

# Year 9 Knowledge Organiser

## Spring 2023

Name: \_\_\_\_\_

Tutor Group: \_\_\_\_\_



ORMISTON  
DENES ACADEMY

**[OAT]**  
Ormiston Academies Trust  
ACHIEVING MORE TOGETHER

## Your Knowledge Organiser

### **What are Knowledge Organisers?**

A Knowledge Organiser is a set of key facts or information that students need to be able to know and recall in order to master a unit or topic. In order to produce our Knowledge Organisers, our departments have effectively extracted from their curriculum content the key vocabulary, facts and information that it would help students to commit to long-term memory.

### **Why are we using Knowledge Organisers?**

All of us, throughout our lives, will benefit from understanding how best we learn – and what strategies for learning we can employ in order to commit information to long-term memory. At school, we talk a lot about the way that knowledge is accumulated over time – and about the importance of over-learning and consolidation. Knowledge Organisers are designed to provide students with opportunities to over-learn and consolidate recently learned information. They encourage use of active and multi-sensory revision practices, repetition, and spaced retrieval. We believe that Knowledge Organisers are important because they are designed to teach students the metacognitive study skills that they will require throughout their adult learning lives; effectively, what we are using Knowledge Organisers to introduce is a five-year programme of revision aimed at developing the skills required for effective revision and developing the knowledge they will need to be effective adults and further learners.

### **What is Metacognition?**

Metacognition is the awareness and understanding of one's own thought processes. When we talk about developing metacognitive skills in students, we're talking about students developing an understanding of how they learn best. For example, a student who wishes to commit key quotations from a text to long term memory may decide to make flashcards. When making those flashcards, a student may make all sorts of decisions such as 'using the colour yellow will help me to remember that...' The decision regarding which multi-sensory strategy to employ (flashcards) and the decisions that are made during active employment of the strategy...both are examples of metacognition.

## How to Use Your Knowledge Organiser:

CHUNK IT	RE-LEARN IT	WRITE IT	SPEAK IT
<p>Split the knowledge organiser into manageable chunks.</p> <p>Choose a chunk at a time to memorise.</p> <p>Start with the most important or the most difficult.</p>	<p>Re-read your notes on the chosen topic.</p> <p>Do some wider research on the internet until you understand it.</p>	<p>Write a detailed description or an explanation about everything that you know about this topic.</p> <p>Try to do this without your notes.</p> <p>Write key facts you need to memorise over and over until you have memorised them.</p>	<p>Give a verbal explanation about this topic as if you were teaching it.</p> <p>Repeat the facts you need to remember 20 times.</p> <p>Record key facts from the knowledge organiser into your phone.</p>

## How to Use Your Knowledge Organiser:

TRANSFORM IT	REDUCE IT	SORT IT	LINK IT
<p>Transform key facts into a series of images.</p> <p>Transform what you have learned into a diagram.</p> <p>Transform your learning into a poem or a story.</p>	<p>Reduce what you have learned to five key bullet points or prompts.</p> <p>Reduce the three most important facts linked to a topic into 10 words.</p>	<p>Rank the most important pieces of information from your knowledge organiser.</p> <p>Categorise your key facts into groups, you choose the group headings.</p>	<p>Find three links between this topic and others you have studied.</p> <p>Link the key points together.</p>

# Art - Deconstruct

## Pablo Picasso b.1881 - d.1973 and Cubism

- Picasso was born on October 25, 1881 in the city of Malaga, Spain.
- Pablo completed his first painting when he was nine years old. The title of the painting was *Le Picador*. The image is of a man riding a horse in a bullfight.
- In 1909, Picasso and French artist Georges Braque co-founded an art movement known as cubism.
- In all his life Picasso produced about 147,800 pieces, consisting of: 13,500 paintings, 100,000 prints and engravings, 300 sculptures and ceramics and 34,000 illustrations - an impressive 78-year career.
- The Nazis would not let Picasso display his paintings in Germany.
- Picasso's art work can be found in art museums throughout the world.
- Cubism was the first abstract art style. It began in 1907, was popular during the early part of the 20th century and had its origins in France and Spain.
- The movement largely ignored perspective, and tried to show objects or people from several different angles.
- One of the best known and most controversial Cubist paintings is *Guernica* by Picasso. The painting shows the horrors of war and measures 8 metres wide and 3.5 metres high.
- Picasso's *Les Femmes d'Alger (O. J. R. M.)* (The Ladies of Avignon) is one of the earliest and most famous Cubist works. It was influenced by African tribal masks and shocked people when it was displayed.
- Today, Picasso is one of the most influential artists, as well as one of the most valued. His painting *Le Rêve* (The Dream) sold in 2013 for almost £100 million.



**“Every child is an artist. The problem is how to remain an artist once we grow up.”**

-Picasso

## Task 1

### Read through the information on Picasso

Highlight any points you think are important.

- Create a magazine cover or design a poster for a new exhibition of Picasso work.
- Include an image/s of his work.
- Consider presentation - colour/ font/ text.
- Include what gallery/museum and when it is.

# Art - Deconstruct

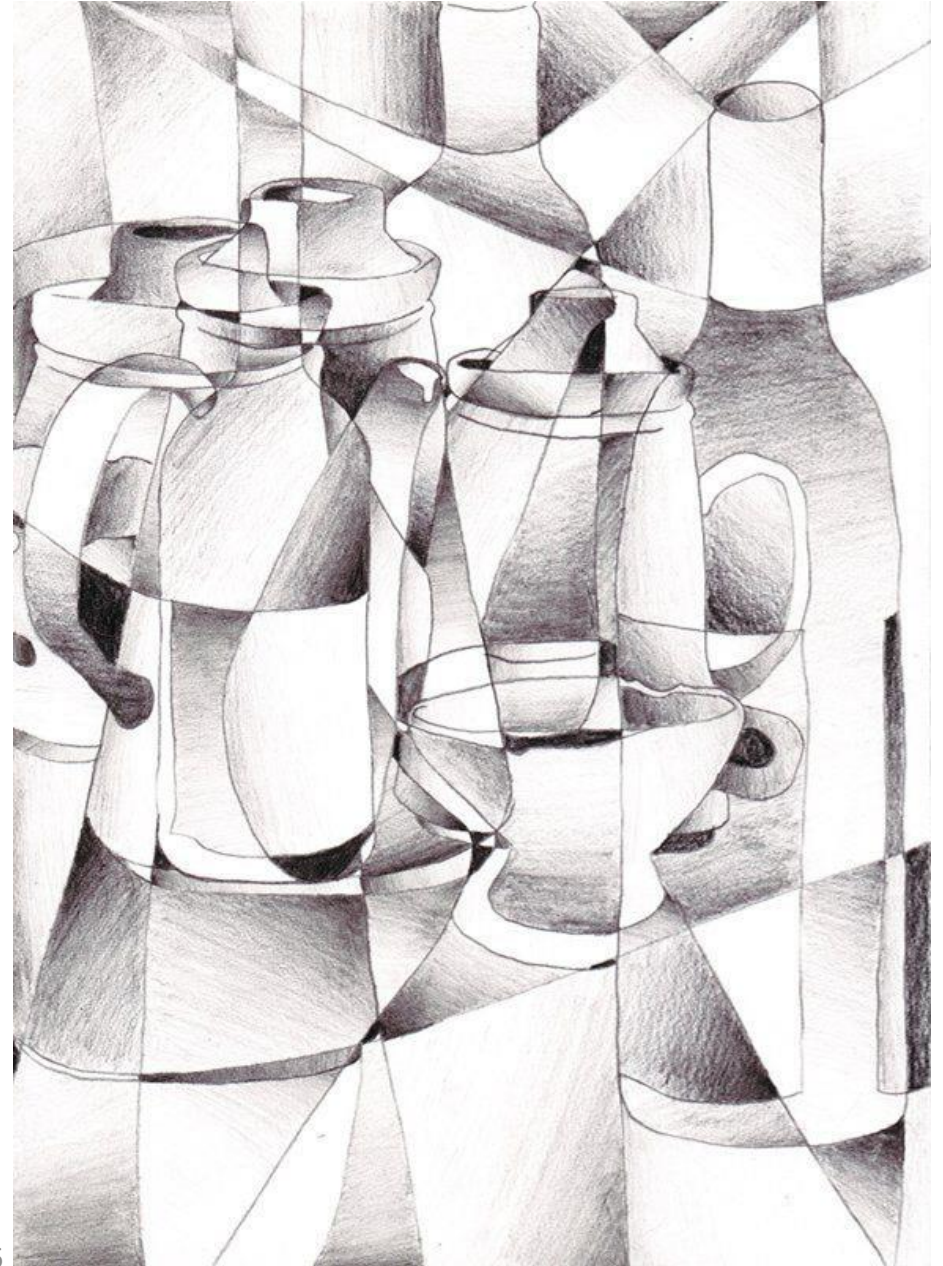
## Keywords

Tone	Line
Shape	Form
Scale	Composition
Relief	Observation
Detail	Accuracy
Texture	Refine

## Task 2

### Create a surreal drawing

- Select an object and sketch it out A5 in size.
- Sketch out a different object so they overlap.
- Divide up the image using multiple straight lines, so the shapes are hidden.
- Using either pencil or one coloured pencil add tone to the shapes created within the lines.
- Each shape must be shaded using a different tone.



# Photography/Graphics - Deconstruct

## David Hockney b.1937

- Born with synesthesia, Hockney sees colours in response to musical stimuli.
- Hockney's acrylic paintings of Californian swimming pools – such as A Bigger Splash (now part of the Tate Gallery collection) – are perhaps his most famous works.
- Hockney has a reputation not just as a painter but also for printmaking – even though he says he stumbled across the medium almost by accident.
- Hockney was one of the big artists involved in the pop art movement in the 1960s.
- Hockney has always had a love-hate relationship with photography, though he admits to having had a 'fascination' with Polaroid photographs in the early Eighties.
- It saw him drop pretty much all other work, while he created a set of photo-collage works he called 'Joiners'.
- In 1990, he turned down a knighthood, on grounds that he didn't 'care for a fuss' and that prizes 'of any sort are a bit suspect'.
- In 2017, his retrospective at Tate Britain, David Hockney, received 478,082 visitors, making it the most popular exhibition ever held at the gallery.
- In May 2018, the auction record for the artist was broken twice in one night, at Sotheby's New York. First, 1978's Piscine de Medianoche (Paper Pool 30) was sold for \$11.7 million (£8.6m); then 1990's oil painting, Pacific Coast Highway and Santa Monica, went under the hammer for \$28.5 million (£21m).
- Since 2009, Hockney has painted hundreds of portraits, still life and landscapes using the Brushes app designed by Apple.



**The mind is the limit. As long as the mind can envision the fact that you can do something, you can do it, as long as you really believe 100 percent.**

David Hockney



## Task 1

### Read through the facts on Hockney

Highlight any points you think are important.

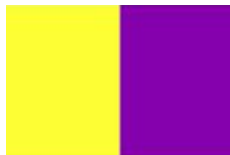
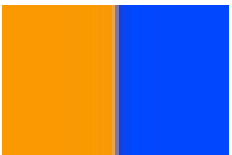
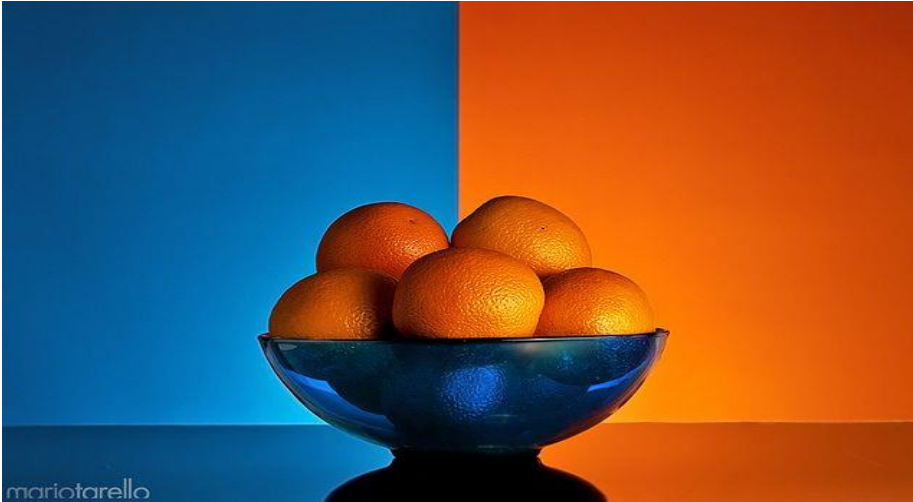
- Create a digital presentation about him and his work.
- Include information on at least 2 different styles of work he creates
  - Eg. digital drawing
  - Painting
  - Photography

Email your work to:-

[artdepartment@ormistonden.es.co.uk](mailto:artdepartment@ormistonden.es.co.uk)

Prior to your lesson deadline

# Photography/Graphics - Deconstruct



## Task 2

### Respond to the work of David Hockney

Create your own still life using complementary colours and everyday objects.

- Take a series of 15 photographs.
- It must include all 3 of the different complementary colour pairing.
- Try different angles:
  - Above
  - Below
  - Eye level
- Think about your background. Fabric and textiles make a really good background:
  - Towels, blankets
  - wallpaper
- Suggested objects:
  - Fruits and vegetables
  - Food packaging
  - Books
  - ornaments
  - House plants

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**Prior to your lesson deadline**

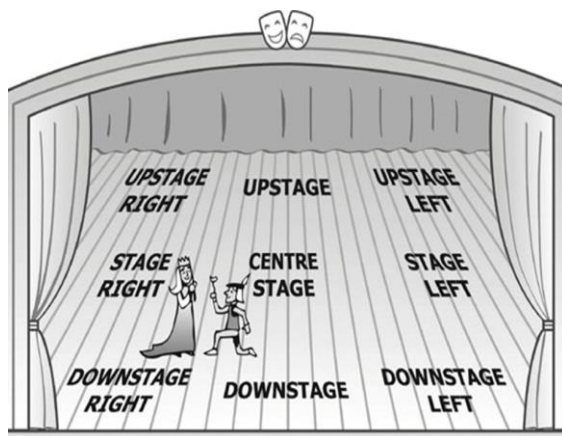


## Key Vocabulary

<b>Physical Theatre</b>	A type of performance where physical movement is the primary method of storytelling.
<b>Tableau</b>	A representation of a scene, posing silently without moving.
<b>Freeze frame</b>	Physically holding a moment, freezing on the spot.
<b>Levels</b>	Using different heights on stage to create visual interest.
<b>Proxemics</b>	The use of space between actors to communicate their relationship to the audience.
<b>Thought Tracking</b>	When a character steps out of a scene to address the audience about how they are feeling.
<b>Status</b>	The power or influence a character has.
<b>Technique</b>	The way of carrying out a task.
<b>Annotate</b>	Comment or add notes to a text.
<b>Devising</b>	A group response to a stimulus, leading to the creation of an original piece.
<b>Plot</b>	The sequence of events in a story or drama.
<b>Hot Seating</b>	Being asked questions and answering as the character.

## Year 9 – Marking a Moment

**Marking the Moment** is a dramatic technique used to highlight a key moment in a scene or improvisation. This can be done in a number of different ways: for example, through **slow-motion**, a **freeze-frame**, **tableau**, **thought-tracking** or music.



**Stage Directions**

### Hot Seating Questions



<b>Actor</b>	<b>Professional Person</b>
An <b>actor's</b> primary duty is to effectively communicate the character that they are playing to an audience, using their voice, body, actions and reactions.	'Acting like a <b>professional</b> ' means working and <b>behaving</b> in such a way that others think of them as competent, reliable and respectful.

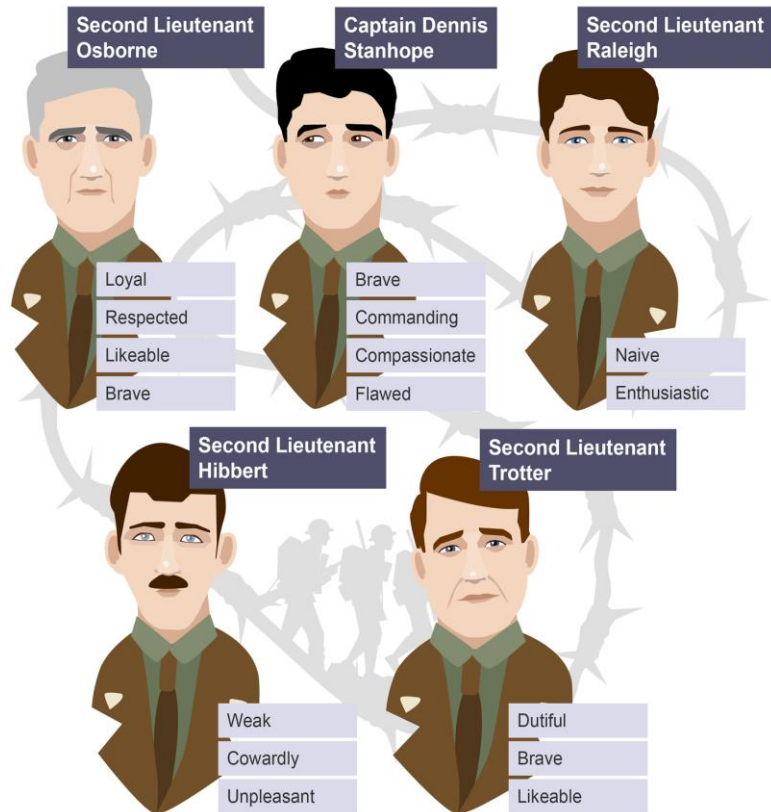
### Devising Log

In the **portfolio** or **devising log**, the process of **devising** a piece of drama is written up. Making notes each step of the way, similar to diary entries, will make it easier to write up into a finished product.

The starting point in a piece of devised drama is known as the **stimulus**. This is provided to generate ideas and can be anything from a picture or piece of music to a poem or work of art.

# Year 9 War Writing – Knowledge Organiser

## Journey's End: The Characters



## Journey's End: Plot

**Act 1**  
The play opens in a **dugout** in the British trenches in Northern France. The action begins on the evening of Monday 18 March 1918 and continues over three days. It ends at dawn on Thursday 21 March 1918.

**Captain Hardy** is about to be relieved by a **Captain Stanhope**. The play begins with Hardy and Stanhope's second in command - **Osborne** - discussing what Stanhope is like. Osborne and Stanhope are the main characters for the rest of the play. After Hardy leaves, a new young officer - **Raleigh** - enters. Raleigh has managed to get himself placed in C Company because he knew Stanhope at **public school**. Also, Stanhope has been in a relationship with Raleigh's sister, Madge. Osborne tries to hint to Raleigh that Stanhope is a changed man from the one he might remember. But Raleigh fails to understand and seems to have an **idealistic** picture of Stanhope as a mythical hero figure. It is also clear that Raleigh is excited and enthusiastic about being on the front line. His youthful energy and exuberance already seem in contrast to the more experienced officers. When Stanhope enters it is clear he is shocked and uncomfortable at Raleigh's presence. We find out that he fears Raleigh will write and inform Madge that he has become an alcoholic and - despite Osborne's advice to the contrary - he threatens to **cancel** Raleigh's letters. Through a conversation with Osborne, we discover that Stanhope's addiction was caused by the terrible realities of trench life.

**Act 2, Scene 1**  
Early on Tuesday morning Osborne and Raleigh discuss their past lives before the war. They talk about rugby and how slowly time passes in the trenches. Poignantly, they reflect on how the Germans are just normal decent people. Stanhope tells his officers that a captured German soldier has revealed that an attack on their men is planned for two days' time. In World War One it was normal practice to check and sometimes censor soldiers' letters home, but officers' letters were usually allowed through unchecked. However, Stanhope - because he is so worried about Raleigh revealing his alcoholism to his sister - insists on checking his letter home. On reading it he finds that Raleigh has only the highest praise for Stanhope, describing him to Madge as "the finest officer in the **battalion** and the men simply love him". Stanhope seems to feel ashamed at his initial mistrust.

**Act 2, Scene 2**  
The **Colonel** arrives to inform Stanhope that Raleigh and Osborne will participate in an imminent raid on the Germans. An officer called **Hibbert** tells Stanhope that he is suffering from neuralgia - shooting facial pain - and can no longer cope. Stanhope will not allow him to go sick and threatens execution for **desertion** if he does. Eventually Stanhope - using the powers of persuasion and leadership that the officers respect him for - convinces Hibbert to stay. Osborne seems resigned to his fate, but he and Trotter express their disapproval of the timing of the raid. Raleigh on the other hand is unaware of the extreme danger and looks forward to the excitement of battle.

**Act 3, Scene 1**  
It is obvious that Stanhope too thinks a daylight raid is ridiculous and dangerous, but the Colonel is adamant. He tells Stanhope, "It's no good getting depressed." The audience gradually begin to question just how much the army superiors really care about those on the front line. Again, Osborne talks acceptingly about the plans and Stanhope insists - unconvincedly - that all will be well. We see Osborne and Raleigh quoting a passage from *Alice in Wonderland* in the moments before the raid. They are trying to keep calm, but admit they are nervous and have "a sort of empty feeling inside". A young German soldier is captured in the raid, but Osborne and six other men are killed. Raleigh is wounded. Stanhope finds it difficult to hide his contempt for the Colonel's apathy about their deaths.

**Act 3, Scene 2**  
Later that evening the officers are having a post-raid celebratory dinner. Stanhope seems in a particularly bad mood. He has a drunken argument with Hibbert and gets angry with Raleigh for not attending the dinner. Raleigh explains that he is grieving for Osborne. Stanhope shows his devastation at Osborne's death. In an emotional outburst he describes his friend as "the one man I could talk to as man to man - who understood everything". We realise that his drinking and jovial dinner chat has all been to cover up his grief.

**Act 3, Scene 3**  
This final scene takes place at dawn on Thursday morning. It is pitch dark and there is silence apart from "the distant mutter of the guns". Stanhope is woken by **Private Mason** - the cook - and is drowsy and cold. There is tension in the dugout as the men and the audience wait for the attack. It is finally here, having first been mentioned two days earlier. Hibbert is frightened and reluctant to go out, but with encouragement from Stanhope and Mason he leaves to fight. The battle begins. The Sergeant Major arrives to tell Stanhope that Raleigh has been badly injured, his spine is broken. Raleigh is carried into the dugout and Stanhope gets Osborne's bed ready for him. It becomes clear that Raleigh is dying. Stanhope stays by his side, comforting him. He attempts conversation, but there is no reply. Stanhope is called to leave as the battle intensifies. As he ascends the steps to the battle the dugout roof collapses, with Raleigh's body inside. The fate of the other characters is left ambiguous, but we assume they all die.

# Journey's End, by R. C. Sherriff – Knowledge Organiser

## Couch to 5k Writing

Thesis statement	At first glance [writer] novel is about _____, but at a deeper level he/she uses it to _____  "Although Faulks depicts war as _____, in Grenfell's poem 'Into Battle' it is presented as _____."
Select & embed references	The writer refers to _____ as '_____' The narrator compares _____ to '_____' It states, '_____' "This is shown when he says " _____."
Analysis	This [literary technique] conveys to the reader a sense of _____ [Writer] uses this [literary technique] to depict _____ [Writer] uses this [word class] to portray to the reader _____ Furthermore, the word '_____' evokes an image of _____
Evaluate writer's intentions	Thus, [writer] is drawing the reader's attention to _____  Hence, [writer] is challenging ideas about _____  Consequently, [writer] is highlighting _____
Compare texts	Both writers explore the concept of _____ _____ is equally significant in both texts. In [text] it is conveyed though _____, whereas in [text] it is portrayed _____ Conversely, in [novel] _____ In [novel] [writer] presents [focus of the question] as _____. Similarly, in [writer] [novel] Likewise, in [novel] _____
Link to context	At the time, [relevant context] and [writer] depicts [reference to text]. Contextually, people were very concerned about [specific social rule], and [writer] employs [technique] to show [writer's intent related to social rule]. In World War I, [relevant context] but writers like [named writer] endeavoured to convey [writer's intention].
Recognise different arguments	Even though it is possible to argue that, [opposing point], it is still the case that [your point]. Although it may be suggested that... Whilst it could be argued that...

War Poets	
Julian Grenfell (1888 – 1915)	Jesse Pope (1868-1941)
Siegfried Sassoon (1886-1967)	Margaret Postgate Cole (1893-1980)
Wilfred Owen (1893 – 1918)	Lois Clarke (b 1927)
John McCrae (1872 – 1918)	Ivor Gurney (1890 – 1937)

Key Context
Robert Cedric Sherriff (1896-1975) served in the First World War as a Captain in the 9th East Surrey Regiment. He was wounded at Passchendaele in 1917 and awarded the Military Cross. Before and after the war Sherriff had worked as an insurance salesman and had no previous experience of the professional theatre. The immense success of Journey's End (which opened in London's West End early in 1929) changed his life for ever.
Journey's End takes place during the final year of the war. More specifically, the play elapses over the days leading up to the Battle of St. Quentin, which began on March 21st and marked the beginning of Operation Michael, a German offensive attempt to advance through Allied lines.

Key Vocabulary
Conflict (n) - A serious disagreement or argument. "The eternal conflict between the sexes" Latin: Con = 'with' + fligere 'to strike'
Glory (n) - Fame and respect won through great bravery or effort. "He fought for the glory of his country." Latin gloria 'fame, renown, great praise or honour'
Patriotism (n) - Being devoted to your country. "He was an officer of unquestioned patriotism." Greek patriotes 'fellow countryman,' from pater 'father'.
Courage (n) - The ability to act even if scared. "She called on all her courage to face the ordeal." Latin cor 'heart'
Incompetent (adj) - Not having the necessary skills to do something. "He was a thoroughly incompetent teacher." Latin in- 'not' + competere 'coincide, agree'
Heroism (n) Great bravery. "They fought with heroism" Greek hērōs 'demi-god'
Comrade (n) A fellow soldier or member of the armed forces. "He helps his comrade" Spanish camarada 'chamber mate'
Insubordination (n) Defiance of authority. "He was dismissed for insubordination" Latin sub 'under' + ordinare 'arrange, set in order' The prefix in is from Latin 'not, opposite'
Regulations (n) A rule or directive made and maintained by an authority. "You must follow the planning regulations" Latin regula 'rule, straight piece of wood'
Brutality (n) Savage physical violence; great cruelty. "Brutality against civilians" Latin brutus 'heavy, dull, stupid, insensible, unreasonable'
Alcoholism (n) Addiction to the consumption of alcoholic drink; alcohol dependency. "He had a long history of depression, drug abuse, and alcoholism" Arabic al-kuhul 'kohl,' the fine metallic powder used to darken the eyelids, from kahala 'to stain, paint' al- is the Arabic definite article, 'the'.
Neuralgia (n) Intense, intermittent pain along a nerve, especially in the head or face. Greek neuron 'nerve'

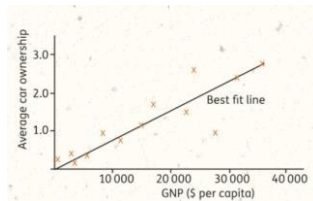
Key Vocabulary
Prohibit (v) Formally forbid (something) by law, rule, or other authority. "All ivory trafficking between nations is prohibited." Latin pro 'away, against' + habere 'to hold'
Social class (n) A division of a society based on social and economic status. "people from different social classes did not mix" Latin socius 'companion, ally' Latin classis 'the six orders into which the Roman people for the purpose of taxation'
Civil (adj) Relating to ordinary citizens and their concerns, as distinct from military or ecclesiastical matters. "Civil aviation" Latin civilis 'relating to society'
Munitions (n) Military weapons, ammunition, equipment, and stores. "Reserves of nuclear, chemical, and conventional munitions" Latin munitionem "defending, fortification, protecting"
Inadequate (adj) Insufficient for a purpose. "These labels prove to be wholly inadequate" Latin ad 'make level' + aequus 'equal, even'
Futility (n) Pointlessness or uselessness "The horror and futility of war" Latin futilis 'leaky, unreliable'
Fatuous (adj) Latin fatuus "foolish, insipid, silly;"
Chaotic (n) In a state of complete confusion and disorder. "The political situation was chaotic" Greek khaos 'abyss, that which gapes wide open; vast and empty,"
Subvert (v) undermine the authority of an established system. "attempt to subvert government". Latin sub 'under' + vertere 'to turn, turn back, transform, be changed'
Ambivalent (adj) mixed feelings about something. "some loved her, some hated her, few were ambivalent about her" Latin ambi 'be on both sides' + valentia 'strength'
Authorities (n) the power or right to give orders, make decisions, and enforce obedience. "he had absolute authority over his subordinates" Latin auctor 'master, owner'
Persisting (adj) continue in an opinion or course of action in spite of difficulty or opposition. "the minority of drivers who persist in drinking" Latin per "thoroughly" + sistere "come to stand, cause to stand still"

Key term	Definition
<b>High Income Country (HIC)</b>	A well-developed country with good healthcare, well-paid jobs and good housing.
<b>Low Income Country (LIC)</b>	A developing country that has poor healthcare, few jobs and poor-quality housing.
<b>Newly Emerging Economy (NEE)</b>	A country that has begun to get richer and develop quickly.
<b>Gross National Income (GNI)</b>	The amount of money a country makes in a year.
<b>Development</b>	The economic progress of a country and improvements to quality of life.
<b>Resource Security</b>	Plentiful supply of resources like food, water and energy.
<b>Aid</b>	Money, food or emergency supplies donated to help improve people's lives.

### SKILLS- Scatter graphs

These show 2 sets of data that are related.

The variable thought to cause the change is shown on the 'x' axis. Each pair of values is plotted on the graph using a cross. A line of best-fit is drawn through the middle of the points, with roughly the same number of crosses on either side of the line.



### Indicators of development

1. Economic (GNI).
2. Social factors such as birth rate, death rate, infant mortality rate, literacy rate.

### Causes of uneven development

1. Colonisation.
2. Poor climate for crop growing.
3. War/conflict.
4. Corrupt government.
5. Lack of clean water.
6. No health or education systems.

### Impacts of uneven development

1. Migration.
2. Disparities in health - HICs: obesity; heart and lung diseases; diabetes. LICs: malaria; cholera; HIV.
3. Food inequality - LICs often don't have food security.

### Limitations of short-term aid

- Dependency of recipient.
- Unsustainability of aid project.
- Corrupt government may not use aid appropriately.

The cost of **Fairtrade** products include a premium. This extra cost is paid directly to local farming communities to help them to develop.



**Explain and prioritise the causes of uneven development.**

**Cause**

**Prioritise**

 WHY?

 WHY?

 WHY?

 WHY?

 WHY?

 WHY?

**Explain why development must be measured using both social indicators and GNI:**

**Reduce the information on the impacts of uneven development to one sentence:**

**List the limitations of short-term aid:**

- 1.
- 2.
- 3.

**Write a summary of the benefits of Fairtrade:**

**Write the definition to the following key words. Try not to look at your knowledge organiser.**

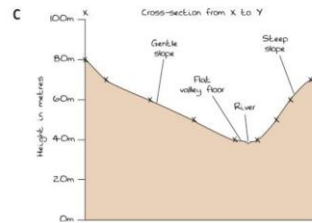
Low Income Country	
High Income Country	
Newly Emerging Economy	
Resource Security	

**Choose one of these words and use it in a sentence.**

Key term	Definition
<b>Economy</b>	The wealth of a country.
<b>Disposable income</b>	Amount of money left to spend after bills are paid.
<b>Colony</b>	An area controlled by another country.
<b>Informal work</b>	Jobs that pay cash-in-hand. No tax is paid and workers have no benefits such as sick pay.
<b>Subsistence farmers</b>	Farmers who grow only enough to feed themselves and their families.
<b>Desertification</b>	Land turned to desert, often through overuse.
<b>Corrupt</b>	Not honest.
<b>Political</b>	To do with governments and the decisions they make.

**SKILLS: Cross-sections**

A cross-section is an imaginary 'slice' through a landscape. It helps us to see what a landscape actually looks like.



Africa is the second largest continent with 54 countries. Its physical geography includes: mountains; rivers; deserts; rainforest; natural resources such as oil, gas, diamonds and gold.



The Sahara desert is the largest desert in the world and stretches over several countries in North Africa. Very few people live there because of the climate. Desertification is when fertile lands turn to desert. Over-farming and climate change are increasing this. The Great Green Wall is a 'wall' of trees and vegetation planted from east to west across 11 countries.

**Nigeria:**

- Largest population in Africa - over 190 million people.
- Capital city: Abuja
- Most populated city: Lagos. Many people migrate to Lagos for work. They often end up in squatter settlements.
- There is huge disparity of wealth.
- Has 4 biomes: desert; tropical savannah; semi-arid savannah; rainforest.
- Has a film industry called 'Nollywood'.
- Much of its income is from oil. This has brought many benefits to the economy and to the quality of life for some people as jobs have been created and more health and education services are provided. However, oil spills and oil flares pollute the environment.

**Reduce** the information about Africa down to 3 key pieces of knowledge.


- 1.
- 2.
- 3.

**Transform** these facts into pictures:

**What are the causes of and solutions to desertification?**

Causes	Solutions

**Add key facts about Nigeria in these boxes.**

	<p style="text-align: center;"><b>Nigeria</b></p> 

**Summarise the benefits and challenges of oil extraction in Nigeria.**

**Map out and or describe the location of Nigeria. Refer to neighbouring countries, bordering ocean, continent, compass points.**

**Write the definition to the following key words. Try not to look at your knowledge organiser.**

Disposable income	
Informal work	
Desertification	
Subsistence farmers	

**Choose one of these words and use it in a sentence.**

# WWI

## Key Terms

**Frontline Trench** - the trench closest to the enemy. Used to move attacking soldiers closer to the enemy trenches and to hold up attacking soldiers.

**Support Trench** - the trench immediately behind the front-line trench. Used to support the front-line trench with machine guns when attacked and to hold the second wave of soldiers when attacking the enemy trench.

**Reserve Trench** - the trench behind the support trench. The reserve trench contained soldiers who could be brought up if the front-line trench was attacked or used as a third wave if attacking the enemy trenches. The reserve trench also protected the artillery batteries.

**Communication Trench** - the trenches dug between the front line, support and reserve trenches. Communication trenches allowed soldiers to move relatively safely between the different trenches.

**Dugout** - protective bunkers dug out of the ground to provide protection from enemy artillery and the weather.

**No Man's Land** - the area between the front-line trenches. It was called no man's land because it was said 'no man' could survive there.

**Machine Gun** - rapid firing weapons that could fire hundreds of bullets every minute. Caused the second highest amount of casualties in WWI.

**Artillery** - large guns designed to fire big explosive shells long distances. Caused the most casualties in WWI.

**Shrapnel** - sharp pieces of metal that blast out after an artillery shell or grenade explodes.

**Barbed Wire** - coiled of spiked wire that was placed in front of the front-line trench to prevent infantry crossing.

## The Chain of Evacuation

**RAMC** The Royal Army Medical Corps. The branch of the army responsible for medical care and the treatment of the wounded.

**FANY** The First Aid Nursing Yeomanry. A volunteer organisation of women who served on the front line providing direct support to the medical services due to the huge numbers of casualties.

**Stretcher Bearers** Due to the rough terrain of No Man's Land, casualties needed to be carried back to their own trench lines in order to receive medical treatment. Stretchers were used to minimise the risk of causing further injury on the trip back.

**Regimental Aid Posts** Located 200m behind the frontline and manned by one or two medical officers who would advise the stretcher bearers on where to send casualties.

**Dressing Stations** Located at least 400m behind the frontline and manned by around 10 medical officers supported by additional nurses. Most wounded who were treated here would usually be sent back to their units after treatment. More serious casualties were sent further back.

**Casualty Clearance Stations** Located as close to the frontlines as possible while still being safe from attack, usually in large buildings such as schools or factories. Casualty Clearance Stations were designed to treat the most critical injuries and were staffed with medical officers trained in surgery supported by volunteer nurses. Due to the large number of casualties they received, CCS's divided all patients upon arrival under a system called 'triage'. Patients were split into three groups. 'Walking Wounded' who could be patched up and quickly sent back, 'Critical' who needed immediate treatment before being sent onto a hospital and 'Unlikely to Recover' who would be made comfortable but would not receive treatment that was needed to save other 'critical' patients.

**Base Hospitals** Located far behind the front lines on the French and Belgium coast, base hospitals were located near the coast to make it easier to transport wounded soldiers home following treatment. Most soldiers treated at base hospitals were so badly wounded they could not be sent back to the front lines. As the war progressed many new treatments were developed at base hospitals which revolutionised medicine.

## Key Events

- **Christmas 1914**
- **The Battle of Verdun**
- **The Battle of the Somme**
- **The Battle of Arras**
- **The Third Battle of Ypres**
- **The Battle of Cambrai**



## Key Terms

- 1) Write a description of each of the key groups without looking at the information on the other side of the knowledge organiser.
- 2) Explain how each part of the trench system contributes to the overall defense of the soldiers manning it.

- **Frontline Trench**
- **Support Trench**
- **Reserve Trench**
- **Communication Trench**
- **Dugout**
- **No Man's Land**
- **Machine Gun**
- **Artillery**
- **Shrapnel**
- **Barbed Wire**

## Key Events

- 1) Describe each event, including a minimum of three pieces of detail.
- 2) Explain the extent it could be described as a success for Britain.

- **Christmas 1914**
- **The Battle of Verdun**
- **The Battle of the Somme**
- **The Battle of Arras**
- **The Third Battle of Ypres**
- **The Battle of Cambrai**

## The Chain of Evacuation

- 1) Describe each stage of the 'Chain of Evacuation' including a minimum of three pieces of supporting detail.
- 2) Explain how each stage contributed saving wounded soldiers in WWI.
- 3) Explain how each stage within the chain is interlinked with another.

- **Stretcher Bearers**
- **Regimental Aid Posts**
- **Dressing Stations**
- **Casualty Clearance Stations**
- **Base Hospitals**

# PROBABILITY

## Listing Outcomes

Listing or counting all the possible outcomes for two or more combined events enables you to calculate the probability of any particular event occurring.

### Systematic listing

The outcomes for an event can be listed in an organised or systematic way to make sure that none of the possible outcomes is missed out. Look for patterns to help find all the outcomes.

At the ice cream kiosk you can choose... **one flavour of ice cream & one topping.**

Flavours	Toppings
Vanilla	Flake
Chocolate	Sprinkles
Banana	Nuts
	Marshmallows

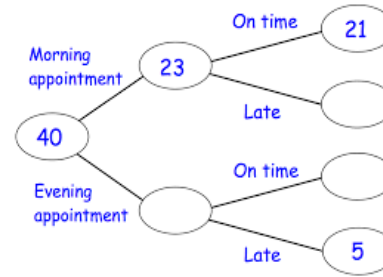
How many different ice creams could Sam order? Use letters to make it easier to list.

VF	CF	BF
VS	CS	BS
VN	CN	BN
VM	CM	BM

What is the connection between the number of options & the total choices?

## Frequency Trees

A frequency tree can be used to record and organise information given as frequencies. This can then be used to calculate probabilities.



## Two Way Tables

Data that is collected can often be from more than one category. For example, data collected on children at a primary school may include their gender as one category and their year group as another. Two-way tables are a way of sorting data so that the frequency of each category can be seen quickly and easily.

	Baseball	Basketball	Football	Total
Male	13	15	20	48
Female	23	16	13	52
Total	36	31	33	100

## Probability of not happening

Events that cannot happen at the same time are called **mutually exclusive** events. For example, a football team can win, lose or draw but these things cannot happen at the same time - they are mutually exclusive. Since it is certain that one of these outcomes will happen, their probabilities must add up to 1.

If the probability the team wins is 0.5 and the probability it draws is 0.2 then the probability of it losing must be 0.3.

YEAR 9  
SPRING



## Relative Frequency

**Relative frequency** is the number of times an event happens divided by the total number of outcomes that took place in an experiment, known as the number of trials.

To calculate the relative frequency we can use the formula,

$$\text{Relative Frequency} = \frac{\text{frequency of event occurring}}{\text{total number of trials of the experiment}}$$

## Sample Space Diagrams

Sample space is a term used in mathematics to mean **all possible outcomes**. For example, the sample space for rolling a normal dice is {1,2,3,4,5,6} as these are all the only outcomes we can obtain. We can also use a **sample space diagram** to help write down all the outcomes when we have a large number of outcomes.

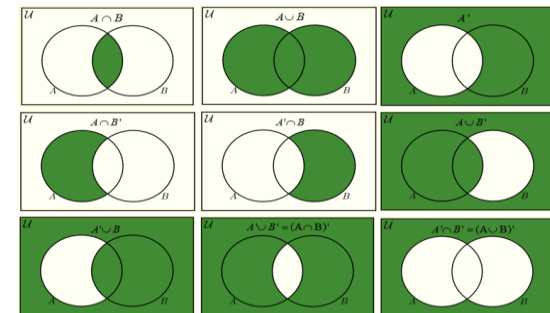
Dice 1

Dice 2	2	3	4	5	6	7
2	4	5	6	7	8	9
3	5	6	7	8	9	10
4	6	7	8	9	10	11
5	7	8	9	10	11	12
6	8	9	10	11	12	

Total Score

## Venn Diagrams

Venn diagrams are very useful constructs made of two or more circles that sometimes overlap. Venn diagrams frequently appear in different areas of mathematics but are most common when dealing with sets and probability. The notation for Venn diagrams is here →



# LINEAR GRAPHS

## Coordinates

**Coordinates** are locations of points on a grid known as the **cartesian plane**.

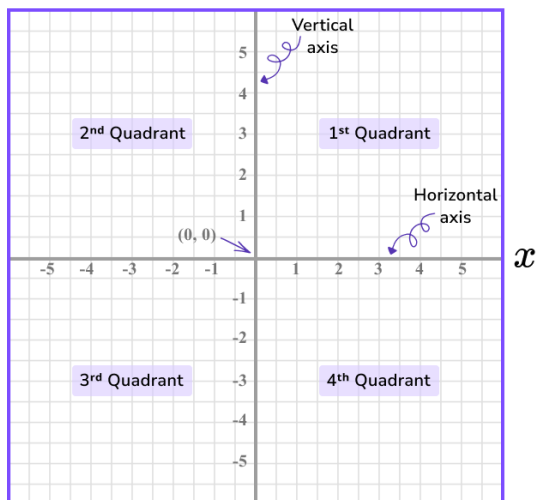
A **coordinate** is written as two numbers, separated by a **comma**, and surrounded by a pair of **round brackets**.

The **general form** of a coordinate is  $(x, y)$  where the value for  $x$  represents the horizontal position of the coordinate, and the value for  $y$  represents the vertical position of the coordinate.

For example, the coordinate  $(3, 5)$  has a horizontal position of 3, and a vertical position of 5.

The **x-axis** and **y-axis** meet at the **origin**,  $(0, 0)$  where,

- the x-axis (the **horizontal axis**) is positive to the right of the origin, and negative to the left of the origin;
- the y-axis (the **vertical axis**) is positive above the origin, and negative below the origin.



## Midpoint of a Line

**Midpoint** refers to a point that is in the middle of the line joining two points. To find the midpoint:

- Add the two  $x$  coordinates together and then divide by two. This will give the  $x$  coordinate of the midpoint
- Add the two  $y$  coordinates together and then divide by two. This will give the  $y$  coordinate of the midpoint

### Example

Find the midpoint between the points  $(2, 4)$  and  $(8, 6)$ .

- Add the  $x$  coordinates together.  $2+8=10$
- Divide that by 2.  $10 \div 2 = 5$ . **5 is the  $x$  coordinate of the midpoint**
- Add the  $y$  coordinates together.  $4+6=10$
- Divide that by 2.  $10 \div 2 = 5$ . **5 is the  $y$  coordinate of the midpoint**
- The midpoint is  $(5, 5)$

## Gradient and y-intercept

**Gradient** – how steep or shallow a line is

**y-intercept** – the point at which the line crosses the  $y$ -axis

We can find this information from the equation of a line

$$y = mx + c$$

gradient     y-intercept

## Plotting Graphs

One way of plotting a linear function is to use a table of values. This method means inputting different values of  $x$  into the function to get a value of  $y$ . Doing this gives coordinates that lie on the line which can be plotted on a grid.

### Example

Plot the following line of  $y = 3x + 1$ .

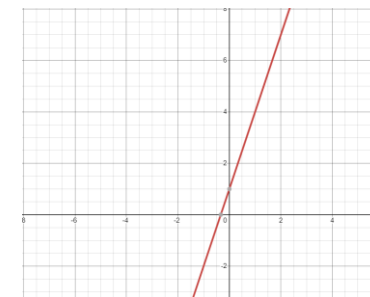
- Create a table of values

$x$	-1	0	1	2
$y$				

- Now input those values of  $x$  into the equation. When  $x = -1$ ,  $y = 3(-1) + 1 = -2$ . So  $y = -2$ . Input that value into the table and repeat until the table is done
- The finished table of values gives you coordinates to plot on a grid, for example  $(-1, -2)$

$x$	-1	0	1	2
$y$	-2	1	4	7

- Plot the points and draw a line through the points or a curve if it is a quadratic



# ADVANCED LINEAR GRAPHS

## Equation of a Line

### From gradient and coordinates

What is the equation of a line which has gradient of 3 and goes through the point (4,14).

1. We know the equation of the line must be in the format  $y = mx + c$ , where  $m$  is the gradient and  $c$  is the  $y$ -intercept
2. The gradient has already been given in the question (gradient = 3) so we just have to replace  $m$  with 3. So we now have  $y = 3x + c$
3. We can work out what  $c$  is by substituting the coordinate into the equation that has the gradient substituted in.

$$(14) = 3(4) + c$$

$$14 = 12 + c$$

Subtract 12 from both sides to get  $c$  on its own.

$$2 = c$$

4. So the equation of the line that has a gradient is 3 and goes through the point (4,14) is  $y = 3x + 2$

### From 2 points

To calculate the equation of a line from 2 points we first need to calculate the gradient. To calculate the gradient we need to use the formula

$$\text{gradient} = \frac{\text{change in } y}{\text{change in } x}$$

Once we have calculated the gradient we then input one of the coordinates given in the question (like we do above in from gradient and coordinates).

## Parallel and Perpendicular Lines

### Parallel Lines

To know if lines are parallel they will have the **same gradient**.

### Perpendicular Lines

To know if lines are perpendicular the gradients are negative reciprocals of each other.

For example:

**If the gradient of a line is 4 then the line that is perpendicular has a gradient of  $-\frac{1}{4}$ . This is because 4 multiplied by  $-\frac{1}{4}$  to -1.**

## Substitution

Substitution is the name given to the process of swapping an algebraic letter for its value. Consider the expression  $8z + 4$ . This can take on a range of values depending on what number  $z$  **actually is**.

If we are told  $z = 5$ , we can work out the value of the expression by swapping the  $z$  for the number 5. (Remember that  $8z$  means 8 **multiply**  $z$ ).

$$8z + 4 = 8 \times 5 + 4 = 44$$

When  $z = 5$ ,  $8z + 4 = 44$

We are also expected to be able to substitute negative numbers into expressions. The method is the same but once again, we must be careful with our signs.

### Example

Find the value of  $4i - 2p$  when  $i = 3$  and  $p = -5$ .

Substituting the values into the formula gives:

$$(4 \times 3) - (2 \times -5) = 12 - -10 = 12 + 10 = 22$$

## Simultaneous Equations

### Elimination Method

1. Multiply one or both equations by some number(s) to make the number in front of one of the letters (unknowns) the same or exactly the opposite in each equation.
2. Subtract the two equations to eliminate one letter.
3. Solve for the remaining unknown.
4. Solve for the other unknown by inserting the value of the unknown found in one of the original equations.

### Example

$$4x + 6y = 36$$

$$4x + 5y = 32 -$$

$$y = 4$$

### Substitute

$$4x + 6(4) = 36$$

$$4x + 24 = 36$$

Subtract 24 from both sides

$$4x = 12$$

Divide by 4 both sides

$$x = 3$$

YEAR 9 SPRING 2

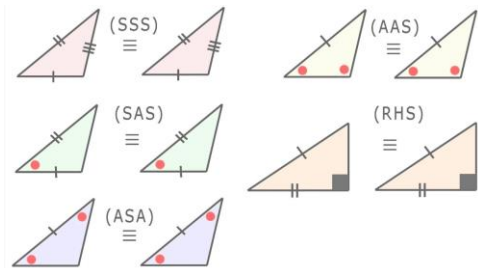
# CONGRUENCY AND SIMILARITY

## Congruent Triangles

When two triangles are congruent they will have exactly **the same three sides** and exactly **the same three angles**.

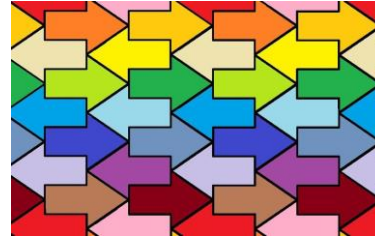
The equal sides and angles may not be in the same position (if there is a turn or a flip), but they are there. There are a few ways to determine whether a triangle is congruent:

1. SSS - **SSS** stands for "side, side, side" and means that we have two triangles with all three sides equal.
2. SAS - **SAS** stands for "side, angle, side" and means that we have two triangles where we know two sides and the included angle are equal.
3. ASA - **ASA** stands for "angle, side, angle" and means that we have two triangles where we know two angles and the included side are equal.
4. AAS - **AAS** stands for "angle, angle, side" and means that we have two triangles where we know two angles and the non-included side are equal.
5. RHS - **RHS** stands for "right-angle, hypotenuse, side" and means that we have two triangles where we have a right angle, a hypotenuse and a side that are equal.



## Tessellation

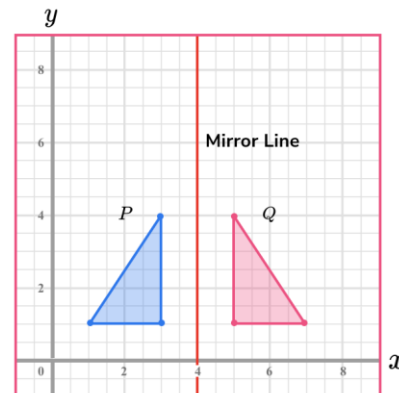
A tessellation is a pattern created with **identical shapes** which fit together with no gaps.



## Reflection

**Reflection** is a type of transformation that flips a shape in a mirror line (also called a line of reflection) so that each point is the same distance from the mirror line as its reflected point.

Triangle *P* has been reflected in the line  $x = 4$  to give Triangle *Q*. Triangle *P* is the **object** and Triangle *Q* is the **image**.



## Transformation

A **translation** moves a shape up, down or from side to side but it does not change its appearance in any other way. Every point in the shape is translated the same distance in the same direction.

Column **vectors** are used to describe translations. Vectors are given in the form  $\begin{pmatrix} x \\ y \end{pmatrix}$  where  $x$  is the movement horizontally and  $y$  is the movement vertically. A positive value of  $x$  means a movement to the right and a negative value of  $x$  means a movement to the left. A positive value of  $y$  means a movement upwards and a negative value of  $y$  means a movement downwards.

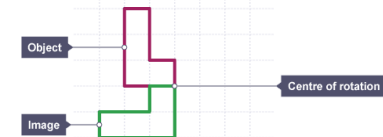
## Rotation

**Rotation** turns a shape around a fixed point called the **centre of rotation**.

**Three pieces of information are needed to rotate a shape:**

- the centre of rotation
- the angle of rotation
- the direction of rotation

The shape has been rotated  $90^\circ$  (a quarter turn) anticlockwise about the centre of rotation.

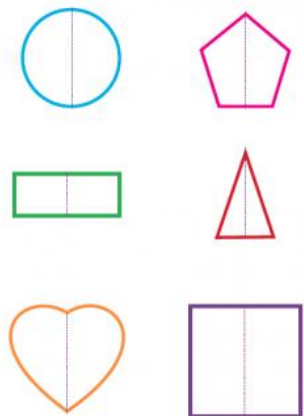


# CONGRUENCY AND SIMILARITY

## Symmetry

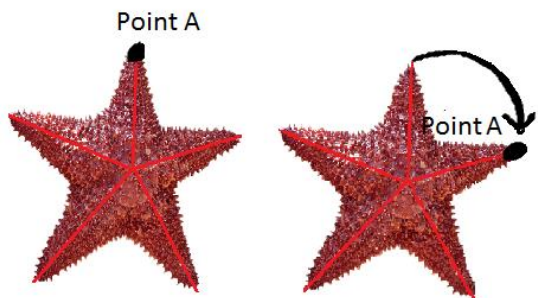
### Reflective Symmetry

The simplest symmetry is Reflection Symmetry (sometimes called *Line Symmetry* or *Mirror Symmetry*). It is easy to see, because one half is the reflection of the other half. The Line of Symmetry can be in any direction (not just up-down or left-right).



### Rotational Symmetry

With Rotational Symmetry, the image is rotated (around a central point) so that it appears 2 or more times. How many times it appears is called the **Order**.



## Enlargement

An enlargement is a type of transformation where we change the size of the original shape to make it bigger or smaller by multiplying it by a scale factor.

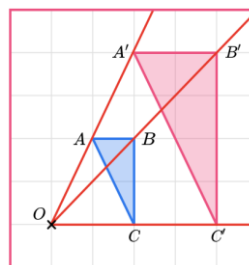
To complete an enlargement we need:

- Centre of enlargement
- Scale factor

To use a centre of enlargement we need to draw lines from the centre of enlargement through the vertices of the original shape. These are called ray lines.

### Example

Here triangle ABC has been enlarged by scale factor 2 about a centre of enlargement point O. The new triangle is labelled A'B'C'.



The lengths of the sides of the new shape are double the lengths of the sides of the original shape. The pairs of corresponding sides are parallel lines. The angles in the two shapes are the same and the triangles are similar triangles.

## Linear Scale Factor

The size of an enlargement/reduction is described by its scale factor.

For example, a scale factor of 2 means that the new shape is twice the size of the original.

A scale factor of 3 means that the new shape is three times the size of the original.

To calculate the scale factor, we use the following:

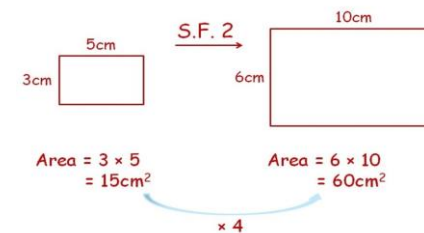
$$SF_{\text{enlargement}} = \frac{\text{big}}{\text{small}}$$

$$SF_{\text{reduction}} = \frac{\text{small}}{\text{big}}$$

You can get the 'big' and 'small' from the corresponding sides on the figures.

## Area Scale Factor

To work out the area scale factor you have to **square** the linear scale factor.



Dynamo 3  
Mod 4

Est-ce que tu manges de la viande? *Do you eat meat?*

**Je mange**  
**Je bois**  
  
**Je ne mange pas\***  
**Je ne mange jamais\***  
**Je ne bois pas\***  
**Je ne bois jamais\***

\*With negatives, the article is always **de**

**du** viande *meat*  
**du** fruit  
**du** poisson *fish*  
**des** légumes *vegetables*  
**des** produits d'origine animale  
*animal products*  
**du** lait *milk*

**je suis pour le**  
**véganisme parce que**  
*I am for veganism*  
*because*

**je suis contre le**  
**véganisme parce que**  
*I am against veganism*  
*because*

**c'est sain / malsain**  
*it's healthy/unhealthy*  
**la production de viande est mauvais pour**  
**l'environnement**  
*the production of meat is bad for the environment*  
**manger des animaux, c'est cruel/normal**  
*eating animals is cruel/normal*  
**il y a beaucoup de vitamines dans le/la...**  
*there's lots of vitamins in..*  
**Le/la..... C'est très savoureux**  
*...is very tasty*

Qu'est-ce qu'il faut faire pour protéger les animaux menacés? *What must you do to protect endangered animals?*

**Le panda géant**  
**Le tigre**  
**Le rhinocéros**  
**Le crocodile**  
**L'ours polaire** *the polar bear*  
**La tortue marine** *the sea turtle*

**habite dans la forêt**  
*lives in the forest*  
  
**habite dans l'eau**  
*lives in the water*  
  
**habite à la campagne**  
*lives in the countryside*

**est menacé(e) par**  
*is threatened by*

**le changement climatique**  
*climate change*  
**la chasse**  
*hunting*  
**la déforestation**  
**la pollution**

## Dynamo 3 Mod 4

**Qu'est-ce que tu as fait pour aider l'environnement?** *What have you done to help the environment?*

<b>J'ai</b> <i>I</i>	<b>ramassé des déchets</b> <i>picked up litter</i>	<b>Il faut</b> <i>You must</i>	<b>ramasser les déchets</b>
<b>On a</b> <i>We</i>	<b>recyclé du papier/du plastique</b> <i>recycled paper/plastic</i>	<b>Il ne faut pas</b> <i>You must not</i>	<b>recycler le papier et les bouteilles</b> ( <i>bottles</i> )
<b>Nous avons</b> <i>We</i>	<b>acheté des produits bio</b> <i>Bought organic products</i>		<b>aller au collège à pied ou à vélo</b>
	<b>utilisé moins d'énergie</b> <i>used less energy</i>		<b>manger trop de viande</b> ( <i>meat</i> )
	<b>organisé une campagne</b> <i>organised a campaign</i>		<b>utiliser trop d'énergie</b>
<b>Je suis</b> <i>I</i>	<b>allé(e) au collège à pied</b> <i>went to school on foot</i>		<b>laisser de sacs en plastiques sur la plage</b> <i>leave plastic bags on the beach</i>

**Qu'est-ce que tu voudrais faire pour changer le monde?** *What would you like to do to change the world?*

<b>Je voudrais</b> <i>I would like</i>	<b>utiliser moins de plastique</b>	<b>Il faut</b> <i>You must</i>	<b>aider les animaux menacés</b>
<b>J'aimerais</b> <i>I would like</i>	<b>acheter moins de vêtements</b> ( <i>clothes</i> )		<b>protéger la planète</b>
	<b>manger moins de viande</b>		<b>combattre le changement climatique</b> <i>fight climate change</i>
<b>Je rêve de</b> <i>I dream of</i>	<b>organiser une campagne</b>		<b>aider les autres</b> <i>help others</i>
	<b>faire du travail bénévole</b> <i>do voluntary work</i>		
	<b>être membre d'un group écolo</b> <i>be in a green group</i>		

### For giving opinions

Je suis pour / contre ... *I am for / against ...*  
 À mon avis, ... *In my opinion, ...*  
 Pour moi, ... *For me, ...*  
 Je pense que ... *I think that ...*  
 Tu es d'accord? ... *Do you agree?*  
 Je suis d'accord. ... *I agree.*  
 Je ne suis pas d'accord. ... *I disagree.*  
 Tu rigoles! ... *You must be joking!*



# Year 9 German Grammar

## The perfect tense

Start with the correct form of haben (below) and end with the past participle. Form the past participle by putting **ge\_\_t** around the verb stem. E.g. spielen – **gespielt**.

ich habe	wir haben
du hast	ihr habt
er hat	Sie haben
sie hat	sie haben

Common irregular past participles:

gelesen, gesehen, gegessen, getrunken, gefunden

Verbs where there is movement or a change of state use sein instead of haben. The most common verbs are: gegangen (went), gefahren (travelled), geflogen (flew), geblieben (stayed)

ich bin	wir sind
du bist	ihr seid
er ist	Sie sind
sie ist	sie sind

## The present tense

Remove the 'en' to form the stem e.g. spielen – spiel

ich	_____e(I)	wir	_____en	(we)
du	_____st(you)	ihr	_____t	(you inf/pl)
er	_____t(he)	Sie	_____en	(you for/pl)
sie	_____t(she)	sie	_____en	(they)

## The future tense

Start with the correct form of werden (below) and end with the infinitive. E.g. spielen

ich werde	wir werden
du wirst	ihr werdet
er wird	Sie werden
sie wird	sie werden

Was trägst du? What do you wear?							
ich trage / wear du trägst er/sie/es trägt wir tragen sie tragen they wear	einen	kurzen <i>short</i> weiten <i>wide-leg</i> schicken <i>smart</i> modischen <i>fashionable</i> altmodischen <i>old-fashioned</i> unmodischen <i>unfashionable</i>	langen <i>long</i> schmalen <i>slim-leg</i> lockeren <i>casual</i> karierten <i>checkered</i> gestreiften <i>striped</i> gepunkteten <i>spotty</i>	schwarzen blauen braunen grauen bunten rosa	roten gelben grünen weißen lila	Rock Mantel Anzug Kapuzenpulli	
Gestern habe ich <i>Yesterday have I</i> Gestern hat er/sie <i>Yesterday had he/she</i> Gestern haben wir <i>Yesterday have we</i>	eine	kurze <i>short</i> weite <i>wide-leg</i> schicke <i>smart</i> modische <i>fashionable</i> altmodische <i>old-fashioned</i> unmodische <i>unfashionable</i>	lange <i>long</i> schmale <i>slim-leg</i> lockere <i>casual</i> karierte <i>checkered</i> gestreifte <i>striped</i> gepunktete <i>spotty</i>	schwarze blaue braune graue bunte rosa	rote gelbe grüne weiße lila	Jeanshose Hose Krawatte Jacke	getragen <i>worn</i>
Morgen werde ich <i>Tomorrow will I</i> Morgen wird er/sie <i>Tomorrow will he/she</i> Morgen werden wir <i>Tomorrow will we</i>	ein	kurzes <i>short</i> weites <i>wide-leg</i> schickes <i>smart</i> modisches <i>fashionable</i> altmodisches <i>old-fashioned</i> unmodisches <i>unfashionable</i>	langes <i>long</i> schmales <i>slim-leg</i> lockeres <i>casual</i> kariertes <i>checkered</i> gestreiftes <i>striped</i> gepunktetes <i>spotty</i>	schwarzes blaues braunes graues buntes rosa	rotes gelbes grünes weißes lila	Kleid Hemd T-Shirt	tragen <i>wear</i>
		kurze <i>short</i> weite <i>wide-leg</i> schicke <i>smart</i> modische <i>fashionable</i> altmodische <i>old-fashioned</i> unmodische <i>unfashionable</i>	lange <i>long</i> schmale <i>slim-leg</i> lockere <i>casual</i> karierte <i>checkered</i> gestreifte <i>striped</i> gepunktete <i>spotty</i>	schwarze blaue braune graue bunte rosa	rote gelbe grüne weiße lila	Schuhe Stiefel Sandalen	
Ich denke Ich glaube Ich würde sagen, / <i>would say,</i>	mein Stil ist <i>my style is</i> ihr Stil ist <i>her style is</i> sein Stil ist <i>his style is</i>			sehr ziemlich zu ein bisschen		sportlich lässig <i>relaxed</i> trendig <i>trendy</i> klassisch <i>classic</i>	

wenn	<i>when (if)</i>
immer	<i>always</i>
zum Beispiel	<i>for example</i>
zuerst	<i>first of all</i>
seit	<i>since (for)</i>
für	<i>for</i>
möglich	<i>possible</i>
pro Jahr	<i>per year</i>
nächstes Jahr	<i>next year</i>
teuer	<i>expensive</i>
alle	<i>all/everyone</i>
um ... zu	<i>in order to</i>

### Kleider/Klamotten • Clothes

der Rock	skirt
der Mantel	coat
der Anzug	suit
der Kapuzenpulli	hoodie
die Jeanshose (die Jeans)	jeans
die Hose	trousers
das Kleid	dress
das Hemd	shirt
das T-Shirt	T-shirt
die Schuhe (pl)	shoes
die Stiefel (pl)	boots
die Sandalen (pl)	sandals

### Wie ist es? • What is it like?

kurz	short
lang	long
weit	wide-leg, baggy
schmal	slim-leg, skinny
schick	smart
locker	casual
kariert	checked
gepunktet	spotty
gestreift	stripy

### Wie ist dein Stil? • What is your style?

lässig	informal
sportlich	sporty
trendig	trendy
klassisch	classic

### Diskussion und Debatte

#### • Discussion and debate

Viele/Einige Leute sagen	Many/Some people say
Meiner Meinung nach	In my opinion
Erstens	Firstly
Zweitens	Secondly
Schließlich	Finally
Du hast gesagt ..., aber ich denke	You said ..., but I think
Auf der einen Seite	On the one hand
Auf der anderen Seite	On the other hand

### Was trägst du?

#### • What do you wear/are you wearing?

Ich trage ...	I wear/am wearing ...
einen kurzen Rock	a short skirt
einen langen Mantel	a long coat
einen schicken Anzug	a smart suit
einen lockeren Kapuzenpulli	a casual hoodie
eine weite Hose	a baggy pair of trousers
eine schmale Jeanshose	a pair of skinny jeans
ein kariertes Hemd	a checked shirt
ein gepunktetes Kleid	a spotty dress
ein gestreiftes T-Shirt	a stripy T-shirt
schicke Stiefel	smart boots

### Ein erstes Date • A first date

Was wirst du machen?	What will you do?
Ich werde ...	I will ...
die Karten im Voraus kaufen	buy the tickets in advance
einen guten Film auswählen	choose a good film
früh ankommen	arrive early
... abholen	pick up ...
etwas Schickes anziehen	put on something smart
genug Geld mitnehmen	take enough money with me
mit dem Bus in die Stadt fahren	go by bus to town
ins Kino gehen	go to the cinema
essen gehen	go out to eat

### Ich mache mich fertig

#### • I get myself ready

Ich style mir die Haare.	I style my hair.
Ich mache mir die Haare.	I do my hair.
Ich putze mir die Zähne.	I clean my teeth.
Ich schminke mich.	I put make-up on.
Ich ziehe mich an.	I get dressed.
Ich sehe mich im Spiegel an.	I look at myself in the mirror.
Ich benutze ein Deo.	I put deodorant on.
Ich wähle meine Kleider aus.	I choose my clothes.

subject	auxiliary verb	Time Manner Place	past participle
Ich	habe	<b>viele Reisen/a lot of journeys</b> <b>mit Kindern/with children</b> <b>viele Länder/a lot of countries</b> <b>viele Preise/a lot of prizes</b> <b>viel Geld/a lot of money</b>	<b>gemacht/did-made</b> <b>gearbeitet/worked</b> <b>gesehen/saw</b> <b>gewonnen/won</b> <b>verdient/earned</b>
Er/Sie	hat	<b>viel/a lot</b> <b>Tennis/Gitarre</b> <b>in (Amerika)</b> <b>Biologie</b> <b>mir/sich das Bein/my-his-her leg</b>  <b>mir/sich den Arm/my-his-her arm</b>  <b>einen Unfall/an accident</b>	<b>trainiert/trained</b> <b>gespielt/played</b> <b>gewohnt/lived</b> <b>studiert/studied</b> <b>verletzt/injured</b> <b>gebrochen/broke</b> <b>gehabt/had</b>
Ich	bin	<b>nach Afrika/to Africa</b> <b>nach Amerika/to America</b> <b>in viele Tanzstudios/to a lot of dance studios</b> <b>vom Rad/off the bike</b>	<b>gefahren/travelled</b> <b>gesegelt/sailed</b> <b>gegangen/went</b> <b>gefallen/fell</b>
Er/Sie		<b>ins Krankenhaus/to the hospital</b> <b>im Schwimmbad/in the swimming pool</b>	<b>gekommen/came-went</b> <b>heruntergefallen/fell down</b>
subject	auxiliary verb	Time Manner Place	infinitive
Ich	<b>werde/will</b>	<b>viele Reisen/ a lot of journeys</b> <b>viele Länder/a lot of countries</b> <b>Arzt/Ärztin /a doctor(male/female)</b> <b>im Ausland/(in) abroad</b> <b>Theaterwissenschaft/drama</b>	<b>machen/to do</b> <b>sehen/to see</b> <b>werden/to become</b> <b>leben/to live</b>
Er/Sie	<b>wird/will</b>	<b>viel Geld/a lot of money</b> <b>für eine Hilfsorganisation/for an aid organisation</b> <b>berühmt/famous</b> <b>viele Preise/a lot of prizes</b>	<b>studieren/to study</b> <b>verdienen/to earn</b> <b>arbeiten/to work</b> <b>sein/to be</b> <b>gewinnen/to win</b>

Complex German sentences follow a word order pattern that is slightly different to English. After our verb and subject are in the correct order the 'rest of the sentence' follows this rule:

**Time** - when did it happen?

**Manner** - how did it happen?

**Place** - where did it happen?

E.g. ich habe **letztes Jahr mit Kindern in Amerika** gearbeitet.  
I worked last year with children in America.

**BUT** remember that infinitives/past participles will **ALWAYS** go to the end of the sentence or clause.

## Year 9 German Spring 2 (Stimmt 3 - Kapitel 1)

Sentence starter / opinion phrase	reason	qualifier	adjective	verb
... ist mein Vorbild, ... ist my role model	weil er  weil sie	sehr zu nicht nie ein bisschen ziemlich manchmal	arrogant begabt talented bescheiden modest großzügig generous launisch nervig erfolgreich successful originell selbstlos selfless selbstbewusst self-confident charismatisch berühmt famous	ist.
Ich liebe..., Ich hasse..., Ich mag..., Ich mag... nicht,				
Mein(e) Lieblingsschauspieler(in) ist..., My favourite actor is...				
Mein(e) Lieblingssportler(in) ist..., My favourite sports star is...				
Mein(e) Lieblingssänger(in) ist... My favourite singer is...				war.
Als ich ein Kind war, war mein Vorbild ..., As a child my role model was...				

### Was macht er/sie?

#### • What does he/she do?

Er/Sie läuft schnell.	He/She runs fast.
Er/Sie fährt schnell Rad.	He/She cycles fast.
Er/Sie singt viele Lieder.	He/She sings many songs.
Er/Sie liest die Nachrichten.	He/She reads the news.
Er/Sie ist oft im Fernsehen.	He/She is often on TV.
Er/Sie spielt gut Gitarre.	He/She plays guitar well.

### Der Körper • The body

der Kopf(-e)	head
die Schulter(n)	shoulder
der Arm(e)	arm
die Hand(-e)	hand
der Rücken(-)	back
der Bauch(-e)	stomach
der Po(s)	bottom
das Bein(e)	leg
das Knie(-)	knee
der Fuß(-e)	foot

### Das Gesicht • The face

das Auge(n)	eye
das Ohr(en)	ear
die Nase(n)	nose
der Mund(-er)	mouth
das Kinn(e)	chin

### Beweg dich! • Get moving!

Beug die Knie!	Bend your knees!
Heb die Beine!	Lift your legs!
Lauf vorwärts/rückwärts!	Run forwards/backwards!
Leg dich auf den Rücken!	Lie on your back!
Setz dich!	Sit down!
Spring hoch!	Jump high!
Steh auf!	Stand up!/Get up!
Streck dich!	Stretch!
Streck die Arme nach links/rechts!	Stretch your arms to the left/right!
Vergiss nicht, Wasser zu trinken!	Don't forget to drink water!

### Los empleos / Los trabajos = Jobs

Soy = I am  
camarero/a = waiter / waitress  
cocinero / a = chef  
dependiente /a = shop assistant  
esteticista = beautician  
jardinero /a = gardener  
limpiador /a = cleaner  
peluquero /a = hairdresser  
repcionista = receptionist

### ¿Cómo es tu jefe? = What is your boss like?

Mi jefe es muy educado / a = my boss is polite  
Mi jefe es maleducado/a = my boss is rude  
¿Cómo son los clientes? = What are the customers like?  
Los clientes son exigentes = the customers are demanding  
Los clientes son mal educados = the customers are rude  
Mis compañeros son simpáticos = my colleagues are nice

### Tasks at Work

Tengo que... = I have to... contestar al teléfono = answer the telephone  
ayudar a los clientes = help customers  
cortar el pelo a los clientes = cut customers' hair  
cuidar las plantas = look after the plants  
hacer manicuras = do manicures  
limpiar habitaciones = clean rooms  
preparar comida = prepare food  
servir la comida en el restaurante = serve food in the restaurant  
vender productos en la tienda = sell products in the shop

### ¿Cómo eres? = What are you like?

En mi opinion soy... = In my opinion I am...  
Creo que soy ... = I believe I am...  
Pienso que soy ... = I think I am ...  
muy = very  
bastante = quite  
ambicioso/a = ambitious  
creativo /a = creative  
independiente = independent inteligente = intelligent  
organizado/a = organised  
paciente = patient  
práctico / a = practical  
serio /a = serious  
sociable = sociable

### Me gusta / no me gusta mi trabajo porque es.. I like / don't like my job because it is....

difícil = difficult	duro = hard
estimulante = stimulating	estresante = stressful
monótono = monotonous	repetitivo = repetitive





Year 9 Spanish  
Spring 2  
Viva 3 Module 4



**Mis Derechos = My Rights**

Tengo derecho = I have the right  
al amor y a la familia = to love and a family  
al juego = to play  
a la educación = to education  
a la libertad de expresión = to freedom of expression  
a un medio ambiente sano = to a healthy environment  
a vivir en armonía = to live in harmony

**No puedo... = I can't ...**

dar mi opinion = to give my opinion  
jugar con mis hermanos = play with my brothers and sisters  
salir solo/a = go out alone  
dormir = sleep  
ir al insti = go to school  
respirar = breathe  
porque... = because...  
tengo que ganar dinero = I have to earn money hay  
mucha violencia en mi ciudad = there is lots of violence in my city  
mi padre grita mucho = my dad shouts a lot  
tengo que trabajar = I have to work  
el aire está contaminado = the air is polluted

No es justo porque = it is not fair because ...

Es inaceptable porque = it is unacceptable because....

**Nationalities** boliviano/

a = Bolivian colombiano/a =  
Colombian mexicano/a = Mexican  
norteamericano/a = north American  
inglés / inglesa = English  
español/a = Spanish paquistaní =  
pakistani

**El comercio justo = Fair Trade**

Tiene .... años = He /she is .... years old  
Vive = he / she lives  
Viven = they live  
con su familia = with his/her family  
en una plantación = on a plantation  
Trabaja = he / she works  
Trabajan = they work  
catorce horas al día = 14 hours a day  
seis días a la semana = 6 days a week  
para un patrón = for an employer  
para una cooperativa = for a cooperative  
Gana = he / she earns  
Ganan = they earn

**High Frequency Words**

mi / mis = my	para = for / in order to
su/ sus = his/her	hay = there is / are
nuestro/a/os/as = our	había = there were
más ... que = more ... than	a partir de ahora = from now
menos ... que = less ... than	además = in addition



# Year 9 Spanish Spring 2 Viva 3 Module 4

## El medio ambiente = The Environment

Para proteger el medio ambiente = to protect the environment

### Se debería = you should

ahorrar energía en casa = save energy at home

apagar la luz = turn off the lights cerrar el grifo

= turn off the tap conservar el agua = save water

desenchufar los aparatos electrónicos = unplug electrical devices

ducharse en vez de bañarse = shower instead of having a bath

ir en bici = travel by bike

reciclar el papel =recycle paper

reciclar el vidrio = recycle glass

reciclar el plástico – recycle plastic

usar transporte público = use public transport

**No se debería = you shouldn't** malgastar el

agua = waste water malgastar energía = waste energy

tirar la basura al suelo = throw rubbish on the ground usar bolsas de

plástico = use plastic bags



**Bitesize  
Resources**



**The  
Imperfect Tense**

## Mi ciudad en el pasado = My town in the past

Antes = in the past

Era = it was

Era bastante aburrida = it was quite boring Era muy

peligrosa = it was very dangerous

Estaba sucia = it used to be dirty

Había mucha basura = there was lots of rubbish

Había mucha contaminación = there was lots of pollution

Había mucha violencia = there was lots of violence

No había medios de transporte público = there was no public transport

No había nada para los jóvenes = there was nothing for young people

## Mi ciudad ahora = My town now

Ahora = now

Está limpia =it is clean

Hay menos basura = there is less rubbish

Hay menos contaminación = there is less pollution

Hay parques bonitos = there are pretty parks

Hay espacios verdes = there are green spaces

Hay una red de transporte muy buena = There is a good transport network

Hay muchas cosas para los jóvenes

= there are lots of things for young people

No tiene barrios peligrosos = it doesn't have dangerous neighbourhoods

## Glossary of key terms for this unit

**Net Shot** - Shot hit from the fore court clearing the net and then falling rapidly.

**Officiating** - The process of overseeing the game and ensuring all the rules and regulations are adhered by.

**Let** - A let is played by the umpire when something (usually distracting) happens and is beyond their control on court.

**Shot tactics** - This is the process of building up a sequence of shots in order to set yourself up for an attacking shot.

**Anticipation** - In badminton this is the ability to quickly and accurately predict the outcome of your opponent's shot and set yourself up for the return.

# Badminton

## Year 9

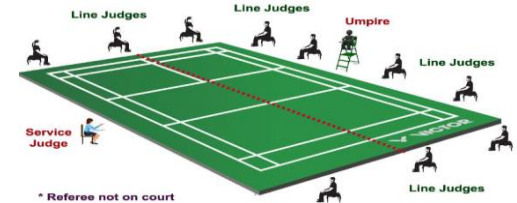
The **net shot** is hit from the forecourt to the opponent's forecourt. The closer it falls to the net the more difficult it is to be returned.



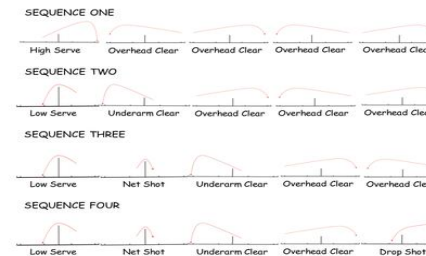
When a **let** occurs the play since the last service will not count and the player which served will serve again.



The **umpire** must enforce all **badminton** rules on the court. The **umpire** makes rules calls regarding service faults, other player faults or lets. The **umpire** announces the match's score to the players throughout the match.

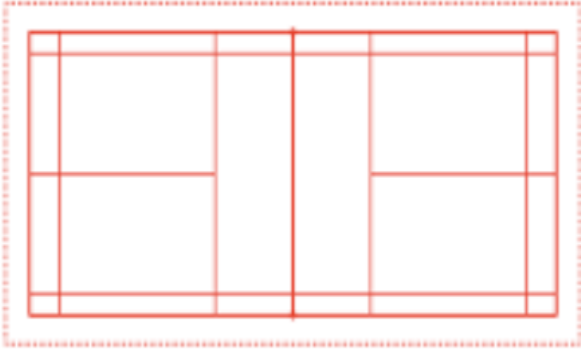


In **badminton**, **anticipation** is preparing for something that is expected to happen. Expected could be a return by an opponent of the shuttle to a particular place.



Shots such as the overhead clear creates space at the front of the court in order to set yourself up for an attacking shot such as the smash shot.

**Identify** on the image below where you would want a net shot to land;



**Sequence 1**

**Sequence 2**

**Sequence 3**

**Identify** three reasons why a 'let' might be called in badminton;

Reason 1

Reason 2

Reason 3

**Explain** what is meant by the term 'shot tactics' in badminton?

**Explain** what is meant by the term 'anticipation' in badminton?

## Knowledge Organiser Year 9 Badminton

**Research** online the roles of the different officials in badminton;

**Line judge**

**Match referee**

**Match umpire**

**Service judge**

## Glossary of key terms for this unit

**Counterattack** - A fast, direct attack launched immediately upon regaining position of the ball.

**Referee** - Every match is controlled by a referee who has the full authority to enforce the laws of the game in connection with the match.

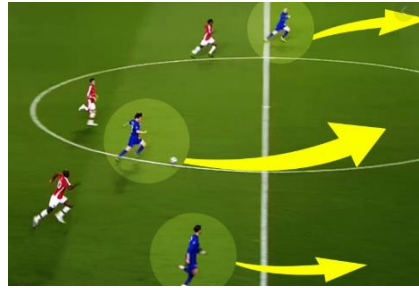
**Outwitting** - This is the ability to gain an advantage over your opponent by being more intelligent or skilful than they are.

**Coach** - The job of a football coach is to develop the skills and techniques of the players they are working with.

**Analyse** - This is the ability to reflect on what went well and what areas need developing.



A coach in football is responsible for setting up practices and improving the skill level of their players. It is also important they have good man management skills.

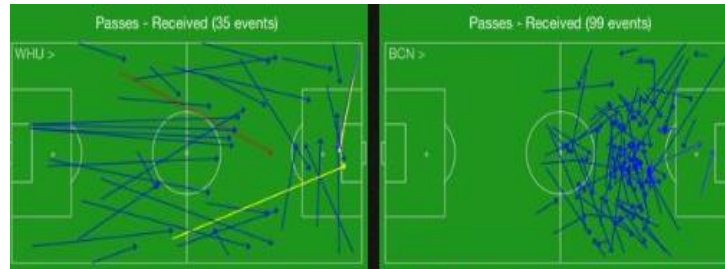


To become a referee, you need to be at least 14 years of age (Year 9) and take the FA basic refereeing course with your local FA (Suffolk FA). Once you are qualified you can start refereeing junior games to earn money.



## Football Year 9

The counterattack in football allows for teams to outnumber their opponents when attacking to optimise their chances of scoring. The picture highlights Chelsea counter attacking against Arsenal by pushing more players forward up the pitch.



In football coaches and managers will analyse their team's performance and coordinate training sessions based on the areas which need developing. It is also important that coaches reflect on their performance in order to improve as coaches themselves.



Outwitting your opponent is the ability to use tactics, strategies and skills to get the better of them. Players such as Ronaldo will use skill to deceive his opponents.

## Knowledge Organiser Year 9 Football

**Describe** what is meant by the term “outwitting’ in your own words”?

**Identify** 3 different ways a footballer can outwit their opponents.

1)

2)

3)

**Identify** a position in football where they are more likely to outwit an opponent and say why?

**Design** a simple passing activity which involves 4 players?

**Explain** why in football it is important for a football coach to analyse their team's performance?

**Describe** in your own words the role of a football referee?

**Explain** the term ‘counterattack’ in your own words?

## Glossary of key terms for this unit

### Aesthetics

When something looks good, i.e. good technique will mean an 'aesthetically pleasing' performance.



### Tuck

Knees to chest, knees together, point toes.



### Straddle

Legs out in v shape, point toes and keep knees straight.



### Pike

Legs out straight, point toes, ankles together.



### Twist (Half / full term)

Turn head over shoulder and bring arms up above your head as you come off the bed and turn, focus eyes in front of you as you turn.



## Trampolining Year 9



### Rules

- No jewellery.
- Remain on the cross in the middle of the bed.
- Always have **spotters** around the bed.
- One person on the bed at a time.
- Do not go underneath the trampoline.
- Do not lift the pads up so you can see the springs.
- Only use trampoline when teacher is present.

### Technique Top Tips

- Stay on the cross
- Body tension
- Extension
- Height in the air
- Pointed toes when jumping

### Key Components of Fitness

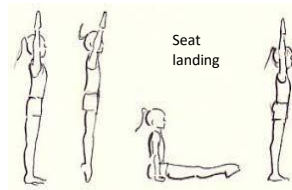
**Balance** – to be able to stay on the cross and keep control.

**Coordination** – to move body parts together at the right time and be able to link each part of a routine together smoothly.

**Flexibility** – to perform movements aesthetically by moving joints effectively each movement.

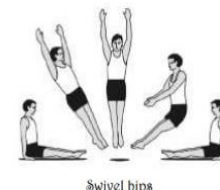
### Basic Landings

- Seat landing
- Front landing
- Back landing



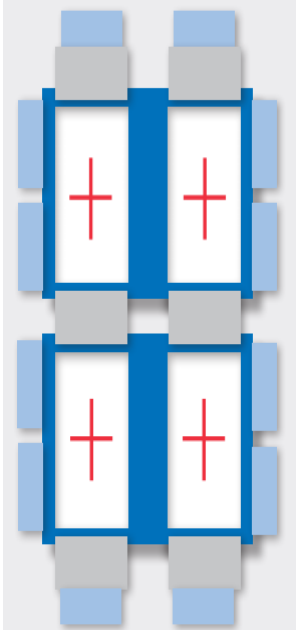
### Swivel Hips

(Seat landing  $\frac{1}{2}$  twist to seat landing to feet)



## Trampolining Safety

Draw and label the diagram below showing a safe trampolining set up.



What other rules are important to follow when in a trampolining lesson?

Explain how to stop safely when bouncing on a trampoline.

## Seat landing

Using the image below, explain the key points in a successful seat landing.



## Swivel hips

Explain how to progress from a seat landing to a swivel hips move.

**Research** the following key words and **explain** in your own words what they mean when performing a trampolining routine.

Control

Elevation

Flight

Fluency

Rotation

## Knowledge Organiser: Year 9 Trampolining

**Design a 10 bounce routine using a range of moves.**  
Think about how they link together.  
Remember, every time you touch the trampoline bed it counts as a bounce!

# Year 8 - Sp2 - Islam


Key word	Definition
<b>Tawhid</b>	The oneness/uniqueness of God.
<b>Islam</b>	Surrender or submit to the will of God.
<b>Prophet</b>	A messenger from God.
<b>Shariah</b>	Clear/straight path.
<b>Haram</b>	Not allowed.
<b>Halal</b>	Allowed.
<b>Jihad</b>	Struggle.
<b>Greater Jihad</b>	The personal inward struggle to stay on the path of God.
<b>Lesser Jihad</b>	The outward struggle to defend Islam against external threats.

**1** **Belief about God**

Muslims believe that there is a single god in the universe, and the word they use to describe this god is Allah.

Muslims think that Allah is unique. There is literally nothing like or equal to Him. This is known as the principle of **Tawhid**, or 'oneness/uniqueness'.

**Laws and Customs (Shariah Law)**




There are many laws and customs outlined in the Qur'an, that Muslims should follow.

- They must dress modestly, e.g. many Muslims wear long clothes that cover their bodies, and women wear a hijab which covers parts of their hair/face.
- Food must be halal, meaning animals must be killed in a certain way.

**Muhammad**


- Muslims believe that God sent his final message to Earth through Muhammad, 1400 years ago.
- When he was around 40 years old, Muhammad is believed to have been approached in a cave by the angel Gabriel, who sent 'revelations' from Allah.
- The messages that Muhammad received were later collected and made into the Qur'an. Muslims believe that they should follow the example set by Muhammad throughout their own lives.

**The Five Pillars of Islam**




The Five Pillars of Islam are the behaviours and beliefs by which Muslims must live their lives.

1. Shahadah: the declaration of faith: 'There is no God but Allah, and Mohammad is his messenger.'
2. Salah: the five daily prayers.
3. Zakah: Giving money to help the poor.
4. Sawm: Committing to fasting during the month of Ramadan.
5. Hajj: A religious pilgrimage to Mecca that Muslims should undertake at least once in their lives.

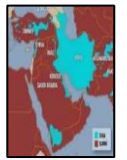


**Where do Muslims worship God?**



- Muslims pray in a building called a mosque.
- The word for mosque in Arabic is 'masjid.'
- Muslims take off their shoes before entering the mosque to pray. This is a sign of respect.
- On Fridays at noon, the most important religious service of the week is held in the mosques.

**Where do most Muslims live in the world?**



There are about 50 countries around the world in which Islam is the largest religion.

- The Arab world (the Middle East and Northern Africa) accounts for about 20% of all Muslims.
- After Christianity, Islam is the 2nd largest religion in most European countries.



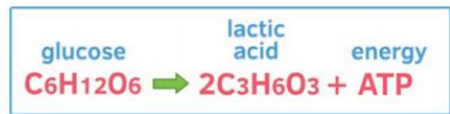


### Key words

- Respiration** is a chemical reaction which releases energy to the surroundings. It is an **exothermic** reaction which requires oxygen.

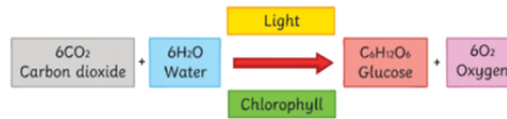


- Anaerobic respiration** occurs when there is no oxygen and occurs in the cytoplasm.

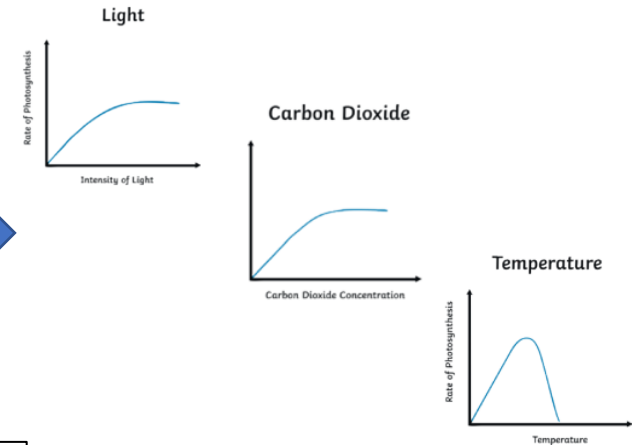


### Key Words

- Photosynthesis** is a chemical reaction in plants which converts carbon dioxide and water into glucose. It is an **endothermic** reaction as it absorbs sunlight to power it. The rate is affected by light intensity, temperature and carbon dioxide levels.



### Limiting factors



## Year 9 Spring 1 Biology

### Specialised cells

Specialised Cell	Function	Adaptation
sperm	To get the male DNA to the female DNA.	Streamlined head, long tail, lots of mitochondria to provide energy.
nerve	To send electrical impulses around the body.	Long to cover more distance. Has branched connections to connect in a network.
muscle	To contract quickly.	Long and contain lots of mitochondria for energy.
root hair	To absorb water from the soil.	A large surface area to absorb more water.
phloem	Transports substances around the plant.	Pores to allow cell sap to flow. Cells are long and joined end-to-end.
xylem	Transports water through the plant.	Hollow in the centre. Tubes are joined end-to-end.

### Cell structure

Structure	Function	Plant/animal
Cell membrane	Movement of substances in and out of cell	Both
Cytoplasm	Cell reactions	Both
Nucleus	Hold DNA	Both
Mitochondria	Site of aerobic respiration	Both
Ribosomes	Protein synthesis	Both
Cell wall	Structure and support	Plant
Permanent vacuole	Holds sap	Plant
Chloroplast	Photosynthesis	Both

### Key words

- Communicable disease** caused by a pathogen such as bacteria or virus passed from one person to another.
- Non-communicable disease** cannot be transmitted from one person to another e.g. cancer.
- Pathogens** are micro-organisms that cause disease e.g. virus, bacteria and fungi.
- Antibiotics** discovered by Fleming, these work on bacteria.
- Antibodies** produced by white blood cells to fight a pathogen.
- Vaccination** made up of dead or inactivated form of the disease – works on viruses.

### Key words

- **Oxidised** when a metal has oxygen added to form an oxide.
- **Reduced** when oxygen is removed from a metal oxide.
- **Reactivity series** the list of elements in order of their reactivity.

Metal	Reaction with cold water	Reaction with dilute acids	Reactivity
Potassium			Most reactive ↑ Least reactive
Sodium	Violent	Violent	
Lithium			
Calcium	Fast	Rapid	
Magnesium	Very slow		
(Carbon)			
Zinc	Usually no reaction	Slow	
Iron	Rusts slowly		
(Hydrogen)			
Copper	No reaction	No reaction	
Gold			

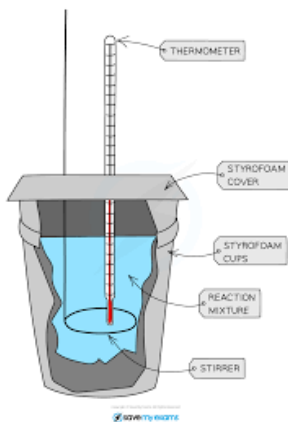
### Equations

#### Exothermic

a reaction where energy is transferred to their surroundings.

#### Endothermic

a reaction where energy is transferred from their surroundings.



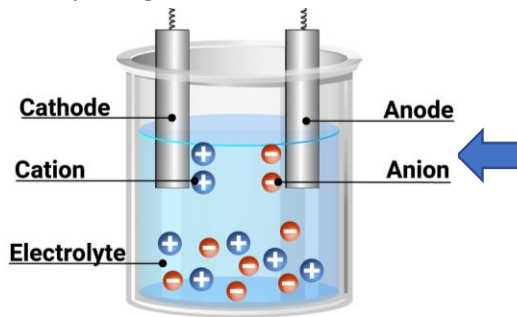
### Key Words

- **Displacement reaction** when a more reactive metal displaces a less reactive metal from its aqueous solution. (see reactivity series).
- **Salts** whenever a reaction takes place between a metal and an acid a salt is formed.
- **Metal ore** the rock a metal is extracted from.
- **Neutralisation** when an acid reacts with a base, producing a salt and water.

## Year 9 Spring 1 Chemistry

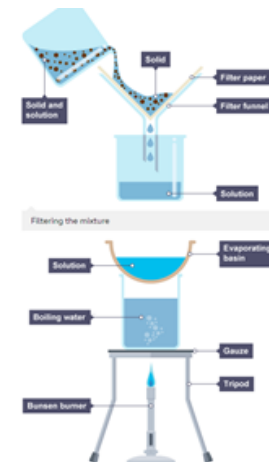
### Key words

- **Electrolysis** breaks down a substance using electricity.
- **Anode** the positive electrode which attracts the negatively charged ions.
- **Cathode** the negative terminal that attracts positively charged ions.



### Making Salts

1. **Make a solution**
2. **Filter solution**
3. **Heat solution**
4. **Leave to evaporate**



### pH



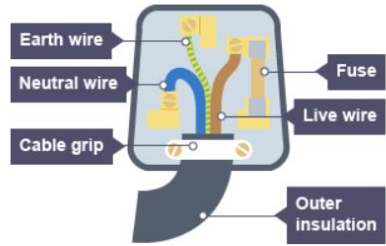
- **Acids** substances that produce  $H^+$  (aq) ions when they add them to water.
- **Bases** are substances that will neutralise acids.
- **Alkali** is a soluble hydroxide, it produces  $OH^-$  (aq) ions when added to water.
- **Neutral** pure water is neutral as it is neither acid nor alkali (pH 7).

## Key words

**Direct current** (dc) current that travels in only one direction.

**Alternating current** (ac) current that repeatedly reverses its direction.

**Plug**



key woras

## Key equations

### Calculating power

$$\text{power} = \text{current} \times \text{potential difference}$$

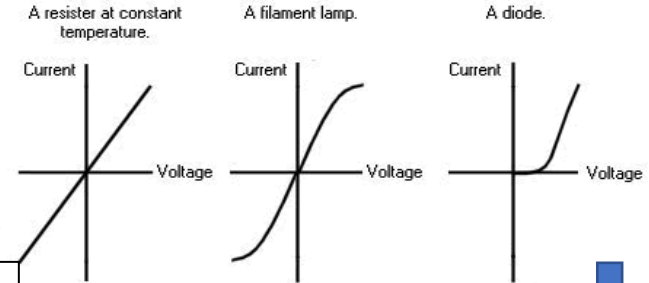
### Resistance heating

$$\text{power} = \text{current}^2 \times \text{resistance}$$

carriers in a circuit.

## Current potential difference graphs

**Potential difference** (or voltage) of a supply is a measure of the energy given to the charge carriers in a circuit.

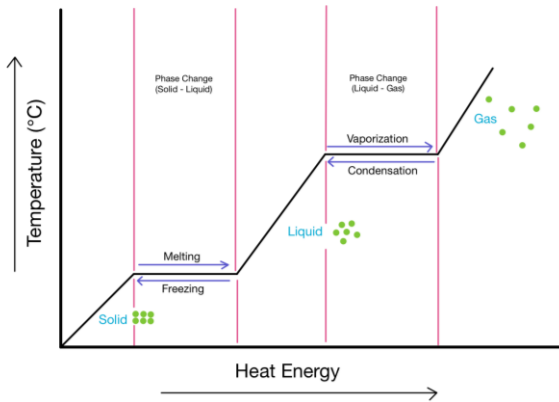


Year 9 Physics Spring 1

## Key Words

## Key Words

**Density** mass per unit volume of a substance.

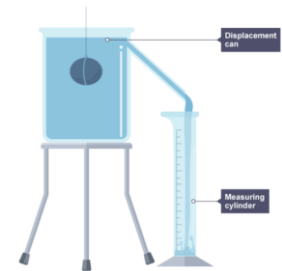


- **Melting point** the temperature at which a solid will change to a liquid.
- **Boiling point** the temperature at which a liquid will change to a gas.
- **Freezing point** the temperature at which a liquid changes to a solid.

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

Use a displacement can to measure a solids Volume.

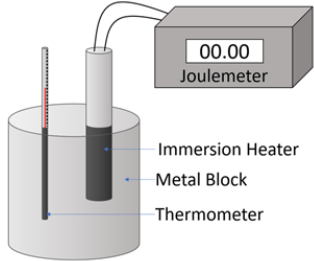
Use scales to measure the mass.



### Key words

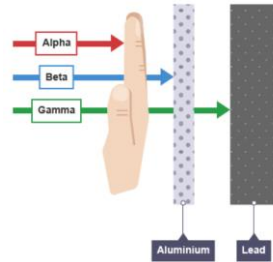
**Specific latent heat** of a substance is the energy needed to change the state of 1kg of the substance without changing its temperature.

**Specific latent heat of fusion** =  $\frac{\text{energy (joules, J)}}{\text{mass (kg)}}$



### Notes

### Key words



**Atomic number (or proton number)** of a nucleus is the number of protons in it.

**Mass number** of a nucleus is the number of protons plus neutrons in it.

**Isotopes** are atoms of the same elements with different numbers of neutrons.

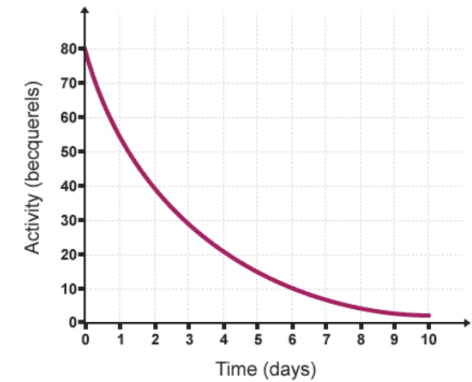
**Year 9 Physics Spring 1**

### Key Word

### Key words

- **Ionisation** when atoms become charged because they lose electrons.
- **Irradiated** when an object is exposed to ionising radiation.
- **Half-life** the average time taken for the number of nuclei of the isotope in a sample to halve.

### Half-life graph

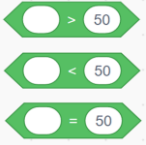

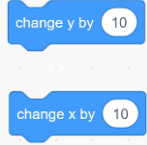
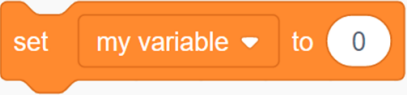
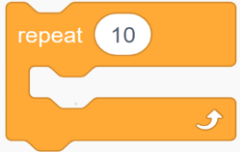

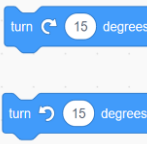
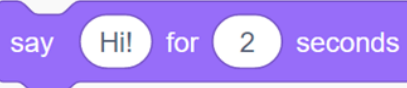


# Computing

<b>Sequence</b>	One of the three basic programming constructs. Instructions that are carried one after the other in order.
<b>Selection</b>	One of the three basic programming constructs. Instructions that can evaluate a Boolean expression and branch off to one or more alternative paths.
<b>Iteration</b>	One of the three basic programming constructs. A selection of code that can be repeated either a set number of times (count-controlled) or a variable number of times based on the evaluation of a Boolean expression (condition-controlled).
<b>Variable</b>	A value that can change depending on conditions or information passed to the program.

<b>Boolean expression</b>	An algebraic expression which has a Boolean value.
<b>Comparison operator</b>	Used to compare two expressions.
<b>Computer bug</b>	Code that causes your computer to behave in an unexpected way.
<b>Resilience</b>	The capacity to recover quickly from difficulties.
<b>Subroutine</b>	A block of code within a program that is given a unique, identifiable name. Supports code reuse and good programming technique.

## Computing:

			
<p>Comparison operators. Used to make a comparison between two values or variables.</p>	<p>Runs the code in the block if the condition is true.</p>	<p>Used to move the sprite by a certain distance along the x or y axis.</p>	<p>Used to set the value of a variable.</p>
			
<p>Count-controlled iteration - code inside the block repeats a set number of times.</p>	<p>Infinite iteration - repeats the code inside the block until the program is stopped by the user.</p>	<p>Rotates the sprite clockwise or anti-clockwise by a certain distance.</p>	<p>Causes the sprite to say a message for a certain amount of time.</p>



**The Eatwell Guide**

- Comprises 5 main food groups.
- Is suitable for most people over 2 years of age.
- Shows the proportions in which different groups of foods are needed in order to have a well-balanced and healthy diet.
- Shows proportions representative of food eaten over a day or more.

**8 tips for healthier eating**

These eight practical tips cover the basics of healthy eating and can help you make healthier choices.

1. Base your meals on starchy carbohydrates.
2. Eat lots of fruit and veg.
3. Eat more fish – including a portion of oily fish.
4. Cut down on saturated fat and sugar.
5. Eat less salt (max. 6g a day for adults).
6. Get active and be a healthy weight.
7. Don't get thirsty.
8. Don't skip breakfast.

**Composite/combination food**

Much of the food people eat is in the form of dishes or meals with more than one kind of food component in them. For example, pizzas, casseroles, spaghetti Bolognese and sandwiches are all made with ingredients from more than one food group. These are often called 'combination' or 'composite' foods.



**Fruit and vegetables**

- This group should make up just over a third of the food eaten each day.
- Aim to eat at least five portions of a variety each day.
- Choose from fresh, frozen, canned, dried or juiced.
- A portion is around 80g (3 heaped tbs).
- 30g of dried fruit or 150ml glass of fruit juice or smoothie count as a max of 1 portion each day.

**Beans, pulses, fish, eggs, meat and other protein**

Sources of protein, vitamins and minerals.

Recommendations include to aim for at least two portions of fish a week, one oily, and people who eat more than 90g/day of red or processed meat, Should cut down to no more than 70g/day.

**Hydration**

Aim to drink 6-8 glasses of fluid every day. Water, lower fat milk and sugar-free drinks including tea and coffee all count.

Fruit juice and smoothies also count but should be limited to no more than a combined total of 150ml per day.

**Potatoes, bread, rice, pasta or other starchy carbohydrates**

- Base meals around starchy carbohydrate food.
- This group should make up just over a third of the diet.
- Choose higher-fibre, wholegrain varieties.

**Oil and spreads**

Unsaturated fats are healthier fats that are usually from plant sources and in liquid form as oil, e.g. olive oil.

Generally, people are eating too much saturated fat and need to reduce consumption.

**Dairy and alternatives**

Good sources of protein and vitamins. An important source of calcium, which helps to keep bones strong.

Should go for lower fat and lower sugar products where possible.

**Foods high fat, salt and sugar**

- Includes products such as chocolate, cakes, biscuits, full-sugar soft drinks, butter and ice cream.
- Are high in fat, sugar and energy and are not needed in the diet.
- If included, should be had infrequently and in small amounts.

**Fibre**

- Dietary fibre is a type of carbohydrate found in plant foods.
- Food examples include wholegrain cereals and cereal products; oats; beans; lentils; fruit; vegetables; nuts and seeds.
- Dietary fibre helps to reduce the risk of heart disease, diabetes and some cancers; help weight control; bulk up stools; prevent constipation; improve gut health.
- The recommended average intake for dietary fibre is 30g per day for adults.

**Key terms**

**The Eatwell Guide:** A healthy eating model showing the types and proportions of foods needed in the diet.

**Hydration:** The process of replacing water in the body.

**Dietary fibre:** A type of carbohydrate found in plant foods.

**Composite/combination food:** Food made with ingredients from more than one food group.



