everyone had to follow.

- Services should be in English.
- Priests can marry.
- Church's can celebrate Saint's Days, but not idols.
- Bishops can stay, but under her control.
- Sins are forgiven by faith in God and good work on earth.
- Only ordained ministers or priests can preach.
- Priests should wear the same robes.
- Church can have some decorations.
- Mass is banned. The bread and wine at Communion is just spiritual.

1. **When did Henry VIII become King of England?**
2. **Who nailed 95 theses to a church in Wittenburg in 1517?**
3. **What does "Fidei Defensor" mean?**
4. **What was Henry VIII's "Great Matter"?**
5. **By breaking from Rome, who could Henry divorce?**
6. **According to the "Catholic Church" illustration, what should a priest wear?**
7. **In the "Protostant" illustration, what are "plain glass windows" a part of?**
8. **In the vocabulary box, what is a "Monastery"?**
9. **After Henry VIII, who became King in 1547?**
10. **Which event happened last on the key chronology: "Mary I dies, Elizabeth I Queen" or "Mary Queen of Scots executed"?**
11. **Who helped Edward VI rule England because he was so young when he became King?**
12. **Under Edward VI's rule, what language were church services required to be in?**
13. **What was Mary I's main goal regarding religion when she became Queen?**
14. **Why did Mary I earn the nickname "Bloody Mary"?**
15. **Give one reason listed under the "Not Bloody Mary?" section that defends her actions.**
16. **What was the name of the compromise Elizabeth I created to solve religious tensions?**
17. **According to the Act of Supremacy (1558), what was Elizabeth I's official title in the Church?**
18. **Who was the Catholic "threat" that Elizabeth I kept under guard for 19 years?**
19. **What did the Puritans think about Elizabeth's religious changes?**
20. **What happened to John Stubbs after he wrote an open letter against Elizabeth marrying a Catholic prince**

**How did the world 'turn upside down' in England during the 1640s**

## Key Chronology

**5th November 1605**
- Gunpowder plot

**27 March 1625**
Charles I acceeds to the throne

**10 March 1629**
Charles I starts '11 Years of Tyranny'

**4 Jan 1642 -** Charles I tries to arrest 5 MP's

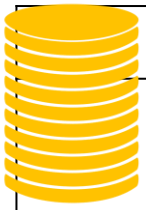
**22 August 1642 -** Civil War begins

**25 September 1644**
- Parliament ally with Scots

**15 Feb 1645 -** Parliament establishes New Model Army

**Power** had always been shared amongst the monarch, barons or nobles and people.

- **William I** needed barons as part of the feudal system
- **Simon de Montford** (noble) went to war against Henry III after he borrowed money from the Pope
- **King John** forced to sign **Magna Carta** (Great Charter) in 1215 after his barons waged war against him because of John's greedy tax laws and loss of land against France.
- Tudors increased the power of the monarchy as well as the **Stuarts** and **Charles I**, who continued the belief that God had chosen them to rule **(divine right to rule)**



### Causes of the English Civil War 1642-49

**Economy**
- Everybody had to pay an old Ship Tax, as King needs money to pay his expensive wars
- You now have to buy from monopolies: this raises tax for the King
- Charles I evicts people living on the King's Forests

**Foreign Policy**
- Charles I makes peace with Spain and France, who were Catholic countries. Protestants didn't like this.
- War against Scotland (Bishops Wars) were expensive and a failure

**Religion**
- Protestants afraid the country becoming more Catholic
- Henrietta Maria, the King's wife, was a French Catholic
- Archbishop of Canterbury, **William Laud,** makes Catholic reforms to the church, including displaying icons and decorations

**Power**
- Charles I uses old, unfair system of the **Court of the Star Chamber** to sentence people. He imprisoned people without a fair trial.
- Charles I believed his power came f
- He banned Parliament for 11 years (Eleven Years of Tyranny)

| Vocabulary | |
|---|---|
| **Democracy** | Equal representation among citizens |
| **Civil War** | A war between sides of the same nation |
| **Parliament** | the building and institution where politicians debate law |
| **Monopolies** | King controls licenses to sell items |

**Parliament declares war on the King in 1642**

| **Roundheads (Parliament)** | **Cavaliers: (King)** |
|---|---|
| Supported by poorer, Puritans, merchants, businessmen, and commoners. | Supported by rich, Catholic, country gentlemen, traditional Protestants |

**5 May 1646 -** Charles I surrenders

**20th January 1649 -** Charles I is executed

**15 May 1649 -** Levellers Mutiny is crushed by New Model Army

**11 September 1649 -** Cromwell crushes Irish at Drogheda

**16 December 1653 -** Cromwell makes himself 'Lord Protector'

**3 September 1658 -** Cromwell dies

2**9 May 1660 -** Charles II is restored

**16 December 1689 -** Bill of Rights is signed

**Battles of the Civil War:**

**1642 Battle of Edgehill: Draw:** King managed to march to London, but were forced to stay at Oxford

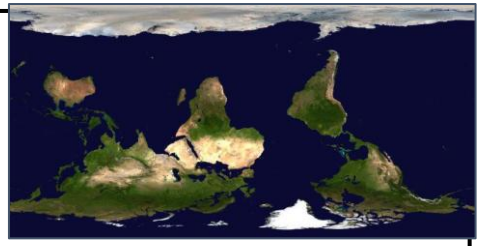
**1644 Battle of Marston Moor: Win for Parliament:** Parliament attack and win the North from the King

**1645 Battle of Naseby: Win for Parliament:**Cromwell's New Model Army (Ironsides) wiped out Prince Rupert's army, forcing the King to surrender in Oxford in 1646

**New Model Army:**

- Cromwell realised Parliament needed better cavalry to defeat the King's under Prince Rupert.
- Cromwell's **'Ironsides'** were tough, well-disciplined and well trained

**Cromwell Victory had <u>political consequences</u>**



- The King is executed 3rd January 1649
- Cromwell set up a **military dictatorship** (army controlled Parliament) . After all, the Army controlled England and the Rump Parliament (only 50 MP's) were inadequate
- Cromwell's **'Barebones'** Parliament, made up of Puritans, was a failure so he made Major Generals (Army) take over. Cromwell therefore ruled as a **military dictator** using the army to suppress people and keep law and order.

**Cromwell Victory had <u>social consequences</u>**

- 'world turned upside down' meant people were **beginning to question** how they should live: **radical** (extreme) ideas were being passed around about how to rule without a King.
- New ideas spread about how society should be led:
  - **Levellers** - wanted freedom of speech, end of Divine Right of Kings, equal rights for people
  - **Diggers** - wanted absolute human equality, shared land between everyone

| Hero | Villain |
|---|---|
| • Promoted religious freedom in private (allowed Jews to return to England) | • Ruled like a King (hypocrite?) |
| • Increased the fair trial system (ridding of the Star Chamber) | • Massacred over 3000 people at Drogheda in Ireland |
| • Ended the King's unfair Ship Tax | • Banned theatre, dance and entertainment |
| | • Increased the Empire (capturing of Jamaica) |

**Parliament's power increased** for the people: **Bill of Rights (1689)** signed by **King William and Queen Mary** said Parliament could appoint judges and have frequent meetings, and that Parliament controlled the money of England.

1. **On what date did Charles I officially become King of England?**
2. **What was the "Eleven Years of Tyranny"?**
3. **Which important historical document was King John forced to sign in 1215?**
4. **What is the "Divine Right to Rule"?**
5. **In the "Economy" section, what was the name of the old tax Charles I made everyone pay to fund his wars?**
6. **Why were many Protestants unhappy with Charles I's marriage to Henrietta Maria?**
7. **What was the "Court of the Star Chamber" used for?**
8. **The Civil War was fought between two main groups. Name them and state who each group supported.**
9. **According to the vocabulary box, what is a "Monopoly"?**
10. **What major event happened in February 1645 which change the strength of Parliament?**
11. **Which 1645 battle was a decisive win for Parliament and led to the King's surrender in 1646?**
12. **What was the nickname given to Oliver Cromwell's tough, well-trained cavalry?**
13. **On what date was King Charles I executed?**
14. **What title did Oliver Cromwell give himself on December 16, 1653?**
15. **Cromwell ruled as a "military dictator." According to the text, what does this mean?**
16. **What did the group known as the "Levellers" want for the people of England?**
17. **Give one "Hero" reason why some people supported Cromwell.**
18. **Give one "Villain" reason why some people disliked Cromwell's rule.**
19. **Who was "restored" to the throne on May 29, 1660?**
20. **What did the Bill of Rights (1689) say about who controlled England's money?**

# Year 7 Religious Studies Knowledge Organiser - Judaism

Key vocab:

**Rabbi:** Jewish spiritual leader who leads services at the Synagogue
**Synagogue:** Jewish place of worship
**Mitzvot:** meaning commandment - 613 within the Torah
**Tanakh:** Also known as the 'Hebrew Bible' is the collection of the main 3 Hebrew scriptures below.
**Torah:** The book of law - the most important Hebrew text revealed to Moses after the Exodus.
**Ketuvim:** Primarily containing poetical books and songs of praise. Mostly written by King David and King Solomon.
**Nevi'im:** The book of Jewish History and the prophets
**Jerusalem:** The most important city to Jews. Located in Israel
**Hebrew:** The language of the Jews
**Monotheism:** The belief in one God
**Covenant:** An agreement made (between humanity and God)
**10 commandments:** The most important laws of the 613 mitzvot

**Denominations of Judaism**

**Orthodox:** Believe that it is essential to keep traditional beliefs and the Jewish way of life alive. Orthodox Jews think that the laws in the Torah show clearly how God wants Jews to live and should be closely followed.

**Conservative:** Are not as strict as Orthodox Jews, though still preserve Jewish rituals and traditions. They are more flexible in interpreting Jewish laws in the modern world.

**Liberal:** Believe that worship can change and modernise over time. For example, some liberal synagogues allow women to be Rabbis. They might also think that some laws in the Torah are not appropriate for modern day and should be changed to suit.

**Secular:** Jews who do not believe in God but still consider themselves to be Jewish by culture or ethnicity.

**Key Beliefs of Judaism**

- The founding father of Judaism, Abraham, made a covenant with God. Abraham and his descendants were to worship God and live according to his commands and in return, God promised they would become a great nation.
- Moses received the 10 commandments God at the top of mount Sinai after freeing the Hebrew slaves from Egypt and scribes the original Torah.
- Jews should live their lives according to what is written in the Torah, following the 613 Mitzvot that are present within.
- Jews believe that there is a single God who not only created the universe, but with whom every Jew can have an individual and personal relationship.

**Jewish rituals:**

**Brit Milah:** Circumcision and naming ceremony for boys 8 days after birth

**Simchat Bat:** Welcoming ceremony for girls

**Bar Mitzvah:** Coming of age ceremony for boys (age 13)

**Bat Mitzvah:** Coming of age ceremony for girls (age 12)

**The Synagogue:** The place of worship for Jews. Orthodox Jews will worship in the synagogue 3 times a day and follow the guidance in the Torah of how to do so properly.

**Shabbat:** The holy day of rest and worship for Jews which starts Friday at sundown and finishes Saturday at Sundown. Exactly how this day is spent differs between denominations but traditionally Jews will not perform any task deemed as 'work' and instead focus on worship and enjoying time with family.

**Trefah and Kosher:** As part of the mitzvot some Jews will follow food laws known as Kashrut. Trefah refers to food that are not acceptable for Jews to eat (words translates to torn). Kosher foods are foods which are acceptable for Jews to eat (word means 'fit').

**Jewish festivals**

**Pesach:** Commemorating the Exodus of the Hebrew slaves from Egypt and the 10th plague that was unleashed upon the Egyption people. The lives of all the first born children were taken by the angel of death. To avoid the plague, the Hebrews were told to slaughter a lamb and with it's blood, mark the doorposts of their homes. The angel of death is said to have seen the blood, passed over the home and not entered.

**Yom Kippur:** Jews mark the day of Yom Kippur by fasting for 25 hours. They also wear white and they don't wear make-up, perfume, or leather shoes. The most important part of Yom Kippur is the time spent in the synagogue. Even Jews who do not go to the synagogue very much will go on Yom Kippur. The day is spent in continuous prayer.

**Rosh Hashanah:** A special festival that celebrates Jewish New Year. The dates of Jewish festivals come from the Hebrew Calendar, so the Jewish New Year begins in autumn. Celebrating the creation of the world and marks making a fresh start.
It is a holy day on which Jewish people are not expected to work.
Instead it is a time for them to reflect on the past year and to ask for forgiveness for anything wrong they feel they have done.

# Year 7 Religious Studies Knowledge Organiser - Judaism

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It is a holy day on which Jewish people are not expected to _____.
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# YEAR 7 FRENCH KNOWLEDGE ORGANISER
## *Sentence Builder 5*

| | |
|---|---|
| I live in | **j'habite à…** |
| in a town | **dans une ville** |
| in a village | **dans un village** |
| in a house | **dans une maison** |

| | |
|---|---|
| London | **Londres** |
| in a flat | **dans un appartement** |
| in a farm | **dans une ferme** |
| small/big | **petit(e)/grand(e)** |

| | |
|---|---|
| which is located | **qui se trouve** |
| in the east | **dans l'est** |
| in the west | **dans l'ouest** |
| in the south-west | **dans le sud-ouest** |
| in the south | **dans le sud** |

| | |
|---|---|
| of England | **de l'Angleterre** |
| of the United Kingdom | **du Royaume-Uni** |
| of France | **de la France** |

| | |
|---|---|
| now | **Maintenant…** |
| these days | **De nos jours** |
| before | **Avant** |
| when I was younger | **Quand j'étais plus jeune** |

| | |
|---|---|
| is/was | **est/était** |
| my (m,f,pl) | **mon/ma/mes** |
| there is/are<br>there isn't/aren't | **il y a/**<br>**il n'y a pas de (d')** |
| but unfortunately | **mais malheureusement** |

| | |
|---|---|
| historic | **historique** |
| boring | **ennuyeux/se** |
| clean | **propre** |
| quiet | **calme** |
| ordinary | **ordinaire** |

| | |
|---|---|
| a shopping centre | **un centre-commercial** |
| popular | **populaire** |
| famous | **célèbre** |
| pleasant | **agréable** |

| | |
|---|---|
| a post office | **une poste** |
| a garden | **un jardin** |
| a shop | **un magasin** |
| a pool | **une piscine** |
| a station | **une gare** |

### Practice Translations

| | |
|---|---|
| I live in Gloucester in a big house | |
| Now my town is famous and pleasant | |
| When I was younger my area was boring | |
| but unfortunately there isn't a station | |
| In my village there is a shop and a pool | |



# YEAR 7 FRENCH KNOWLEDGE ORGANISER
## *Sentence Builder 6*

| | |
|---|---|
| Usually | **D'habitude** |
| At the moment | **En ce moment** |
| Sometimes | **Quelquefois** |
| From time to time | **De temps en temps** |
| Each day | **Chaque jour** |

| | |
|---|---|
| Normally | **Normalement** |
| Often | **Souvent** |
| every day | **Tous les jours** |
| Generally | **Généralement** |

| | |
|---|---|
| In my town | **Dans ma ville** |
| In my region | **Dans ma région** |
| on my street | **Dans ma rue** |

| | |
|---|---|
| in my area | **dans ma zone** |
| in my village | **dans mon village** |
| in my neighbourhood | **dans mon quartier** |
| in my country | **dans mon pays** |

| | |
|---|---|
| I travel | **Je voyage** |
| I go | **je vais** |
| I would travel | **Je voyagerais** |
| I would go | **j'irai** |
| on foot | **à pied** |
| by train | **en train** |
| by car | **en voiture** |
| by coach | **en car** |
| by plane | **en avion** |
| by bus | **en bus** |
| by boat | **en bateau** |

| | |
|---|---|
| to go to school | **pour aller à l'école** |
| to go on holiday | **pour aller en vacances** |
| to visit my friends | **pour visiter mes copains** |
| to help the environment | **pour aider l'environnement** |

| | |
|---|---|
| If I had the choice | **Si j'avais le choix** |
| If I had enough money | **Si j'avais assez d'argent** |
| If I had the time | **Si j'avais le temps** |
| If I could | **Si je pouvais** |
| If I was rich | **Si j'étais riche** |
| If I had to choose | **Si je devais choisir** |

### Practice Translations

| | |
|---|---|
| Sometimes I travel by car to go to school | |
| If I had the time I would go on foot | |
| Often I go by bus to visit my friends | |
| If I was rich I would go by plane | |
| If I had the choice I would go by boat | |

# YEAR 7 FRENCH KNOWLEDGE ORGANISER
## *Sentence Builder 7*

| | |
|---|---|
| I love | **J'adore** |
| I like | **J'aime** |
| I prefer | **Je préfère** |

| | |
|---|---|
| I would say that | **je dirais que** |
| in my opinion | **À mon avis…** |
| however | **cependant** |

| | |
|---|---|
| I hate | **je déteste** |
| I can't bear | **Je ne supporte pas** |
| I don't like | **Je n'aime pas** |

| | |
|---|---|
| but | **mais** |
| reality-tv programmes | **les émissions de télé-réalité** |
| the news | **les informations** |

| | |
|---|---|
| series | **les séries** |
| music programmes | **les émissions de musique** |
| sport programmes | **les émissions de sport** |

| | |
|---|---|
| my dad | mon père |
| my brother | mon frère |

| | |
|---|---|
| because | **parce que/car/puisque** |
| I find them | **je les trouve** |
| my friend (m) | **mon copain** |
| my mum | **ma mère** |

| | |
|---|---|
| my sister | **ma sœur** |
| my friend (f) | **ma copine** |
| he/she finds them | **il/elle les trouve** |

| | |
|---|---|
| he/she thinks that | **il/elle pense qu'** |
| my parents think that | **mes parents pensent qu'** |
| my friends think that | **mes copains pensent qu'** |
| they are | **elles sont** |
| different | **différentes** |

| | |
|---|---|
| fun/funny | **amusantes** |
| tiring | **fatigantes** |
| exciting | **passionnantes** |
| interesting | **intéressantes** |
| surprising/amazing | **étonnantes** |
| boring | **ennuyeuses** |
| rubbish | **nulles** |

### Practice Translations

| | |
|---|---|
| I love music programmes, I find them interesting. | |
| I hate the news because I would say they are boring. | |
| My friend (f) can't stand sports programmes. | |
| She finds them rubbish. | |
| My parents love series because they find them fun. | |



# YEAR 7 FRENCH KNOWLEDGE ORGANISER
## *Sentence Builder 8*

| | |
|---|---|
| During my free time | **Pendant mon temps libre** |
| each day | **chaque jour** |
| Normally | **Normalement** |
| Often | **Souvent** |

| | |
|---|---|
| Usually | **D'habitude** |
| At the moment | **En ce moment** |
| Sometimes | **Quelquefois** |
| From time to time | **de temps en temps** |
| every day | **tous les jours** |

| | |
|---|---|
| I watch | **je regarde** |
| we watch | **nous regardons** |
| crime films | **des films de crime** |
| horror films | **des films d'horreur** |
| police films | **des films policiers** |

| | |
|---|---|
| I like to watch | **j'aime regarder** |
| I only watch | **je ne regarde que** |
| comedies | **des comédies** |
| videos | **des vidéos** |
| at my house | **chez moi** |
| on a YouTube channel | **sur une chaîne YouTube** |

| | |
|---|---|
| I love to watch | **j'adore regarder** |
| I don't watch | **je ne regarde pas** |
| I never watch | **je ne regarde jamais** |
| after school | **après le collège** |
| when I have some free time | **quand j'ai du temps libre** |
| on TV | **à la télé** |

| | |
|---|---|
| at the cinema | **au cinéma** |
| on Netflix/TikTok | **sur Netflix/TikTok** |
| but | **mais** |
| however | **cependant** |

### Practice Translations

| | |
|---|---|
| During my free time I like to watch films on TV | |
| I never watch horror films after school | |
| Every day I love to watch videos on YouTube | |
| We watch comedies from time to time | |
| However, I don't like crime films | |

# YEAR 7 FRENCH KNOWLEDGE ORGANISER

## *Sentence Builder 9*

| | |
|---|---|
| My school is called… | **Mon école s'appelle…** |
| of France | **de la France** |
| it's a secondary school | **c'est un collège** |
| in the town centre | **au centre-ville** |

| | |
|---|---|
| which is located | **qui se trouve** |
| in the north / south / east/west/south-west | **dans le nord / sud / est / ouest / sud-ouest** |
| of England | **de l'Angleterre** |
| in the countryside | **à la campagne** |
| at the mountains | **à la montagne** |

| | |
|---|---|
| we have to | **il faut** |
| it's forbidden to | **il est interdit de (d')** |
| wear school uniform | **porter l'uniforme scolaire** |
| do your homework | **faire ses devoirs** |

| | |
|---|---|
| arrive on time | **arriver à l'heure** |
| eat in class | **manger en classe** |
| use your mobile in class | **utiliser son portable en classe** |
| I agree | **je suis d'accord** |

| | |
|---|---|
| In my school | **Dans mon collège** |
| there is/are | **il y a** |
| we have | **on a / nous avons** |

| | |
|---|---|
| lots of | **beaucoup de** |
| plenty of | **plein de** |
| so many | **tellement de** |

| | |
|---|---|
| teachers | **professeurs / profs** |
| pupils | **(d')élèves** |
| lessons | **cours / leçons** |
| classrooms | **salles de classe** |
| rules | **règles** |

| | |
|---|---|
| a sports field | **un terrain de sport** |
| a tennis court | **un court de tennis** |
| a laboratory | **un laboratoire** |
| a playground | **une cour de récréation** |
| a canteen | **une cantine** |
| a swimming pool | **une piscine** |

### Practice Translations

| | |
|---|---|
| My school is called Henley Bank High School. | |
| It's a secondary school which is located | |
| In the south-west of England in the countryside | |
| There are lots of classrooms and teachers | |
| We have a sports field and lots of lessons | |

# YEAR 7 SPANISH KNOWLEDGE ORGANISER
## *Sentence Builder 5*

| | |
|---|---|
| Hello | **Hola** |
| I would like to present myself | **quiero presentarme** |
| My name is… | **me llamo…** |

| | |
|---|---|
| and | **y** |
| I live in | **Vivo en** |
| I live in a town | **Vivo en una ciudad** |
| I live in a village | **Vivo en un pueblo** |

| | |
|---|---|
| Which is (located) | **Que está** |
| In the north of | **En el norte de** |
| In the south of | **En el sur de** |
| In the west of | **En el oeste de** |
| In the east of | **En el este de** |
| In the northeast | **En el noreste** |
| In the southwest | **En el suroeste** |

| | |
|---|---|
| Reino Unido | **UK** |
| Alemania | **Germany** |
| España | **Spain** |
| Las Islas Baleares | **Balearic Islands** |
| Las Islas Canarias | **Canary islands** |

| | |
|---|---|
| July | **julio** |
| August | **agosto** |
| September | **septiembre** |
| October | **octubre** |
| November | **noviembre** |
| December | **diciembre** |

| | |
|---|---|
| A big house | **Una casa grande** |
| A small flat | **Un piso pequeño** |

| | |
|---|---|
| **Venezuela, Perú** | **Bolivia, Ecuador** |
| **Gloucester, Barcelona, Madrid, Buenos Aires** | |

| | |
|---|---|
| Now | **Ahora** |
| My town is | **Mi pueblo es** |
| Historic and modern | **Histórico y moderno** |
| And beautiful | **Y bonito** |

| | |
|---|---|
| Now my city is | **Ahora mi ciudad es** |
| small | **pequeña** |
| old | **antigua** |
| huge | **enorme** |

### Practice Translations

| | |
|---|---|
| Hello I would like to present myself. | |
| I live in a small and beautiful town. | |
| Now my city is huge and historic. | |
| I live in a town in the south of Spain. | |
| I live in a small flat in the east of Gloucester. | |



# YEAR 7 SPANISH KNOWLEDGE ORGANISER
## *Sentence Builder 6*

| | |
|---|---|
| Before | **Antes** |
| My street **was** | **Mi calle era** |
| My neighbourhood | **Mi barrio** |
| When I was younger | **Cuando era pequeño/a** |
| My region | **Mi región** |

| | |
|---|---|
| But | **pero** |
| Unfortunately | **desafortunadamente** |
| The isn't/there aren't | **No hay** |
| I hate | **odio** |
| I can't stand | **no aguanto** |

| | |
|---|---|
| There is/are | **hay** |
| Un aeropuerto | **An airport** |
| Un centro comercial | **A shopping centre** |
| Un jardín | **A garden** |
| Un puerto | **A port** |

| | |
|---|---|
| There isn't | **No hay** |
| Una bibliteca | **A library** |
| Una piscina | **A pool** |
| Una playa | **A beach** |
| Una estación | **A station** |
| Una farmacia | **A pharmacy** |
| Una playa | **A beach** |

| | |
|---|---|
| In my province there is…… | **En mi provincia hay….** |
| A castle | **Un castillo** |
| A market | **Un mercado** |
| A cinema | **un cine** |
| A post office | **Una oficina de correos** |
| A shop | **Una tienda** |

| | |
|---|---|
| In my region | **En mi región** |
| I travel | **viajo** |

| | |
|---|---|
| I go | **Voy** |
| By car | **En coche** |

| | |
|---|---|
| Clean | **Limpio/a** |
| Dirty | **Sucio/a** |

| | |
|---|---|
| I travel by bus | **Viajo en autobús** |
| I go on foot | **Voy a pie** |
| I go by train | **Voy en tren** |
| I travel by plane | **Viajo en avión** |

| | |
|---|---|
| If I had the opportunity | **Si tuviera la oportunidad** |
| I would travel by bike | **Viajaría en bici** |
| If I could | **Si pudiera** |
| I would go by car | **Iría en coche** |

### Practice Translations

| | |
|---|---|
| Now my neighbourhood is big and beautiful. | |
| Before my town was old and dirty. | |
| Unfortunately there isn't a post office. | |
| If I could, I would travel by plane. | |
| When I was younger in my village there was a pool and a station. | |

# YEAR 7 SPANISH KNOWLEDGE ORGANISER
## *QUIZ – Sentence Builder 5 & 6*

| | |
|---|---|
| In my house | |
| In my family | |
| there is… | |

| | |
|---|---|
| me | |
| my sister | |
| my step-dad | |

| | |
|---|---|
| Also, at the moment | |
| I live in | |
| A big house | |
| I would say that | |

| | |
|---|---|
| A flat | |
| a house | |
| a town | |
| a city | |
| big | |
| small | |

| | |
|---|---|
| There is | |
| A shop | |
| A pool | |
| A school | |
| A park | |
| A library | |

| | |
|---|---|
| I would say that | |
| In my opinion | |
| I go | |
| I travel | |
| By car | |

| | |
|---|---|
| By plane | |
| On foot | |
| By tube | |
| By bike | |

| | |
|---|---|
| sometimes | |
| often | |
| every day | |
| never | |
| always | |

| | |
|---|---|
| I like sci-fi programmes | |
| I don't like comedies | |
| news | |
| It is… | |

| | |
|---|---|
| because | |
| they aren't | |
| they are | |
| interesting | |
| funny | |
| boring (x2) | |

### Practice Translations

| | |
|---|---|
| I never travel by bus. | |
| I always go by car to school. | |
| I would say that my city is big. | |
| In my town there is a library, a park and a shop. | |
| I don't like adventure programmes because they aren't interesting . | |



# YEAR 7 SPANISH KNOWLEDGE ORGANISER
## *Sentence Builder 7*

| | |
|---|---|
| I love | **Me encanta(n)** |
| I like a bit | **Me gusta(n) un poco** |
| I prefer | **Prefiero** |

| | |
|---|---|
| programmes | **Los programas** |
| series | **las series** |
| news | **las noticias** |

| | |
|---|---|
| I hate | **Odio** |
| I can't bear | **No aguanto** |
| I can't stand | **Detesto** |

| | |
|---|---|
| documentaries | **los documentales** |
| series of… | **las series de…..** |
| programmes of… | **los programas de…** |

| | |
|---|---|
| My brother loves | **A mi hermano le encantan** |
| My friend doesn't like | **A mi amigo/a no le gusta(n)** |
| My mum hates | **Mi madre odia** |

| | |
|---|---|
| amor | **romance/love** |
| adventure | **aventura** |
| horror | **terror** |

| | |
|---|---|
| because | **Porque / ya que** |
| they are<br>They aren't | **Son**<br>**No son** |

| | |
|---|---|
| I would say that | **Diría que** |
| In my opinion | **En mi opinión** |
| really | **realmente/ verdaderamente** |
| absolutely | **absolutamente** |
| films | **las películas** |

| | |
|---|---|
| fun | **divertido(a)(s)** |
| relaxing | **relajante (s)** |
| exciting | **emocionante(s)** |
| interesting | **interesante(s)** |
| cheerful | **alegre(s)** |
| boring | **aburrido(a)(s)** |
| boring | **monótono(a)(s)** |

### Practice Translations

| | |
|---|---|
| I would say that I can't stand romance programmes. | |
| I really love documentaries because they are exciting. | |
| I hate horror series because they are boring . | |
| In my opinion adventure programmes are totally relaxing and they aren't boring. | |
| I can't bear the news because they aren't cheerful . | |

# YEAR 7 SPANISH KNOWLEDGE ORGANISER
## *Sentence Builder 8*

| | |
|---|---|
| Normally | **Normalmente** |
| From time to time | **De vez en cuando** |
| Sometimes | **a veces** |

| | |
|---|---|
| I don't watch | **no veo** |
| I always watch | **siempre veo** |
| I never watch | **nunca veo** |

| | |
|---|---|
| I like to watch | **me gusta ver** |
| I love to watch | **me encanta ver** |
| I watch | **veo** |

| | |
|---|---|
| I go | **voy** |
| to the beach | **a la playa** |
| to school | **al colegio** |

| | |
|---|---|
| Given that (because) | **dado que** |
| I would say that | **diría que** |
| They are | **son** |

| | |
|---|---|
| I think that | **pienso que** |
| I believe that | **creo que** |
| He/she thinks that | **piensa que** |

| | |
|---|---|
| at the cinema | **En el cine** |
| at home | **en mi casa** |
| on a music channel | **en un canal de música** |

| | |
|---|---|
| My parents think that | **mis padres piensan que** |
| My friends think that | **mis amigos piensan que** |

| | |
|---|---|
| on Netflix | **en Netflix** |
| at my friend's house | **en la casa de mi amigo** |
| on tv | **en la tele** |

| | |
|---|---|
| In the morning | **Por la mañana** |
| In the afternoon | **Por la tarde** |
| Por la noche | In the evening |

| | |
|---|---|
| often | **A menudo** |
| From time to time | **De vez en cuando** |
| Dos veces a la semana<br>Tres veces a la semana | **Two times per week (twice a week)**<br>**Three times a week** |

| | |
|---|---|
| Antes del colegio | **Before school** |
| Después del colegio | **After school** |
| Cuando tengo tiempo libre | **When I have free time** |

### Practice Translations

| | |
|---|---|
| Sometimes I watch series in the afternoon after school. | |
| From time to time I watch series at my friend's house. | |
| My parents think that I never watch programmes on Netflix. | |
| I think that, twice a week, I love to watch programmes . | |
| I would say that I always watch films on Netflix. | |



# YEAR 7 SPANISH KNOWLEDGE ORGANISER
## *Sentence Builder 9*

| | |
|---|---|
| My school is called | **Mi colegio se llama** |
| My school is called | **Mi instituto se llama** |
| It is | **es** |

| | |
|---|---|
| Mucho/a (s) | **Lots of** |
| Poco/a (s) | **few** |
| Demasiado/a (s) | **too many** |

| | |
|---|---|
| A big secondary school | **Un colegio secundario grande** |
| It is a sixth form college | **Es un bachillerato** |

| | |
|---|---|
| teachers | **profesores** |
| pupils | **alumnos** |
| students | **estudiantes** |

| | |
|---|---|
| It is called | **Se llama** |
| but | **pero** |
| It isn't | **No es** |

| | |
|---|---|
| I think that | **pienso que** |
| I believe that | **creo que** |
| he/she thinks that | **piensa que** |

| | |
|---|---|
| Which is | **está** |
| In the north of England | **En el norte de Inglaterra** |
| In the southeast of England | **En el sureste de Inglaterra** |
| On the coast | **En la costa** |
| In the countryside | **en el campo** |

| | |
|---|---|
| exámenes | **exams** |
| aulas | **classrooms** |

| | |
|---|---|
| rules | **reglas / normas** |
| Sports teams | **Equipos de deporte** |
| subjects | asignaturas |

| | |
|---|---|
| In the mountains | **En las montañas** |
| En the town centre | **En el centro** |
| We have | **Tenemos** |
| There is/are | **hay** |

| | |
|---|---|
| We have to | Hay que |
| It is forbidden | **Está prohibido** |
| To eat in class | **Comer en clase** |
| To arrive late | **Llegar tarde** |
| Usar tu móvil | **To use your phone** |

### Practice Translations

| | |
|---|---|
| My school is called Henley Bank High School | |
| It is a big school which is (located) | |
| In the southwest of England | |
| We have lots of teachers and pupils | |
| There are too many rules and a few lessons | |

Year 7 Support Knowledge

**Keywords associated with support**

| |
|---|
| Assisting |
| Back someone |
| Encourage |
| Contribute |

**Example of support**

- Backing up in cricket
- Zone defense in netball
- Running with the ball carrier in rugby
- Being there to pass to in any sport
- Giving guidance on where to be as a leader.

**Support definition** - The purpose of support in sport is to contribute effectively as a team to reach a collective goal.

**What are the defensive principles?**

These are used to stop teams making advance towards goal

| | |
|---|---|
| Man to man | Marking a specific player |
| Zone | Making a space as a unit |
| Closing Down | Outnumbering the attack and giving them less space |

**What are the attacking principles?**

These are used to advance towards goal

| | |
|---|---|
| Angles & options | Running into spatial directions |
| Overloading | Having more attackers than defenders |
| Creating space | Allowing others to 'run through' having 'protected' space. |

Year 7 Support Knowledge

**Keywords associated with support**

| |
|---|
| |
| |
| |
| |

**Example of support**

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- Zone defense in netball
- Running with the ball carrier in rugby
- Being there to pass to in any sport
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**Support definition** -

**What are the defensive principles?**

These are used to stop teams making advance towards goal

| | |
|---|---|
| | |
| | |
| | |

**What are the attacking principles?**

These are used to advance towards goal

| | |
|---|---|
| | |
| | |
| | |

**Year 7 Reduce Space Knowledge**

**Reduce space definition** - When the playing area you are working in is made smaller, or you attempt to make the playing area smaller for the opposition

## Keywords associated with Reduce space

| |
|---|
| Narrow |
| Press |
| Closing down |
| Squeeze |

## How do we reduce space?

| | |
|---|---|
| Narrowing the angle | This term is frequently used in sports like football or hockey when a defender, especially a goalkeeper, moves closer to the ball carrier to reduce the available space for a shot or pass |
| Compacting | A team is described as "compact" in defense when players stay close together, making it difficult for the opposition to find space between them. |
| Pressing/high press | While this is a broader term for a defensive strategy, a key component of pressing is to reduce the time and space the opponent has on the ball. |
| Squeezing | This phrase sometimes used to describe a team pushing up the field as a unit to condense the space available to the opponent. |
| Closing down | This refers to an individual player quickly moving towards an opponent with the ball to reduce their space and force a quick decision or error. |

## An example of a question

Team A are doing really well at reaching the goal. How could you reduce the space?

a) Keep the triangles as close to the circle bench as possible.
b) Put more circle players in front of the triangle bench.

## Why do we reduce space?

| |
|---|
| To stop the team they are playing against getting into an attacking space |
| Delaying how long the attacking team has to score or gain ground |
| To force the team into a mistake or run out of attacking time. |
| Overload the number of players reducing space to the attack |

**Year 7 Reduce Space Knowledge**

## Keywords associated with Reduce space

| |
|---|
| |
| |
| |
| |

## An example of a question

Team A are doing really well at reaching the goal. How could you reduce the space?

a) Keep the triangles as close to the circle bench as possible.

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## Reduce space definition -

## How do we reduce space?

| | |
|---|---|
| | |
| | |
| | |
| | |

## Why do we reduce space?

| |
|---|
| |
| |
| |

**Year 7 Length & width Knowledge**

## Keywords associated with length & width

| |
|---|
| Depth |
| Channels |
| Touchline |
| Goal line |

## Length & Width definition -

| |
|---|
| **Length** - Typically refers to the measurement along the longer boundary lines of the playing area. For a rectangular pitch or court, this is often called the *touchline* in rugby. |
| **Width** - Refers to the measurement across the shorter boundary lines, perpendicular to the length. This is often called the *goal line* in netball or the *try* line in rugby. |

## How to use width in attack

| | |
|---|---|
| Stretch the defense | By positioning players (wingers, full-backs) out wide, the opposition's defenders are forced to spread out, which creates gaps and space in the central areas for midfielders and strikers to exploit |
| Create overloads and crossing opportunities | Wide areas are used for quick counter-attacks and delivering crosses into the penalty box. Overlapping runs from full-backs can create numerical advantages (overloads) in wide areas. |
| Switch play | Quickly moving the ball from one side of the field to the other can disorient a compact defense and exploit the space left on the far side |

## How to use width in defense

| | |
|---|---|
| Condense the field | Defenders push up to reduce the space between the defensive, midfield, and attacking lines, preventing the opposition from playing penetrative passes through the lines |
| Force errors | By denying space in wide areas, the defense can force opponents into making difficult decisions or losing possession |

Year 7 Length & width Knowledge

## Keywords associated with length & width

| |
|---|
| |
| |
| |
| |

## Length & Width definition -

| |
|---|
| Length - |
| Width - |

## How to use width in attack

| | |
|---|---|
| | |
| | |
| | |

## How to use width in defense

| | |
|---|---|
| | |
| | |

**Year 7 Length & width Knowledge**

## Activities use length and width the most

| |
|---|
| Cricket |
| Football |
| Rugby |
| Basketball |
| Netball |
| Hockey |
| Badminton |
| Tennis |

## How to use length in attack

| | |
|---|---|
| Force defense to drop | Strikers making runs in behind the defensive line force defenders to retreat and drop deeper, increasing the space in front of the defense for playmakers to operate. |
| Maintain balance | Holding midfielders or defenders stay deeper to offer support, maintain team shape, and recycle possession |
| Play long balls | Early long or diagonal passes can exploit a high defensive line and quickly transition the team into a scoring position |

## How to use length in defense

| | |
|---|---|
| Compact the field vertically | Defenders push up to reduce the space between the defensive, midfield, and attacking lines, preventing the opposition from playing penetrative passes through the lines. |
| Set the offside trap | A high defensive line can catch opposing attackers offside, though it is vulnerable to quick balls over the top. |

**Year 7 Length & width Knowledge**

## Activities use length and width the most

| |
|---|
| Cricket |
| Football |
| Rugby |
| Basketball |
| Netball |
| Hockey |
| Badminton |
| Tennis |

## How to use length in attack

| | |
|---|---|
| | |
| | |
| | |

## How to use length in defense

| | |
|---|---|
| | . |
| | |

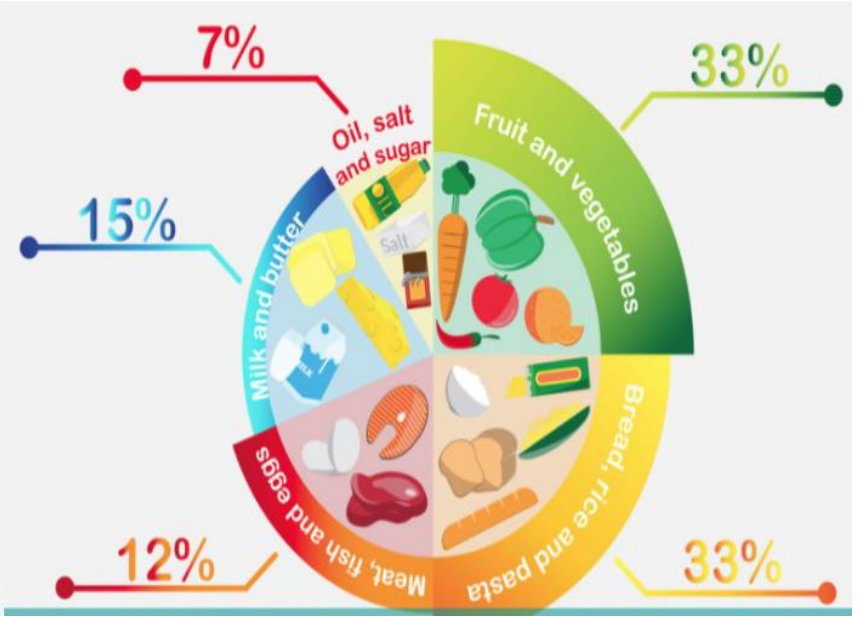
# Year 7 Food & Nutrition Knowledge Organiser (Summer Term)

| Nutrient | What It Does | Examples |
|---|---|---|
| **Carbohydrates** | Gives energy | Bread, rice, pasta |
| **Proteins** | Help us grow and repair | Meat, eggs, beans |
| **Fats** | Give energy and protect organs | Butter, oil, nuts, cheese |
| **Vitamins** | Help the body stay healthy | Fruits, vegetables |
| **Minerals** | Build strong bones and teeth | Milk (calcium), meat (iron) |
| **Water** | Keeps us hydrated and helps digestion | Water, fruit, soup |
| **Fibre** | Helps with digestion | Whole grains, fruit, veg |

**Key Tip:**
A balanced diet includes foods from all groups.

**Protein**

- Needed for **growth and repair**
- **Animal sources:** meat, fish, eggs (complete proteins)
- **Plant sources:** beans, lentils, chickpeas
- **Complete protein combos:** rice + beans



# Year 7 Food & Nutrition Knowledge Organiser (Summer Term)

| Nutrient | What It Does | Examples |
|---|---|---|
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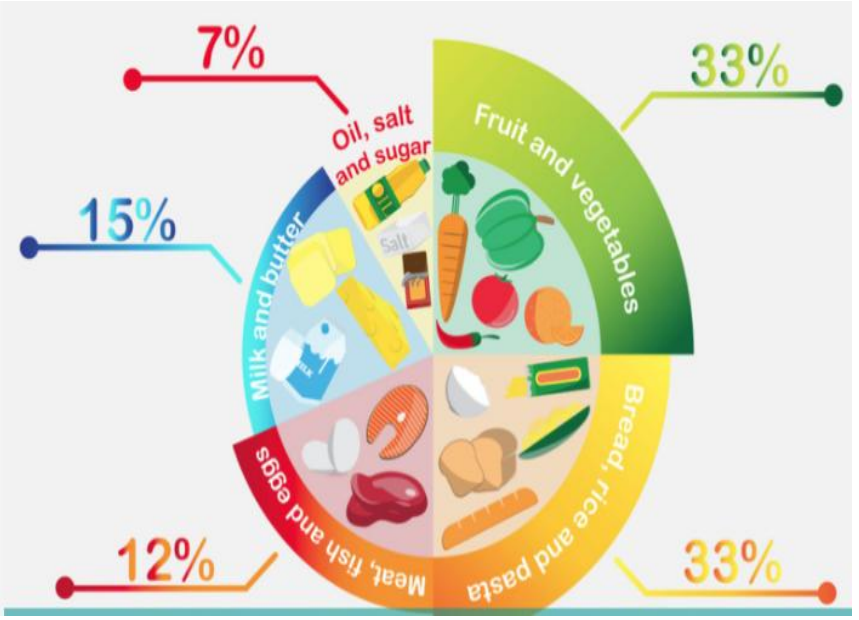
| **Proteins** | ……. | Meat, eggs, beans |
| **Fats** | Give energy and protect organs | ……. |
| **Vitamins** | ……. | Fruits, vegetables |
| **……** | Build strong bones and teeth | Milk (calcium), meat (iron) |
| **Water** | …….. | Water, fruit, soup |
| **Fibre** | Helps with digestion | …….. |

**Key Tip:**

A balanced diet includes foods from all groups.

**Protein**

- Needed for **…….. and …….**
- **Animal sources:** ……..
- **Plant sources:** ……
- **Complete protein combos:** ……..



| Life Stage | Needs |
|---|---|
| **Babies** | Nutrients for rapid growth |
| **Children** | Balanced diet for steady growth |
| **Teenagers** | More energy & protein (growth spurts) |
| **Adults** | Balanced diet to maintain health |
| **Older adults** | More fibre, balanced nutrients |

## Knife Skills & Safety

- **Use a claw grip (fingers curled under)**
- **Cut on a chopping board**
- **Keep knives sharp (safer than blunt!)**
- **Carry knives pointing downwards**
- **Never try to catch a falling knife**
- **Store knives safely after use**

## Risks & Hazards

- **Hazard: Something that can cause harm**
- **Risk: The chance of harm happening**



| Hazard | Risk |
|---|---|
| **Wet floor** | **Slipping** |
| **Sharp knife** | **Cuts** |
| **Hot oven/oil** | **Burns** |



## Key Words

- **Balanced diet:** Eating the right amounts of each food group
- **Cross-contamination:** Spread of bacteria between foods
- **Nutrients:** Substances the body needs to function
- **Hygiene:** Keeping clean to prevent illness

| Life Stage | Needs |
|---|---|
| Babies | |
| Children | |
| Teenagers | |
| Adults | |
| Older adults | |

## Knife Skills & Safety

- **Use a ……(fingers curled under)**
- **Cut on a……...**
- **Keep knives……..(safer than blunt!)**
- **Carry knives pointing……**
- **Never try to……a falling knife**
- **……..after use**

## Risks & Hazards

- **Hazard: Something that can ……**
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| Hazard | Risk |
|---|---|
| Wet floor | |
| Sharp knife | |
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## Key Words

- **Balanced diet:** Eating the right amounts of each food group
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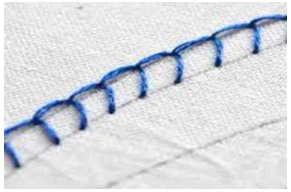
## Design and Technology Year 7 - Knowledge organiser

| | |
|---|---|
|  | The **running stitch** is the basic stitch in hand-sewing and embroidery, on which all other forms of sewing are based. The stitch is worked by passing the needle in and out of the fabric at a regular distance. |
|  | The **cross stitch** consists of two diagonal stitches that cross in the middle, forming an 'X'. It is decorative and is commonly used to create pictorial patterns, images, or text on fabric with an even weave |
|  | The **whip stitch** is a simple, diagonal hand-sewing stitch where the needle passes in and out of fabric edges, wrapping around them to join pieces or prevent fraying. It is widely used for finishing blanket edges, seaming felt or leather and closing stuffed items. |
|  | The **blanket stitch** is commonly used to finish the raw edges of blankets and other fabrics as well as to tack down folded hems. |

| **Term** | **Description** |
|---|---|
| Textiles | Any material made of interlacing fibers, including woven, knitted or felted fabrics |
| Embroidery | The art of decorating fabric or other materials by using a needle and thread or yarn to create ornamental designs. |
| Fibre | A slender filament that can be spun into yarn or used to create materials like cloth, paper, or rope |
| Synthetic fibres | Man-made filaments produced from polymers through processes such as melt spinning or solvent spinning. Examples include nylon, polyester and viscose. |
| Natural fibres | Raw, hair-like materials obtained directly from plant, animal, or mineral sources. Examples include wool, linen, cotton and silk |
| Thread | Yarn used to join different textile pieces together |

## Design and Technology Year 7 - Knowledge organiser

| | |
|---|---|
|  | The _____**i**s the basic stitch in hand-sewing and embroidery, on which all other forms of sewing are based. The stitch is worked by passing the_____in and out of the fabric at a _____distance. |
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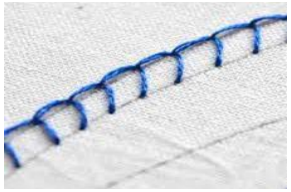
|  | The _____is commonly used to finish the raw edges of blankets and other fabrics as well as to tack down folded hems. |

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# Design and Technology Year 7 - Knowledge organiser

## Wood finishes

| | | |
|---|---|---|
| **Paints** | **Undercoat** | Undercoat is the first coat of paint (on top of a primer if you've used one, or on old finishes if you're reusing timber). It covers up any previous colours more cheaply than applying extra layers of the final 'topcoat,' |
| | **Overcoat** | Gloss paints are hardwearing and waterproof and come in lots of colours. They're shiny and used for things like interior woodwork. You apply them with a brush or roller, painting in the direction of the grain. |
| **Varnish** | Varnish can be coloured or clear, and either gloss, matt or satin. It can be applied with a brush or sprayed to produced a waterproof coating. It allows the natural wood grain to remain visible. | |
| **Wax** | Waxes provide a protective, water-resistant coating that enhances the natural grain and adds a soft lustre to interior wood. Applied with a lint-free cloth in circular motions or along the grain. | |
| **Oil** | Enhances the natural grain and provides a protective barrier against moisture and dirt. | |

| **Term** | **Description** |
|---|---|
| **Design Brief** | A short, clear statement that outlines a problem to be solved, who it is for, and what needs to be designed and made. It acts as the starting point for a project, providing guidance and focus for the designer |
| **Client** | A specific person, group of people, or target audience for whom a product or service is being designed and made |
| **CAD - Computer Aided Design** | The use of computer software and digital tools to create, modify, analyze, or optimize a design |
| **CAM - Computer Aided Manufacture** | The process of manufacturing products with the help of computers. CAM machines are computer numerically controlled (CNC). They can follow x,y,z coordinates and move the tools to cut out or build up your design.<br><br>Examples include: Laser cutter, 3D printer and a CNC router |

# Design and Technology Year 7 - Knowledge organiser

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# Computer Science Year 7 - Knowledge organiser

## Input/Output Devices

| Name | Input / Output |
|---|---|
| Keyboard | Input |
| Mouse | Input |
| Screen / Monitor | Output |
| Printer / 3D Printer | Output |
| Microphone | Input |
| Camera | Input |
| Speaker / Headphones | Output |

Bytes - Kilobytes - Megabytes - Gigabytes - Terabytes

X1000 x1000 x1000 x1000

## Spreadsheets

| Symbol | Operation | Example |
|---|---|---|
| + | Add | =A2+D7 |
| - | Subtract | =H7-E3 |
| / | Divide | =G7/A3 |
| * | Multiply | =G3*E3 |

| Function | Operation | Example |
|---|---|---|
| =sum() | Adds the values from the range | =sum(a2:b5) |
| =max() | Finds the highest value in the range | =max(d2:d10) |
| =min() | Finds the lowest value in the range | =min(a3:f3) |
| =average() | Finds the mean average of the values in a range | =average(a2:b9) |

# Computer Science Year 7 - Knowledge organiser

## Input/Output Devices

| Name | Input / Output |
|---|---|
| Keyboard | |
| Mouse | |
| Screen / Monitor | |
| Printer / 3D Printer | |
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X1000 x1000 x1000 x1000

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| =min() | | =min(a3:f3) |
| | Finds the mean average of the values in a range | |

# Comedy

## Comedy basics

- ***Comedy:*** A genre of theatre aiming to make people laugh
- Comedy can be traced back to Ancient Greece
- The word 'Comedy' comes from the Greek word 'Komos'
- Comedy evolved in Medieval times when it moved onto the streets (after the church banned it in theatres).
- In Italy, the style developed further by inspiring Commedia Dell'Arte (A very physical comedy with falls, accidents and stock characters)
- In other areas of Europe, the style developed into Clowning.
- ***Slapstick:*** Physical comedy with lots of accidents
- ***Satire:*** Comedy which pokes fun and takes the mick out of current events and people
- ***Buster Keaton:*** The first stunt performer
- ***Lazzo:*** The Italian word for a joke or skit
- ***Lazzi:*** A routine which actors would put into their performances. Follows the order of: Set up, Accident, Reaction
- Comedic timing relies on an actors pace and pause

## Vocal Skills

***Pitch:*** Speaking in a high, low or natural voice
***Pace:*** The speed in which someone speaks
***Pause:*** A break in speaking, a period of silence
***Tone:*** How the voice conveys emotions
***Volume:*** The loudness or quietness of the voice
***Emphasis:*** The exaggeration of individual words

## Physical Skills

***Facial expressions:*** Showing emotion with the face
***Posture:*** The way someone stands or sits
***Body Language:*** Open or closed to show emotion
***Gesture:*** A movement with the arms/hands (wave, pointing)
***Levels:*** Height -crouching, laying, stood


## Clowning

***White Faced clown:*** Most intelligent, causes trouble, leader -highest status, most stereotypical -has a white painted face
***Auguste clown:*** Least intelligent, loves attention, chaotic, silly, always gets a trick played on them, created the famous red nose
***Character clown:*** Usually silent (but not always), works alongside someone, tends to be tatty, Charlie Chaplin and Mr Bean are a character clown

# Comedy

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**Remember:** We never read aloud the stage directions when performing.

**Key Vocabulary**

***Naturalism:*** a style of theatre which aims to make everything as real and believable as possible. It is the opposite of Melodrama

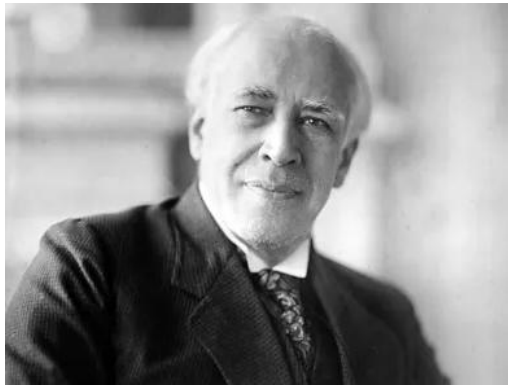
**Stanislavski**

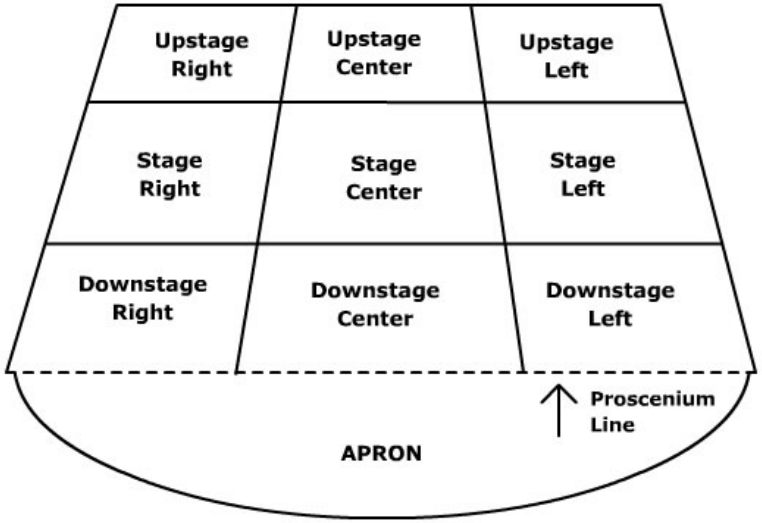
- Stanislavski created Naturalism
- He was a Russian theatre practitioner -meaning he created theatre

**Blood Brothers**

- Blood Brothers is the play we have been looking at in class
- It follows the story of Mickey and Edward (Eddie) -they are brothers but do not know.
- The play is set in Liverpool
- The actors who play Mickey and Eddie have to pretend to be 7 years old at the start of the play -this is when the boys first meet.

# Scripts and Naturalism






**Scripts**

- ***Table work:*** Studying the script and analysing it
- ***Script analysis:*** Going through the script and deciding how your character is going to act -you may make notes on your script but they must always be in pencil
- ***Staged reading/table read:*** Reading the script without physically acting it -focusing on your vocal skills and how you say the lines
- ***Blocking:*** A rough draft of the performance. When actors first act in the space and block out their staging and positions.
- ***Stage directions:*** Instructions for the actors written in the script. They are usually in *italics* or (brackets). They tell an actor what to do and how to speak.
- ***Subtext:*** To read inbetween the lines
- ***Hot seating:*** A rehearsal technique where one character gets asked questions. This allows and actor to deepen their understanding of their role.

**Remember:** We never _____ _____ the stage directions when performing.

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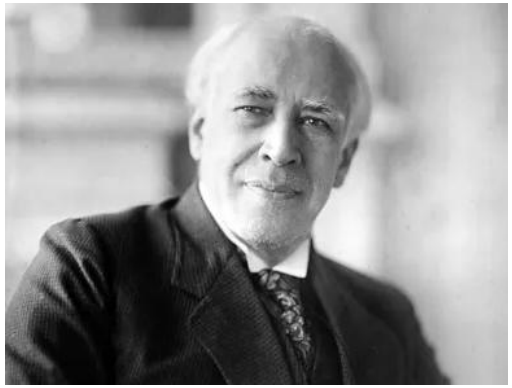

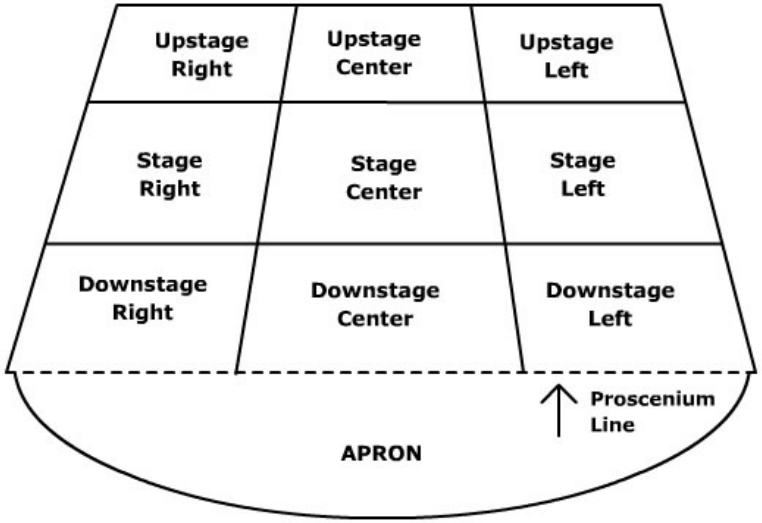


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# Elements of Music

## Key Vocabulary

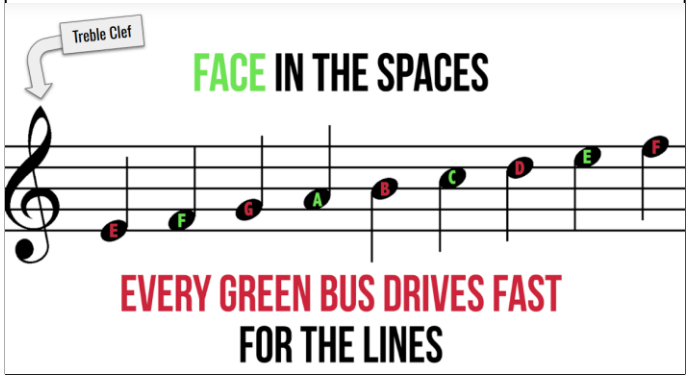
- **Soprano:** The highest vocal range in a choir
- **Alto:** The Lowest Female voice in a choir
- **Tenor:** the Highest male voice in a choir
- **Bass:** The lowest vocal range in a choir

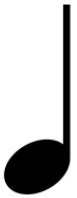
**Pitch:** How high or low a note is

**Melody:** A linear sequence of notes

**Harmony:** Two or more note played at the same time

**Rhythm:** The way music flows



Crotchet = 1 beat

Quavers = 1 beat (½ beat each)

## Singing Groups

- **Solo: 1 person**
- **Duo: 2 people**
- **Trio: 3 People**
- **Quartet: 4 People**
- **Quintet: 5 People**

## Singing

WARM UPS

We always warm up our:

1. Lungs
2. Muscles in the face and mouth
3. Voice/vocal chords

**Instrument families**

1. Woodwind - Instruments you need to blow into (Flute)
2. Brass - Instrument that require an embouchure technique
3. Stringed - Instruments that require you the strum/pluck or bow a string.
4. Percussion - any instrument that needs to be hit, shaken or moves to produce a sound.

## Additional info

- The conductor is the person who leads the orchestra
- Major is happy music
- Minor is Sad music

## Elements of Music

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- _____**:** The Lowest Female voice in a choir
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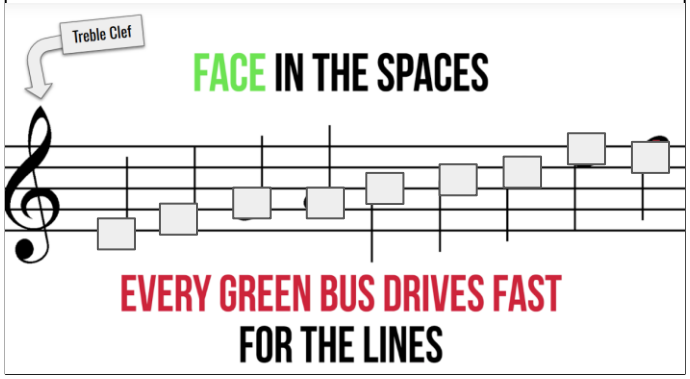


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