

# Buckler's Mead Academy

## Knowledge Organiser

### Year 9

### Autumn 2022

"In a time of turbulence and change, it is more true than ever that knowledge is power"

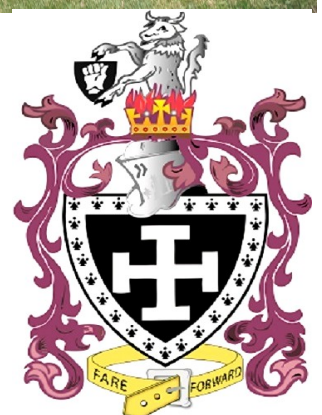
John F Kennedy

***Inspiring Education for All***

**Name:**

**Tutor:**

***Ready, Responsible, Respect***



## Homework Timetable

	Week A	Week B
Monday		
Tuesday		
Wednesday		
Thursday		

# Your Knowledge Organiser

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## How to Use Your Knowledge Organiser

### Self –Quizzing

Your Knowledge Organiser contains all of the key information you need to know for each subject area.

Your Knowledge Organiser will allow you to revise this key information and make sure it is stored in your long-term memory

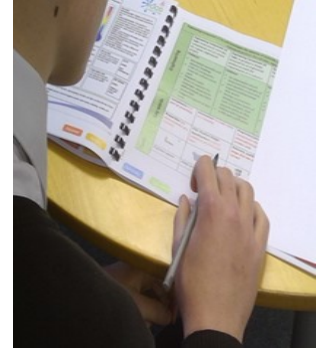
The best way to use this resource is by self-quizzing.

**“look, cover, write and check”**



# Look, Cover, Write, Check, Correct

**First**, look through and read the information on a section of your Knowledge Organiser.



**Then**, cover the section so you can no longer see the information.

**Next**, try and **write out** the key definitions or facts that you need to know.



**Now**, uncover the section of your Knowledge Organiser and check how correct you were.

**Finally**, correct anything that you wrote down that was incorrect in **purple**.

# Knowledge Quiz

You teacher will quiz you on your Knowledge  
Organiser during the term .

Record your score from each quiz in the  
mark box.

Quiz 1					
Quiz 2					
Quiz 3					

Quiz 1					
Quiz 2					
Quiz 3					

Quiz 1					
Quiz 2					
Quiz 3					

## Art Technique Key Words

Media/Medium	The materials and tools used by an artist to create a piece of art
Technique	The way an artist uses tools and materials to create a piece of art
Composition	Where you place objects on the page
Highlight	The bright or reflective area on an object or piece of art
Shadow/shade	The darker areas within a piece of art or object
Proportion	The size relationship between different parts - eg height compared to width

## LINE

the path left by a moving point, e.g. a pencil or a brush dipped in paint. It can take many forms, e.g. horizontal, diagonal or curved.

## tone

means the lightness or darkness of something. This could be a shade or how dark or light a colour appears

## TEXTURE

the surface quality of something, the way something feels or looks like it feels. There are two types: Actual and Visual

## SHAPE

an area enclosed by a line. It could be just an outline or it could be shaded in.

## PATTERN

a design that is created by repeating lines, shapes, tones or colours.  
can be manmade, like a design on fabric, or natural, such as the markings on animal fur.

## COLOUR

There are 2 types including Primary and Secondary. By mixing any two Primary together we get a Secondary

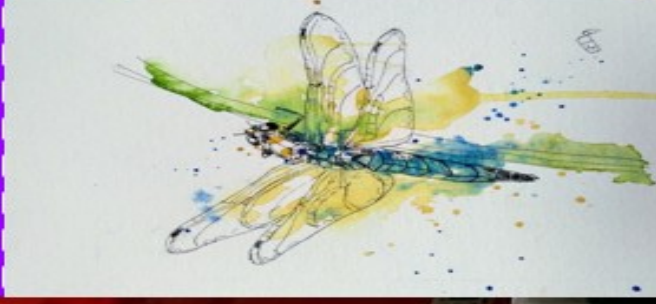
## Materials & Techniques

### Coloured Pencil



### Blending

### Pen and Ink



### Line & Wash

### Pencil & Pen



### Hatching & Cross hatching

Design Keyword: Pattern, repeat, half drop repeat, texture, surface.



# Computing

## Year 9 Legal and Ethical Knowledge Organiser

### Legislation

**Data Protection Act** - law that controls how you personal information is used by companies, organisations or the government.

**Computer Misuse Act** - law that secures computer material against unauthorised access or modification.

**Health & Safety at Work Act** - law that covers occupational health and safety.

**Copyright, Designs and Patents Act** - gives the creators of literary, dramatic, musical and artistic works the right to control how their content is used.

### Ethics

**Machine Learning** - an automatic method of data analysis.

**Copyright** - the owners rules about how their work is used.

**Copyright Infringement** - works that are copyrighted are used without permission.

**Hacking** - breaking into a computer network or system illegally

**AI** - Artificial Intelligence

**Net Neutrality** - concept that all data on the internet should be treated equally.

**Patent** - prevents others from copying or selling an invention.

### Keywords/Key Terms

**Legislation** - laws that are created for a particular reason or purpose.

**Data** - facts and statistics that are collated together for reference of analysis.

**Password** - a string of characters that allow access to a computer system or service.

**Ethics** - considering whether something is "right" or "wrong".

**Encryption** - a method of converting information into secret code.

**Environment** - the surroundings or conditions that a person lives or operates within.

**Open Source Software** - software that can be changed.

**Proprietary** - software that cannot be changed.

**CCL** - Creative Commons License

**Lawful** - actions that are within the law.

### Environmental

**E-Waste** - Electronic waste- includes anything with a battery, plug, cords or electrical part.

**Recycling** - the process of converting waste into new materials or objects.

**Environmental Impact** - how the environment is affected by an action or event.

Community

Opportunity

"Inspiring Education for All"

Enjoyment

Success

Ambition



## The Eatwell Guide



### 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.

### 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.

### 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.

To find out more, go to:  
<https://bit.ly/2QzUMfe>

### 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.

### 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.

### 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.

### 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.

### 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.

### Hydration

- Aim to drink 8-8 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.

### 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.

### 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.



### 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.

Meals and snacks can be sorted into The Eatwell Guide food groups.

### Composite/combination food - Lasagne



Pasta (lasagne sheets); Potatoes, bread, rice, pasta or other starchy carbohydrates

Onions, garlic and chopped tomatoes: Fruit and vegetables

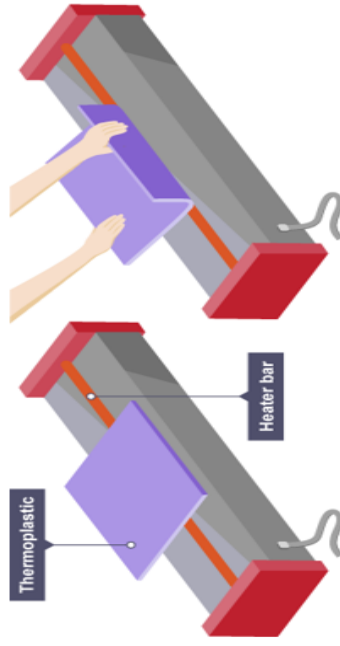
Lean minced meat (or meat substitute): Beans, pulses, fish, eggs, meat and other protein –

Cheese sauce made with milk and cheese: Dairy and alternatives

Olive/vegetable oil used to cook onions and mince: Oil and spreads

# Design & Technology

Design Considerations	Thermoplastic	Advantages of laser cutting	Disadvantages of laser cutting
<b>Aesthetics</b> - What does it look like - colour/texture/shape?	<b>Acrylic</b> - This is the most common plastic in a school workshop. It is purchased usually in the form of sheets and comes in a range of colours. It is resistant to most acids and weather conditions.	Precise and accurate	Equipment is expensive, as is maintenance
<b>Ergonomics</b> - Using anthropometric data to ensure the product and users fit together well.	<b>Polythene</b> - Can be moulded into almost any form due to its excellent moulding qualities. Used for the production of bottles, bowls, toys, tube etc.	Can cut complex shapes	Training is needed
<b>Environment</b> - Considering the impact of the product on the environment from material extraction to end-use	<b>Thermosetting</b>	Engraves and cuts	Ventilation is needed
<b>Materials</b> - What material/s is it made out of? Why?	<b>Melamine Formaldehyde</b> - Used in the production of plastic laminates because of its smooth surface and hygienic qualities. Also used in electrical plugs and sockets because it can be cast and it is an excellent insulator.	Leaves a smooth edge	
<b>Function</b> - What is the purpose of the product? What does it do? How does it do this?	<b>Urea Formaldehyde (UF)</b> - Has physical properties of high hardness and high toughness, making it suitable for strong, knock-resistant electrical fittings. It is also scratch resistant and a very good electrical insulator, making electrical fittings manufactured from this polymer safe to use.	Time efficient	
		<b>Advantages of 3D printing</b>	<b>Disadvantages of 3D printing</b>
		No moulds or formers are needed	Equipment is expensive, as is maintenance
		Alterations can be made to the design digitally before wasting materials	Training is needed
		It uses hardwearing, durable, waterproof and lightweight plastics	Can only use plastics
		Can create complex shapes	The layering process is slow



## Bending plastics

A line bender has a heated element that provides heat, concentrated to just a few millimetres wide, along the length of the long machine. These are used to heat polymers along this line so that they can be bent. Once the polymer softens, it will bend easily into shape around a former before being left to cool. It is a fast and easy process but can only form basic shapes. Heated polymers can be placed in a cooling jig so that the bend produced is the same each time.

There are two types of polymers...

- Thermoplastics** - also known as thermoforming
  - these are types of plastics that are formed by heat and can be reformed
- Thermosetting** - plastics that once formed or set, cannot be reheated and reformed. If you heat them they either catch fire or go into a blob. They can be recycled by chopping them up and by pushing the pieces together by press forming into sheets

# Drama

## Knowledge & Understanding:

**Verbatim:** is a form of documentary theatre in which plays are constructed from the precise words spoken by people interviewed about a particular event or topic.

**Acting for the Screen, acting for the Stage.**


**Creative Intentions:** your creative vision for your work.

**Roles & Responsibilities in Theatre:** Roles such as director; actor; designer; writer; dancer; singer; choreographer.

**Classical Acting Technique:** an umbrella term for different acting techniques used together. It encompasses the use of the whole body, the full range and quality of the voice, the actor's imagination, the actor's ability to personalize, improvise, use external stimuli, and **analyse scripts**.

**Method Acting Technique:** describes a range of **training and rehearsal techniques** that seek to encourage sincere and emotionally expressive performances.

**Proscenium Stage**  
**Traverse Stage**  
**Theatre-in-the-Round**  
**Promenade Theatre**  
**Thrust Stage**



**Fourth wall:** a performance convention in which an invisible, imagined wall separates actors from the audience.

**Proximity:** How close or far you are from your co-performers can be a source of very powerful impact. For example, the threatening gangster who speaks to his victim from perhaps a couple of inches.

**Cross-Cutting:** two or more scenes are performed on stage at the same time.

**Narration and Narrating:** a technique whereby one or more performers speak directly to the audience to tell a story, give information.

**Still Image/freeze frame:** It is like pressing the pause button on a remote control, taking a photo, or making a statue.

**Style and Form:** the methods used to tell a story i.e. mime or physical theatre.

**Non-Naturalistic:** where no-one is pretending that what is happening on stage is realistic. Non-naturalistic techniques include slow motion & Soundscape

**Physical Theatre:** theatre which emphasizes the use of physical movement, as in dance and mime, for expression.

**Symbolism:** Symbolism in terms of theatre can be done with colour, movement, characters, props, and costumes.

**Naturalism:** theatre that attempts to create an illusion of reality through a range of dramatic and theatrical strategies.

**Thought-Tracking:** Speaking aloud the thoughts or feelings of a character in a freeze-frame.

**Voice-Over:** Narration heard over what is seen on stage.

**Mime:** Action without words  
**Physical Theatre:** Theatre which emphasizes the use of physical movement for expression.  
**Suspension of disbelief:** Logically you understand that the drama is not real but you override this reaction and believe in it anyway.  
**Empathy:** The ability to understand and share the feelings of another.  
**Character:** Playing someone different from yourself. A person in a novel, play or film.  
**Character Motivation:** the reason behind a character's behaviours and actions.  
**Stereotype:** a widely held but fixed and oversimplified image or idea of a particular type of person or thing.  
**Cliché:** overused and unoriginal.  
**Spontaneous Improvisation:** completely unplanned  
**Polished Improvisation:** refinement through rehearsal, of characters, scenarios, and dialogue without a script.  
**Genre:** A style or category of drama.  
**Proscenium Stage:** Where curtains are used to separate the stage and the audience.  
**Blocking:** Where an actor stands in front of another actor and blocks the audiences view.  
*It also means when the Director organises the precise movement of actors on a stage.*  
**Profile:** to stand side on to the audience so that they see the side and not the front of your face.  
**Rapport:** a close and harmonious relationship in which the people or groups concerned understand each other's feelings or ideas and communicate well with each other.  
*It is when the performers 'connect and communicate' with an audience and the audience are interested in and engaged with the performance.*  
**Script:** The written text of a play, film, or broadcast.  
**Stage Direction:** an INSTRUCTION in italics and often found in brackets.  
**Monologue:** a long speech by one actor in a play or film  
**Duologue:** speaking roles for only two actors.  
**Narration:** Explaining the action in a play.  
**Teacher in role:** Teacher playing a character.  
**Writing in role:** Writing as a character.  
**Hot seating:** a character or characters, played by the teacher or a student, interviewed by the rest of the group.  
**Role on the wall:** The outline of a body is drawn. Words or phrases describing the CHARACTER are then written directly onto the drawing or stuck on with post-its.



English

Noughts and Crosses Knowledge Organiser	
Key Vocabulary and Definitions	
<b>Etymology</b> (OE: Old English, F: French, L: Latin, G: Germanic, AG: Ancient Greek, N: Norse)	
Racism	The belief that different races possess distinct characteristics, especially so as to distinguish them as inferior or superior to one another. 1930s, the Nazi's decided race was a 'given unit of value'
Prejudice	Opinion not based on reason or actual experience L: praee: in advance judicium: judgement
Dystopia	A state or society in which there is great suffering or injustice, typically one that is totalitarian or post-apocalyptic. AG: Dis: bad, Utopia: heaven
Tragic	Causing or characterized by extreme distress or sorrow. AG: Tragos: goat, Ode: song
Prologue	Used to give readers extra information that advances the plot AG: Pro: before, logos: saying
Eias	Prejudice for or against one person or group, especially in a way considered to be unfair AG: Epikaristos, oblique line
Militia	A military force that engages in rebel or terrorist activities in opposition to a regular army L: milit: soldier
Liberation	The action of setting someone free from imprisonment, slavery, or oppression: release. L: Liberatio: freeing
Hypocrite	A person who pretends to have virtues, moral or religious beliefs, principles, that he or she does not actually possess, especially a person whose actions belie stated beliefs. AG: Hypokrites: actor
Equality	The state of being equal, especially in status, rights, or opportunities. L: Aequalis: level
Superior	Higher in rank, status, or quality. L: Super, above
Inferior	Lower in rank, status, or quality. L: Inferus, low

Terminology	
Dual narrative	A dual narrative is a narrative that tells a story in two different perspectives, usually two different people. Dual narrative is also an effective technique that can be used to tell the story of people (or one person) at two different points in time.
Euphemism	A mild or indirect word or expression substituted for one considered to be too harsh or blunt when referring to something unpleasant or embarrassing.
Simile	The comparison of one thing with another thing of a different kind, used to make a description more vivid (e.g. as brave as a lion).
Metaphor	A thing regarded as representative or symbolic of something else.
Perspective	A particular attitude towards or way of regarding something; a point of view.
Foreshadow	Be a warning or indication of (a future event).
Tension	The feeling of anxiety or fear in a reader or character.
Mood/ Atmosphere	The feeling that a text or chapter has.
Protagonist	The leading character or one of the major characters in a play, film, novel, etc.

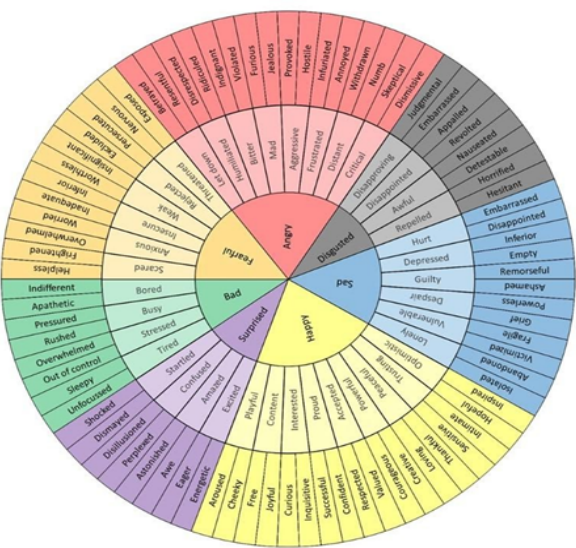
<b>Roots and Stems</b>
Pre — before
Dys — bad
Equ — equal

<b>Themes</b>
Racism
Terrorism
Justice
Heroes
Forbidden love
Tragic love

Context
Noughts and Crosses is the first in a series of novels about an alternative present, where people of African descent, rather than European, are the dominant race. White people (known as "noughts") were long the slaves of black people (known as "Crosses"). They are now free, but still heavily discriminated against. Sephy, a Cross, and Callum, a nought, are best friends, but the world seems determined to keep them apart. By reversing the racism seen in the real world, Blackman is able to hold up a mirror to the unfairness and absurdity of judging people by the colour of their skin.

<b>Spellings:</b>
Many words in English end in either -ious or -eous and it can be hard to know which ending to choose. <b>Most</b> words that have a 'sh' sound just before the ending are spelt <b>-ious</b> .  ambitious; previous; curious; anxious; delicious; rebellious; religious; serious; envious; superstitious; notorious; glorious; conscious; various; hilarious; ferocious; obvious; studious; tedious; victorious.

SPaG Focus	
Nouns	a word (other than a pronoun) used to identify any of a class of people, places, or things ( common noun ), or to name a particular one of these ( proper noun )
Verbs	a word used to describe an action, state, or occurrence, and forming the main part of the predicate of a sentence, such as hear, become, happen.
Adjectives	a word naming an attribute of a noun, such as sweet, red, or technical.
Adverbs	a word or phrase that expresses how the verb is being done.
Syllables	A part of a word that contains a single vowel sound and that is pronounced as a unit. So, for example, 'book' has one syllable, and 'reading' has two syllables.
Inflection	'inflection' comes from the Latin 'inflectere', meaning 'to bend'. It is a process of word formation in which letters are added to the base form of a noun, adjective or verb to show a different grammatical meaning. Inflections show grammatical categories such as tense, person or number of.
Apostrophe for possession	Apostrophes for possession: an apostrophe and the letter 's' are used to show possession. The apostrophe is placed either before the 's' or after the 's', depending on whether the subject is singular or plural.
Apostrophe for omission	Apostrophes because of omission are used when two words are contracted into one, for example: "it's" for "it is".





# Geography

Global pattern of air circulation			Changing pattern of Tropical Storms		
Atmospheric circulation is the large-scale movement of air by which heat is distributed on the surface of the Earth.			Scientist believe that global warming is having an impact on the frequency and strength of tropical storms. This may be due to an increase in ocean temperatures.		
Hadley cell	Largest cell which extends from the Equator to between 30° to 40° north & south.		Management of Tropical Storms		
Ferrell cell	Middle cell where air flows poleward between 60° & 70° latitude.		Protection	Aid	
Polar cell	Smallest & weakest cell that occurs from the poles to the Ferrell cell.		Development	Planning	
Distribution of Tropical Storms.			Primary Effects of Tropical Storms		
They are known by many names, including hurricanes (North America), cyclones (India) and typhoons (Japan and East Asia). They all occur in a band that lies roughly 5-15° either side of the Equator.			Prediction	Education	
			Secondary Effects of Tropical Storms		
Formation of Tropical Storms			Case Study: Typhoon Haiyan 2013		
1	The sun's rays heats large areas of ocean in the summer and autumn. This causes warm, moist air to rise over the particular spots		People are left homeless, which can cause distress, poverty and ill health due to lack of shelter.		
2	Once the temperature is 27°, the rising warm moist air leads to a low pressure. This eventually turns into a thunderstorm. This causes air to be sucked in from the trade winds.		Shortage of clean water and lack of proper sanitation makes it easier for diseases to spread.		
3	With trade winds blowing in the opposite direction and the rotation of earth involved (Coriolis effect), the thunderstorm will eventually start to spin.		Businesses are damaged or destroyed causing employment.		
4	When the storm begins to spin faster than 74mph, a tropical storm (such as a hurricane) is officially born.		Shortage of food as crops are damaged.		
5	With the tropical storm growing in power, more cool air sinks in the centre of the storm, creating calm, clear condition called the eye of the storm.		Causes		
6	When the tropical storm hits land, it loses its energy source (the warm ocean) and it begins to lose strength. Eventually it will 'blow itself out'.		Started as a tropical depression on 2 <sup>nd</sup> November 2013 and gained strength. Became a Category 5 "super typhoon" and made landfall on the Pacific Islands of the Philippines.		
Effects			Management		
<ul style="list-style-type: none"><li>Almost 6,500 deaths.</li><li>130,000 homes destroyed.</li><li>Water and sewage systems destroyed had caused diseases.</li><li>Emotional grief for dead.</li></ul>			<ul style="list-style-type: none"><li>The UN raised £190m in aid.</li><li>USA &amp; UK sent helicopter carrier ships deliver aid remote areas.</li><li>Education on typhoon preparedness.</li></ul>		

ty	Opportunity	Inspiring Education for All	Enjoyment	Success	Ambition
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Community

Opportunity

"Inspiring Education for All"





Enjoyment

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# Geography

Sustainable Urban Living		Traffic Management	
Sustainable urban living means being able to live in cities in ways that do not pollute the environment and using resources in ways that ensure future generations also can use them.		Urban areas are busy places with many people travelling by different modes of transport. This has caused urban areas to experience different traffic congestion that can lead to various problems.	
Water Conservation	Energy Conservation	Environmental problems	
<p>This is about reducing the amount of water used.</p> <ul style="list-style-type: none"> <li>Collecting rainwater for gardens and flushing toilets.</li> <li>Installing water meters and toilets that flush less water.</li> <li>Educating people on using less water.</li> </ul>	<p>Using less fossil fuels can reduce the rate of climate change.</p> <ul style="list-style-type: none"> <li>Promoting renewable energy sources.</li> <li>Making homes more energy efficient.</li> <li>Encouraging people to use energy.</li> </ul>	<ul style="list-style-type: none"> <li>Traffic increases air pollution which releases greenhouse gases that is leading to climate change.</li> </ul>	
Creating Green Space	Waste Recycling	Economic problems	
<p>Creating green spaces in urban areas can improve places for people who want to live there.</p> <ul style="list-style-type: none"> <li>Provide natural cooler areas for people to relax in.</li> <li>Encourages people to exercise.</li> <li>Reduces the risk of flooding from surface runoff.</li> </ul>	<p>More recycling means fewer resources are used. Less waste reduces the amount that eventually goes to landfill.</p> <ul style="list-style-type: none"> <li>Collection of household waste.</li> <li>More local recycling facilities.</li> <li>Greater awareness of the benefits in recycling.</li> </ul>	<ul style="list-style-type: none"> <li>Congestion can make people late for work and business deliveries take longer. This can cause companies to lose money.</li> </ul>	<p>Social Problems</p> <ul style="list-style-type: none"> <li>There is a greater risk of accidents and congestion is a cause of frustration. Traffic can also lead to health issues for pedestrians.</li> </ul>
Sustainable Urban Living Example: Freiburg		Congestion Solutions	
Background & Location	Sustainable Strategies	 	
<p>Freiburg is in west Germany. The city has a population of about 220,000. In 1970 it set the goal of focusing on social, economic and environmental sustainability.</p>	<ul style="list-style-type: none"> <li>The city's waste water allows for rainwater to be retained.</li> <li>The use of sustainable energy such as solar and wind is becoming more important.</li> <li>40% of the city is forested with many open spaces for recreation, clean air and reducing flood risk.</li> </ul>	<ul style="list-style-type: none"> <li>Widen roads to allow more traffic to flow easily.</li> <li>Build ring roads and bypasses to keep through traffic out of city centres.</li> <li>Introduce park and ride schemes to reduce car use.</li> <li>Encourage car-sharing schemes in work places.</li> <li>Have public transport, cycle lanes &amp; cycle hire schemes.</li> <li>Having congestion charges discourages drivers from entering the busy city centres.</li> </ul>	
Urban Sustainability		Traffic Management Example: Bristol	
Integrated Transport System	Greenbelt Area	<p>In 2012 Bristol was the most congested city in the UK. Now the city aims to develop it's integrated transport system to encourage more people to use the public transport. The city has also invested in cycle routes and hiring schemes.</p> 	
<p>This is the linking of different forms of public and private transport within a city and the surrounding area.</p>	<p>This is a zone of land surrounding a city where new building is strictly controlled to try to prevent cities growing too much and too fast.</p>		
Brownfield Site	Urban Regeneration		
<p>Brownfield sites is an area of land or premises that has been previously used, but has subsequently become vacant, derelict or contaminated.</p>	<p>The investment in the revival of old, urban areas by either improving what is there or clearing it away and rebuilding.</p>		

Community

Opportunity

"Inspiring Education for All"








Enjoyment

Success

Ambition













# History

ALLIED POWERS			CENTRAL POWERS		
Country	Date Joined	Death Toll	Country	Date Joined	Death Toll
FRANCE 	3 <sup>rd</sup> Aug, 1914	approx. 1,700,000 4.3% of population in 1914	GERMAN EMPIRE 	1 <sup>st</sup> Aug, 1914	approx. 2,500,000 4% of population in 1914
BRITISH EMPIRE 	4 <sup>th</sup> Aug, 1914	approx. 900,000 2% of population in 1914	AUSTRIA-HUNGARY 	28 <sup>th</sup> Jul, 1914	approx. 1,900,000 3.7% of population in 1914
RUSSIA 	1 <sup>st</sup> Aug, 1914	approx. 3,100,000 13.7% of population in 1914	OTTOMAN EMPIRE 	31 <sup>st</sup> Oct, 1914	approx. 3,000,000 14% of population in 1914
USA 	6 <sup>th</sup> Apr, 1917	117,466 0.13% of population in 1914	BULGARIA 	12 <sup>th</sup> Oct, 1915	187,500 3.4% of population in 1914

## Key People

<p><b>Archduke Franz Ferdinand</b> – (1863-1914) was a high-ranking member of the Habsburg Dynasty, who was the presumed heir to the Austro-Hungarian throne. As was customary of Habsburg men, he had begun his military career young (aged just 12). He rose through the ranks quickly, becoming inspector general of the armed forces in 1913. This role brought him to Sarajevo in 1914, where he was assassinated alongside his wife, Sophie. The perpetrator was Gavrilo Princip, a member of the Serbian Black Hand secret society. Austria-Hungary's subsequent declaration of war on Serbia prompted a chain of events that led to World War I.</p> 	<p><b>Kaiser Wilhelm II</b> – (1859-1941) was the last German Emperor (Kaiser), reigning between 15<sup>th</sup> June 1888 until 9<sup>th</sup> November 1918. Wilhelm was a grandchild of Queen Victoria, and was related to many of the monarchs of Europe, including George V of the UK and Nicholas II of Russia. His support for Austria-Hungary in the crisis of July 1914 was a leading factor in the outbreak of World War I. Many sources suggest that he was not respected as a leader, and as a result, his two leading generals, Paul von Hindenburg and Erich Ludendorff, dictated most of German policy and strategy during the war. He abdicated in 1918, and fled to the Netherlands.</p> 
<p><b>Woodrow Wilson</b> – (1856-1924) was the 28<sup>th</sup> President of the United States, serving between 1913 and 1921. At the outbreak of World War I, in 1914, the US was neutral, but remained an important supplier to Great Britain and the Allies. However, after 2 1/2 years of war, America declared war on Germany on 6<sup>th</sup> April 1917, after Germany continued to attack neutral boats and ships. In early 1918, Wilson gave his outline of 14 points that he thought would bring lasting peace. This influenced the eventual Treaty of Versailles. He received the 1919 Nobel Peace Prize for his efforts.</p> 	<p><b>David Lloyd George</b> – (1863-1945) was the Prime Minister of the United Kingdom throughout the latter part of the war effort, and in the years following the war. He was integral to reorganising the Allied military strategy to work more cohesively under one commander. Lloyd George also played an important role after the war, being one of the 'Big Three' (alongside the leaders of France and the US) to negotiate the Treaty of Versailles with Germany. He represented the halfway point between the harsh demands of Clemenceau and the more lenient requests of Wilson.</p> 
<p><b>Tsar Nicholas II</b> – (1868-1918) was the last Emperor of Russia, ruling from 1894 until his forced abdication on 2<sup>nd</sup> March 1917. Throughout his reign, Russia fell from being one of the foremost great powers of the world, to economic and military collapse. These factors, coupled with the perception of Nicholas' weak leadership, led to the events of the Russian Revolution, Nicholas' abdication, and his eventual execution. The Russians' catastrophic losses forced them to leave the war effort before the end of the war, with Russia eventually becoming a part of the communist Soviet Union.</p> 	<p><b>Wilfred Owen</b> – (1893-1918) Wilfred Edward Salter Owen was a British poet and soldier. He was one of the most prominent World War I poets, detailing the horrors of trench warfare in a similar style to his mentor, Siegfried Sassoon. His poetry brought a sense of realism to public perceptions of war, in stark contrast to the earlier works of poets such as Rupert Brooke. He composed almost all of his poetry in just over a year, from August 1917 to September 1918. Among the most famous are <i>Dulce et Decorum est</i> and <i>Anthem for Doomed Youth</i>. He was killed one week before the end of the war.</p> 

Event	Image	Description	Date/s
<b>Entangling Alliances</b>		In the early 20 <sup>th</sup> Century, there was no one dominating European countries. Consequently, each of the most powerful countries moved to make alliances with one another. Military defensive pacts were held between the allied powers of France, Great Britain, Russia and others, whilst an opposing central alliance was formed including Germany and Austria-Hungary.	1879-1914
<b>Assassination of Archduke Franz Ferdinand</b>		Archduke Franz Ferdinand, the heir to the Austro-Hungarian throne, and his wife Sophie, were assassinated by Gavrilo Princip, a member of the Serbian Black Hand Society. The aim of the assassination was to make the South Slav provinces a part of Yugoslavia.	28 <sup>th</sup> June 1914
<b>July Crisis</b>		After Serbia's failure to make amends for the assassination, Austria-Hungary declared war on them. Russia (in pact with Serbia) declares war on Austria-Hungary, before Germany consequently declares war on Russia. By the 4 <sup>th</sup> August, all of the European powers from the Allied and Central Powers are at war.	July-August 1914
<b>Trench Warfare</b>		To prevent enemy advances, both sides built large trenches, which stretched from the North Sea, through Belgium and France. As a result, neither side made much ground from late 1914 until early 1918. Attacks involved going across No Man's Land (in the middle) where attackers were open to machine gun fire, mines, and shells. Casualties were huge. Life in the trenches was awful, with diseases like trench foot rife. Mustard gas was used, causing blisters on skin and lungs. It caused excruciating pain and often death.	From September 1914 until November 1918 (the end of the war).
<b>Gallipoli Campaign</b>		The Gallipoli campaign was an unsuccessful attempt by the Allies to control the sea route from Europe to Russia. It included a failed naval attack in February 1915, and a major land invasion on 25 <sup>th</sup> April, which resulted in major losses to the Ottoman Empire.	19 <sup>th</sup> February 1915 – 9 <sup>th</sup> January 1916
<b>Battle of the Somme</b>		The Battle of the Somme was the largest battle of World War I on the Western Front. More than 3 million fought in the battle, with more than 1 million killed or injured. At the end of the battle, the Allies had advanced 4km.	1 <sup>st</sup> July 1916 – 18 <sup>th</sup> November 1916
<b>America Declares War</b>		President Woodrow Wilson declared war on Germany, citing Germany's violation of its pledge to suspend unrestricted German warfare in the Northern Atlantic and Mediterranean. This had caused sinking of US ships.	6 <sup>th</sup> April 1917
<b>Second Battle of Marne</b>		The Second Battle of Marne was the last major German offensive in the war. They were defeated on the Allied counter-attack. This triggered the start of the Allied advance which led to the Armistice 100 days later.	15 <sup>th</sup> July – 6 <sup>th</sup> August 1918
<b>Armistice of 11<sup>th</sup> November</b>		The Armistice of the 11 <sup>th</sup> November 1918 signalled the end of the fighting between the Allies and Germany. Previous armistices had already been agreed with the other central powers. It came into force at 11am. It marked a victory for the Allies and defeat for Germany although was not officially a German surrender.	11 <sup>th</sup> November 1918
<b>The Treaty of Versailles</b>		The Treaty of Versailles was the most important of the peace treaties bringing to an end World War I, ending conflict between Germany and the Allied Powers. It was signed in Versailles, but mostly negotiated in Paris. The most contentious of the requirements in the peace treaty was that Germany had to accept responsibility for all of the loss and damage in the war. They had to make massive repayments to other countries.	28 <sup>th</sup> June 1919

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# Maths



## Mathematics - Year 9

In Maths you will receive a separate knowledge organiser.

Your knowledge organiser will help you to:

- Know** which **MET**\* skills you should be learning
- Track** when you have learnt, revisited and revised a skill
- Identify** any gaps where you have missed lessons
- Guide** your revision when it comes to assessments

\*The **MET (Mathematics Expertise Tower)** shows you all the skills you will master during your lessons and how each skill builds upon the last.

It is arranged into **4 topic areas**:

Number & Ratio	Algebra & Graphs	Geometry & Measure	Probability & Statistics
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You can see the full **MET** in the Maths Corridor!

**Maths Equipment you must have every lesson:**

Pen, pencil, rubber, ruler, protractor, compasses, scientific calculator

## USEFUL WEBSITES:

My Login:



Password:

My Login:



Password:

[www.bbc.co.uk/bitesize](http://www.bbc.co.uk/bitesize)

[www.khanacademy.org](http://www.khanacademy.org)

<https://corbettmaths.com>

Year 9																				
Term 1			Term 2			Term 3			Term 4			Term 5			Term 6			Summer		
	September	October	November	December		January	February		March	April		May	June	July						
Number and Ratio			Geometry and Measure			Algebra			GCSE Assessment 2			GCSE Assessment 2			Revision			GCSE Assessment 2 (3 Papers)		
Number Test			Shape Test			Algebra Test			Half-Term			Half-Term			Half-Term			Half-Term		

Programme of study and assessment calendar

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## Television

Qu'est-ce que tu aimes/ n'aimes pas regarder à la télé?	<i>What do you like/not like to watch on TV?</i>
J'aime (bien/beaucoup) ...	<i>I like ... (very much/a lot).</i>
Je n'aime pas (du tout)/ Je déteste ...	<i>I don't like ... (at all)/I hate ...</i>
les comédies	<i>comedies</i>
les dessins animés	<i>cartoons</i>
les documentaires	<i>documentaries</i>
les émissions musicales	<i>music programmes</i>
les émissions de sport	<i>sports programmes</i>
les émissions de télé-réalité	<i>reality tv programmes</i>
les jeux télévisés	<i>game shows</i>
les séries	<i>series</i>
Je les aime/adore/déteste.	<i>I like/love/hate them.</i>
Je ne les aime pas.	<i>I don't like them.</i>
Ça dépend.	<i>It depends.</i>
Je les trouve ...	<i>I find them ...</i>
amusant(e)s.	<i>funny.</i>
intéressant(e)s.	<i>interesting.</i>
divertissant(e)s.	<i>entertaining.</i>
enfantin(e)s.	<i>childish.</i>
ennuyeux/ennuyeuses.	<i>boring.</i>
éducatifs/éducatives.	<i>educational.</i>
nuls/nulles.	<i>rubbish.</i>
très/assez/un peu	<i>very/quite/a bit</i>

## Music

Qu'est-ce que tu aimes comme musique?	<i>What sort of music do you like?</i>
J'aime/J'adore/Je déteste ...	<i>I like/love/hate ...</i>
Ce que j'aime, c'est la musique folklorique.	<i>What I like is folk music.</i>
Ce que je n'aime pas, c'est le classique.	<i>What I don't like is classical music.</i>
Ça me fait ...	<i>It makes me ...</i>
danser/dormir/rêver.	<i>dance/sleep/dream.</i>
Ça me rend triste.	<i>It makes me sad.</i>
Ça me rend heureux/ heureuse.	<i>It makes me happy.</i>
Ça me calme.	<i>It calms me.</i>
C'est ...	<i>It is ...</i>
déprimant/ennuyeux.	<i>depressing/boring.</i>
entraînant/vif.	<i>lively.</i>
gai/moderne.	<i>happy/modern.</i>
Original/rapide.	<i>original/fast.</i>

## Cinema

Quel dernier film as-tu vu?	<i>What was the last film you saw?</i>
J'ai vu ...	<i>I saw ...</i>
un film d'action	<i>an action film</i>
un film d'arts martiaux	<i>a martial arts film</i>
un film comique	<i>a comedy</i>
un film d'horreur	<i>a horror film</i>
un film romantique	<i>a romantic film</i>
un film de science-fiction	<i>a science-fiction film</i>
un film à suspense	<i>a thriller</i>
un western	<i>a western</i>
au cinéma/en DVD	<i>at the cinema/on DVD</i>
en streaming	<i>streamed (on the Internet)</i>
à la télé	<i>on TV</i>
Je l'ai aimé/adoré/détesté.	<i>I liked/loved/hated it.</i>
Je ne l'ai pas aimé.	<i>I didn't like it.</i>
C'était ...	<i>It was ...</i>
Je (ne) le recommande (pas).	<i>I (don't) recommend it.</i>

### PHONICS

peut (eu) Silent t  
bu/vu/lu (short u sound)  
préfère v préféré (e)  
Sounds with accents (eh and ay)  
Past tense sounds ay  
dans

### GRAMMAR

Negatives and word order= eg  
ne...jamais around the verb  
Il y a  
On peut  
Past tense of regular and irregular verbs  
Comparatives using  
plus/moins/aussi...que

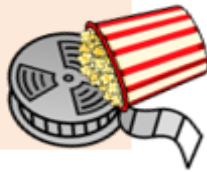
# MFL - German

Im Fernsehen	On TV
eine Castingshow	a talent show
eine Dokumentarserie	a documentary
eine Musiksendung	a music programme
die Nachrichten (plural)	the news
eine Quizsendung	a quiz show
eine Realityshow	a reality show
eine Seifenoper	a soap opera
eine Sportsendung	a sports programme
eine Zeichentrickserie	a cartoon
Ich sehe (nicht) gern ...	I (don't) like watching ...
Meine Lieblingssendung ist ...	My favourite programme is ...
Neue Medien, alte Medien	New media, old media
das Chatten auf Skype	chatting on Skype
der Fernseher	television set
das Handy, das Telefon	mobile phone, telephone
der Kassettenrekorder	cassette recorder
die Schreibmaschine	typewriter
die Tageszeitung	daily paper
die Webseite	web page
Ich höre Radio auf meinem MP3-Player.	I listen to the radio on my MP3 player.
Ich sehe Filme auf meinem Computer.	I watch films on my computer.
Ich lese im Internet.	I read on the internet.
Ich lade Videoclips aus dem Internet herunter.	I download video clips from the internet.
Ich chatte mit Freunden im Internet.	I chat with friends on the internet.
weil das schnell/langsam geht	because it's fast/slow
bequem	convenient
billig, teuer	cheap, expensive
einfach, kompliziert	easy, complicated
langweilig	boring
praktisch, unpraktisch	practical, impractical
Das kostet nichts/viel.	It costs nothing/a lot.
morgens, mittags	in the mornings, at midday
nachmittags, abends	in the afternoons/evenings
jeden Tag/Abend, jede Woche	every day/evening/week

oft, manchmal, selten, nie	often, sometimes, seldom, never
<b>Techno ist toll!</b>	<b>Techno is great!</b>
Welcher/Welche?	Which ... do you like
Welches ... gefällt dir (am besten)?	(best)?
... gefällt mir gut/gar nicht.	I like .../don't like ... at all.
Ich höre am liebsten ...	I prefer listening to ...
<b>Wie war der Film?</b>	<b>What was the film like?</b>
Welchen Film hast du gesehen?	What film have you seen?
Ich habe ... gesehen.	I saw ...
Was für ein Film ist/war das?	What kind of film is/was it?
ein Actionfilm	an action film
ein Dokumentarfilm	a documentary
ein Fantasyfilm	a fantasy film
eine Komödie	a comedy
ein Liebesfilm	a love story
ein Musical	a musical
ein Science-Fiction-Film	a science fiction film
ein Zeichentrickfilm	a cartoon
Dieser Film gefällt mir (nicht), ...	I (don't) like this film, ...
Dieser Film hat mir (nicht) gefallen, ...	I liked/didn't like this film ...
weil er lustig ist/war.	because it is/was funny.
weil die Spezialeffekte toll sind/waren.	because the special effects are/were great.
die Dialoge (plural)	dialogue/script
die Geschichte	story/plot
der Schauspieler/die Schauspielerin	actor/actress
romantisch	romantic
spannend	exciting
unterhaltsam	entertaining

# Music

<b>Film Music Key Words</b>	
<b>SOUNDTRACK</b>	The music and sound recorded on a motion-picture film. The word can also mean a commercial recording of a collection of music and songs from a film.
<b>MUSIC SPOTTING</b>	A meeting/session where the composer meets with the director and decides when and where music and sound effects are to feature.
<b>CUESHEET</b>	A detailed listing of <b>MUSICAL CUES</b> matching the visual action of a film so that composers can time their music accurately.
<b>DIEGETIC FILM MUSIC</b>	Music within the film for both the characters and audience to hear e.g. a car radio, a band in a nightclub or sound effects.
<b>NON-DIEGETIC FILM MUSIC</b>	Music which is put "over the top" of the action of a film for the audience's benefit and which the characters within a film can't hear – also known as <b>UNDERSCORE</b> or <b>INCIDENTAL MUSIC</b> .



<b>The Elements</b>	
<b>PITCH</b>	High or low
<b>DYNAMICS</b>	Loud or soft
<b>FORTE</b>	Loud
<b>PIANO</b> – soft	Soft
<b>CRESCENDOS</b>	Getting louder
<b>DECRESCENDOS/DIMINUENDOS</b>	Getting softer
<b>MAJOR</b>	Happy sound
<b>MINOR</b>	Sad sound
<b>CONSONANT HARMONY</b>	'Blending' chords
<b>DISSONANT HARMONY</b>	'Clashing' chords
<b>PEDAL NOTES</b>	Long held notes
<b>TEXTURE</b>	How many layers of sound- (thick/thin)
<b>LEGATO</b>	Slurred and smooth
<b>STACCATO</b> – short and sharp	Short and sharp
<b>ACCENTS</b>	A note with emphasis
<b>OSTINATO</b>	A short repeated melody



## How the Elements of Music are used in Films

**PITCH AND MELODY** – **RISING MELODIES** are often used for increasing tension, **FALLING MELODIES** for defeat.

**DYNAMICS** – **FORTE (LOUD)** dynamics to represent power; **PIANO (SOFT)** dynamics to represent weakness/calm/resolve. **CRESCENDOS** used for increasing threat, triumph or proximity and **DECRESCENDOS** or **DIMINUENDOS** used for things going away.

**HARMONY** – **MAJOR** – happy; **MINOR** – sad. **CONSONANT HARMONY** for "good" and **DISSONANT HARMONY** for "evil".

**DURATION** – **LONG** notes often used in Westerns/Sci-Fi to describe vast open spaces; **SHORT** notes often used to depict busy, chaotic or hectic scenes. **PEDAL NOTES** – long held notes in the **BASS LINE** used to create tension and suspense.

**TEXTURE** – **THIN/SPARE** textures used for bleak or lonely scenes; **THICK/FULL** textures used for active scenes or battles.

**ARTICULATION** – **LEGATO** for flowing or happy scenes, **STACCATO** for 'frozen' or 'icy' wintry scenes. **ACCENTS** for violence or shock.

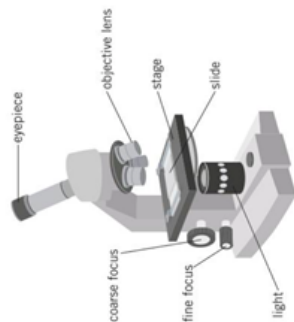
**RHYTHM & METRE** – 2/4 for Marches (battles), 3/4 for Waltzes, 4/4 for "Big Themes" in Westerns. **IRREGULAR TIME SIGNATURES** used for tension. **OSTINATO** rhythms for repeated sounds e.g. horses.



KS3 PHYSICAL EDUCATION – KNOWLEDGE ORGANISER AUTUMN TERM	
All students will participate in at least 4 of the following activities this term. They are Rugby, Hockey, Basketball, Netball and Trampolining	
<b>INVASION GAMES:</b> Rugby, Hockey, Netball and Basketball	<b>GYMNASTICS:</b> Trampolining
<u>Invasion games:</u> Team games in which the purpose is to 'invade' the opposition's territory to score points whilst trying to make sure the other team does not score.	<u>Spotters:</u> stand around the trampoline and ensure that the person on the trampoline is safe at all times. A spotter will prevent the trampolinist from falling off the trampoline if they get too close to the sides or the ends.
<u>Receiving the ball:</u> when you catch a ball or receive the ball with a stick	<u>Basic Jumps:</u> tuck, pike and straddle
<u>Passing the ball:</u> throwing a ball to your teammate or passing it with your stick to a teammate.	<u>Basic landing positions:</u> Seat landing, Front landing and Back landing
<u>Spatial awareness:</u> when you recognise your position in relation to your opponent and the ball/object you are playing with.	<u>Combinations:</u> Seat to front, front to seat, seat $\frac{1}{2}$ twist to feet, $\frac{1}{2}$ twist to seat, front $\frac{1}{2}$ twist to feet, $\frac{1}{2}$ twist to front
<u>Defending strategies:</u> defending a space or area to stop your opponents from scoring. Defending the goal or try line.	<u>Twists:</u> Swivel hips, Back $\frac{1}{2}$ twist to feet, $\frac{1}{2}$ twist into back
<u>Attacking strategies:</u> Creating space for yourself and your teammates. Moving into space to receive a pass.	<u>Advanced twists:</u> Roller, Cradle, Cat twist, Half turntable, Full turntable
<u>Tackling:</u> forcing your opponent to lose possession of the ball in order for you or your teammates to gain possession.	<u>Basic Somersaults:</u> Hands and knees turnover to feet, back pullover to feet, Back pullover to front, Back to front landing, $\frac{3}{4}$ front to back landing, Front somersault, Back somersault



OBSERVING CELLS USING A MICROSCOPE



1. Move the stage to its lowest position.
2. Place the object on the stage.
3. Select the objective lens with the lowest magnification.
4. Look through the eye-piece and turn the coarse-focus knob slowly until you see the object.
5. Turn the fine-focus knob until the object comes into focus.
6. Repeat steps 1-5 with a higher magnification object lens to see the object in greater detail.

TOTAL MAGNIFICATION

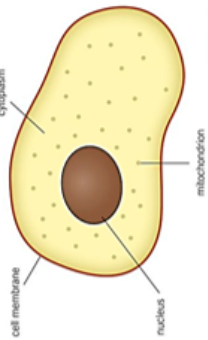
$$\text{Eyepiece lens magnification} \times \text{objective lens magnification} = \text{magnification}$$

UNI-CELLULAR AMOEBA

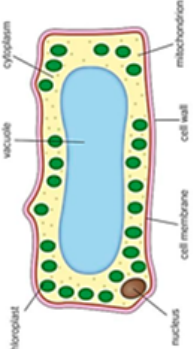
- Has no fixed shape
- Found in fresh water, salt water, wet soil, and even inside animals!
- They move by changing the shape of their body.
- They eat algae, bacteria and plant cells. They surround the tiny particles of food and form a food vacuole (engulf). The vacuole digests the food.
- They reproduce by binary fission (splits into two cells)



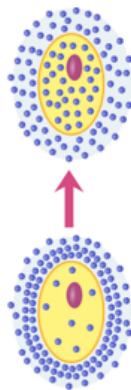
ANIMAL CELLS



**PLANT CELLS:** plant cells have *three extra* components: cell wall, vacuole and chloroplasts.

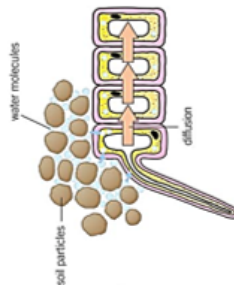


**DIFFUSION:** Movement of particles from an area of *high concentration* to an area of *low concentration* until they are evenly spread out.

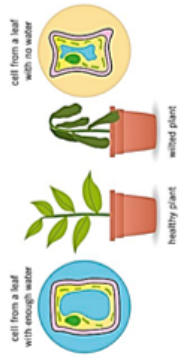


DIFFUSION IN PLANTS

Water molecules diffuse from the soil (high concentration) into the root hair cells (low concentration). Water travels from root hair cells to other cells by diffusion.



If a plant does not have enough water, the vacuole shrinks. The cells become floppy and the plant wilts.



**SPECIALISED CELLS:** These cells have specific structural adaptations.

**Nerve cell (neurone)** → long and thin with connections at the end (to join to other nerve cells)



**Red blood cell** → contain haemoglobin – a red pigment which joins to oxygen. Disk-shaped with no nucleus to increase its surface area.

**Sperm** → Have a long tail and lots of mitochondria (movement towards the egg).



**Root hair cell** → root hair creates a large surface area to absorb water and nutrients from the soil.

KEYWORD	DEFINITION
<b>Amoeba</b>	A uni-cellular organism.
<b>Cell membrane</b>	The cell component that surrounds the cell and controls movement of substances in and out.
<b>Cell wall</b>	The cell component that surrounds the cell and strengthens it. In plant cells it is made of cellulose.
<b>Chloroplasts</b>	The plant cell component that absorbs light so the plant can make food by photosynthesis.
<b>Concentration</b>	A measure of the number of particles in a given volume.
<b>Cytoplasm</b>	Jelly-like substance (in cells) where most chemical processes happen.
<b>Diffusion</b>	The process by which particles in liquids or gases spread out through random movement from a region where there are many particles to one where there are fewer.
<b>Euglena</b>	Uni-cellular organism that performs photosynthesis.
<b>Flagellum</b>	A tail-like structure that allows euglenas to move.
<b>Leaf cells</b>	The plant cells that contain chloroplasts, where photosynthesis takes place.
<b>Microscope</b>	An optical instrument used to magnify objects, so small details can be seen clearly.
<b>Mitochondria</b>	Part of the cell where glucose is broken down during the process of respiration, enabling energy transfer.
<b>Nerve cells</b>	An animal cell that transmits electrical impulses around the body.
<b>Nucleus</b>	The cell component that contains genetic material (DNA), which controls the cells activities.
<b>Observation</b>	Information gathered by your senses.
<b>Red blood cells</b>	An animal cell that transports oxygen around the body.
<b>Respiration</b>	A chemical reaction where food and oxygen are converted into water and carbon dioxide, enabling energy transfer.
<b>Specialised cells</b>	A cell whose shape and structure enable it to perform a particular function.
<b>Sperm cells</b>	Male sex cell containing male genetic information.
<b>Structural adaptations</b>	Special features to help a cell carry out its function.
<b>Uni-cellular</b>	Living things made up of one cell.
<b>Vacuole</b>	The cell component that contains liquid (cell sap), and can be used by plants to keep the cell rigid (firm) and store substances.