

## Year 8 Term 1 Knowledge Organiser Booklet

Name:

Form:



An investment in  
knowledge always  
pays the best interest

*Benjamin Franklin*



# **Year 8 Term 1 Knowledge Organiser Booklet**

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# Year 8 Term 1 Knowledge Organiser Booklet

## How do I use the Knowledge Organiser booklet for independent home learning?

Every day you should be studying from your Knowledge Organiser (KO) booklet for home learning, as a minimum expectation.

The timetable on page 4 in this KO booklet tells you which subjects you should be studying and on which days. It doesn't matter if you don't have that subject on that day, you just follow the timetable.

### Key instructions:

- Produce your home learning in your knowledge organiser exercise book.
- Start a new page for each subject.
- Bring your knowledge organiser booklet and exercise book to school with you every day.
- Your parents/carers should sign completed home learning every evening at the top of each page in your knowledge organiser exercise book.
- Your knowledge organiser exercise book will be checked regularly in form time and in lessons.
- Failure to complete knowledge organiser home learning will result in an after-school detention, where the missed home learning will be caught up.
- You will be regularly quizzed in lessons on knowledge from your knowledge organisers, to support the retention of this key information.

### How does Knowledge Organiser home learning work?

The knowledge organiser for each subject contains the foundation knowledge that is required for that topic for that specific part of the year. Your aim is to make sure that by the end of the topic you are able to retain all of the knowledge from each subject knowledge organiser.

For each subject you should follow one of the two methods, and you should do one page of knowledge organiser home learning per subject. You are self-quizzing and self-assessing your knowledge against that in the KO booklet for each subject. **You are not just taking notes or copying out.**

### Method 1

- Read the knowledge organiser for about 5 minutes
- Cover the knowledge organiser up
- Write down as much as you can remember in black/blue pen
- Add all that you couldn't remember or any corrections in green pen.

### Method 2

- Read the knowledge organiser for about 5 minutes
- Use/write exam style questions
- Answer the questions in black/blue pen
- Correct/improve your answers in green pen



# Year 8 Term 1 Knowledge Organiser Booklet

You are expected to study the subjects shown on your timetable each day.

Each day complete one page of your knowledge organiser exercise book to evidence your home learning

Week 1	Subject 1	Subject 2	Signature
Monday	Cultural Capital	English	
Tuesday	Maths	Science	
Wednesday	Art	LFL	
Thursday	Drama	MFL	
Friday	PE	Geography	

Week 2	Subject 1	Subject 2	Signature
Monday	History	Drama	
Tuesday	Music	ICT	
Wednesday	Spark	Cultural Capital	
Thursday	English	Maths	
Friday	Science	Art	

Week 3	Subject 1	Subject 2	Signature
Monday	LFL	Drama	
Tuesday	MFL	PE	
Wednesday	Geography	History	
Thursday	Drama	Music	
Friday	ICT	Spark	

Week 4	Subject 1	Subject 2	Signature
Monday	Cultural Capital	English	
Tuesday	Maths	Science	
Wednesday	Art	LFL	
Thursday	Drama	MFL	
Friday	PE	Geography	

Week 5	Subject 1	Subject 2	Signature
Monday	History	Drama	
Tuesday	Music	ICT	
Wednesday	Spark	Cultural Capital	
Thursday	English	Maths	
Friday	Science	Art	

Week 6	Subject 1	Subject 2	Signature
Monday	LFL	Drama	
Tuesday	MFL	PE	
Wednesday	Geography	History	
Thursday	Drama	Music	
Friday	ICT	Spark	

Week 7	Subject 1	Subject 2	Signature
Monday	Cultural Capital	English	
Tuesday	Maths	Science	
Wednesday	Art	LFL	
Thursday	Drama	MFL	
Friday	PE	Geography	

Week 8	Subject 1	Subject 2	Signature
Monday	History	Drama	
Tuesday	Music	ICT	
Wednesday	Spark	Cultural Capital	
Thursday	English	Maths	
Friday	Science	Art	



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You are expected to study the subjects shown on your timetable each day.

Each day complete one page of your knowledge organiser exercise book to evidence your home learning

Week 9	Subject 1	Subject 2	Signature
Monday	LFL	Drama	
Tuesday	MFL	PE	
Wednesday	Geography	History	
Thursday	Drama	Music	
Friday	ICT	Spark	

Week 10	Subject 1	Subject 2	Signature
Monday	Cultural Capital	English	
Tuesday	Maths	Science	
Wednesday	Art	LFL	
Thursday	Drama	MFL	
Friday	PE	Geography	

Week 11	Subject 1	Subject 2	Signature
Monday	History	Drama	
Tuesday	Music	ICT	
Wednesday	Spark	Cultural Capital	
Thursday	English	Maths	
Friday	Science	Art	

Week 12	Subject 1	Subject 2	Signature
Monday	LFL	Drama	
Tuesday	MFL	PE	
Wednesday	Geography	History	
Thursday	Drama	Music	
Friday	ICT	Spark	

Week 13	Subject 1	Subject 2	Signature
Monday	Cultural Capital	English	
Tuesday	Maths	Science	
Wednesday	Art	LFL	
Thursday	Drama	MFL	
Friday	PE	Geography	

Week 14	Subject 1	Subject 2	Signature
Monday	History	Drama	
Tuesday	Music	ICT	
Wednesday	Spark	Cultural Capital	
Thursday	English	Maths	
Friday	Science	Art	

Week 15	Subject 1	Subject 2	Signature
Monday	LFL	Drama	
Tuesday	MFL	PE	
Wednesday	Geography	History	
Thursday	Drama	Music	
Friday	ICT	Spark	



## Year 8 Term 1 Knowledge Organiser Booklet

### Reading Log

Use this reading log to record the books that you read and how long you have spent reading them during this term

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Books read (title and author	Time spent reading	Signature
1										
2										
3										
4										
5										
6										
7										



## Year 8 Term 1 Knowledge Organiser Booklet

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Books read (title and author	Time spent reading	Signature
8										
9										
10										
11										
12										
13										
14										
15										



# Year 8 Term 1 Knowledge Organiser Booklet

## Year 8 Knowledge Organiser

Key Words Term 1		
overall	communication	civil
emerged	ethnic	contrast
regime	hypothesis	resolution
implementation	professional	adequate
project	status	
hence	conference	
occupational	attributed	
internal	annual	
goals	obvious	
retained	error	
sum	implications	
integration	apparent	
mechanism	commitment	
parallel	subsequent	
imposed	debate	
despite	dimensions	
job	promote	
parameters	statistics	
approximate	option	
label	domestic	
concentration	output	
principal	access	
series	code	
predicted	investigation	
summary	phase	
attitudes	prior	
undertaken	granted	
cycle	stress	

### Key Words

Having a broad vocabulary is very important in helping you to make progress. Each term we will provide you with a bank of words so that you can learn the definition and practice spelling, your subjects teachers will be looking for opportunities for you to use these words within your work. Your form tutor will be working with you during registration time to check your understanding of the words. Over the course of the term it's important for you to;

Establish the definitions for all of the words

Learn how to spell each word

Develop example sentences that use the words and try and use these words in your work across the subjects you study

### Key Facts about the United Kingdom

When was the United Kingdom formed?	1 <sup>st</sup> January, 1801
What is the flag of United Kingdom?	The union flag, often referred to as the "Union Jack" , represents the union of the three Kingdoms of England, Scotland and Northern Ireland.
How big is the United Kingdom?	The UK is approximately 1000 kilometres long
How many people live in Britain?	66 million people (2017)
What is the highest mountain in the UK?	Ben Nevis in Scotland

### Extended Learning

Why was Wales not included in the union flag?

What are the 5 biggest cities by population in the UK?

How high is Ben Nevis?

What 4 bodies of water surround the UK?



## Year 8 Term 1 Knowledge Organiser Booklet

### British Values

The idea that human beings should have a set of basic rights and freedoms has deep roots in Britain. These are some of the national and international milestones that have shaped the concept of human rights in Britain over the last 800 years.

British Value	Definition
Democracy	A political system based upon the concept of people having the power to decide. The word comes from the Ancient Greek for people and power.
Individual Liberty	The Concept that in a modern democracy people have the freedom to make their own choices and decisions.
The Rule of Law	A basic principle of a democratic society that the law applies equally to all people.
Mutual respect for and tolerance of those with different faiths and beliefs, and for those without faith.	A concept based upon the idea that in a modern society people show understanding of others with differing views and opinions.

<b>1215: the Magna Carta</b>	This English Charter acknowledged for the first time that subjects of the crown had legal rights and that laws could apply to kings and queens too. The Magna Carta was also the first step in giving us the right to a trial by a jury of our peers.	<b>1979: Convention on the Elimination of All Forms of Discrimination against Women</b>	Often referred to as the 'bill of rights for women', the Convention on the Elimination of All Forms of Discrimination against Women.
<b>1679: Habeas Corpus Act</b>	Another crucial step towards the right to a fair trial, this law protected and extended the right of a detained person to go before a judge to determine whether the detention was legal.	<b>1984: UN Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment</b>	The most comprehensive international treaty dealing with torture, it became the first binding international instrument exclusively dedicated to preventing some of the most serious human rights violations of our time.
<b>1689: English Bill of Rights</b>	The Bill was a landmark moment in the political history of Britain because it limited the powers of the monarch and set out the rights of Parliament. It included the freedom to petition the monarch (a step towards political protest rights) and the freedom from being fined without trial.	<b>1989: UN Convention on the Rights of the Child</b>	Governments worldwide promised all children the same rights by adopting the Convention on the Rights of the Child. The basic premise is that children (under the age of 18) are born with the same fundamental freedoms and inherent rights as all human beings, but with specific additional needs because of their vulnerability.
<b>1948: Universal Declaration of Human Rights</b>	The Universal Declaration of Human Rights is the foundation for modern human rights. After the Second World War, the international community recognised the need for a collective expression of human rights. The declaration sets out a range of rights and freedoms to which everyone, everywhere in the world, is entitled.	<b>1995: Disability Discrimination Act</b>	This Act represented the first far-reaching legislation on discrimination against disabled people. It covered key areas of life such as employment and training, education, goods, facilities and services, premises and transport.



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<b>1950: the European Convention on Human Rights</b>	Members of the Council of Europe used the Universal Declaration of Human Rights to draw up this treaty to secure basic rights both for their own citizens and for other nationalities within their borders. The Convention was signed in Rome in 1950, ratified by the UK in 1951 and came into force in 1953. Unlike the Universal Declaration, the European Convention on Human Rights contains rights which can be relied on in a court of law.	<b>1998: Human Rights Act</b>	In force since October 2000, the Human Rights Act incorporated into domestic law the rights and liberties enshrined in the European Convention on Human Rights. People in the UK no longer had to take complaints about human rights breaches to the European Court in Strasbourg – British courts could now hear these cases.
<b>1966: UK signs up to the European Court of Human Rights</b>	Six years after the European Court of Human Rights was created, the UK granted what is known as 'individual petition' - the right for people to take their cases directly to the court in Strasbourg.	<b>2008: UN Convention on the Rights of Persons with Disabilities (UNCPRD)</b>	The UN Convention on the Rights of Persons with Disabilities was the first human rights treaty of the 21st Century. It reaffirms disabled people's human rights and signals a further major step in their journey to becoming full and equal citizens.
<b>1975: Sex Discrimination Act</b>	The act made sex discrimination illegal in the areas of employment, education and the provision of goods, facilities and services.	<b>2010: the Equality Act</b>	The Equality Act brought together more than 116 separate pieces of legislation into one single act - a new, streamlined legal framework to protect the rights of individuals and advance equality of opportunity for all.
<b>1976: Race Relations Act</b>	The Race Relations Act was established to prevent race discrimination. It made race discrimination unlawful in employment, training, housing, education and the provision of goods, facilities and services.		



## Year 8 Term 1 Knowledge Organiser Booklet

Context
World War I began in 1914, after the assassination of Archduke Franz Ferdinand, and lasted until 1918. During the conflict, Germany, Austria-Hungary, Bulgaria and the Ottoman Empire (the Central Powers) fought against Great Britain, France, Russia, Italy, Romania, Japan and the United States (the Allied Powers). Over 9 million soldiers and 7 million civilians died as a result. It paved the way for major political changes and unresolved conflicts that contributed to WW2 21 years later. The Allies were victorious and in the 1919 Paris Peace Conference laid the blame for the war on Germany & her allies, ordering them to pay reparations which led to economic depression, renewed nationalism and feelings of humiliation & resentment believed to have contributed significantly to the rise of the Nazis & WW2.
The Second Boer War was fought from 11 October 1899 until 31 May 1902 between the United Kingdom; and the South African Republic (Transvaal Republic) and the Orange Free State. The war ended in victory for the British and the annexation of both republics. Both would eventually be incorporated into the Union of South Africa in 1910.
The Crimean War (1854-56) was fought by an alliance of Britain, France, Turkey and Sardinia against Russia. For the British, the campaign was symbolised by military and logistical incompetence alongside the bravery and endurance of its soldiers.
The Napoleonic Wars were a series of conflicts fought between France under the leadership of Napoleon Bonaparte and a number of European nations between 1799 and 1815. They engaged nearly all European nations in and also spilled over into Egypt, America and South America. During the Wars (for during this period the fighting was not constant) warfare was to change and move towards modern warfare leaving behind forever the idea of war as a sport of kings and moving towards the concept of Total War and the nations in arms. The period starting with bright uniforms but by the end of the period dark blue or green uniforms had become common for skirmishers, the beginnings of military camouflage. The period also saw the British Army under the leadership of the Duke of Wellington become renowned as the best in Europe. The Battle of Waterloo was fought on Sunday, 18 June 1815 near Waterloo in Belgium, part of the United Kingdom of the Netherlands at the time. A French army under the command of Napoleon Bonaparte was defeated by two of the armies of the Seventh Coalition: a British-led allied army under the command of the Duke of Wellington, and a Prussian army under the command of Field Marshal <a href="#">Blücher</a> . The battle marked the end of the Napoleonic Wars.
Syrian Conflict - The Syrian Civil War is an ongoing multi-sided armed conflict in Syria

Key term Power and Conflict	Definition
Patriotic	Having or expressing devotion to and vigorous support for one's country.
Jingoism	the extreme belief that your own country is always best, often shown in enthusiastic support for a war against another country
Armistice	An agreement made by opposing sides in a war to stop fighting for a certain time; a truce.
Conscription	where men are legally obliged to enrol for military service
Bayonet	A blade that may be fixed to the muzzle of a rifle and used to stab an opponent in hand-to-hand fighting.
Bugle	A brass instrument like a small trumpet, typically without valves or keys and used for military signals.
Conflict	A serious disagreement or argument, typically a protracted one.
Power	<ol style="list-style-type: none"> <li>1. The ability to do something or act in a particular way, especially as a faculty or quality.</li> <li>2. The capacity or ability to direct or influence the behaviour of others or the course of events.</li> <li>3. Physical strength and force exerted by something or someone.</li> </ol>
Futility	Pointlessness or uselessness.
Heroism	Great bravery.
Propaganda	Information, especially of a biased or misleading nature, used to promote or publicize a particular political cause or point of view.
Enlist	Enrol or be enrolled in the armed services.
Moral	Concerned with the principles of right and wrong behaviour and the goodness or badness of human character.
Duty	A moral or legal obligation; a responsibility.
Morale	The confidence, enthusiasm, and discipline of a person or group at a particular time.
Remembrance	The action of remembering something.
Brutality	savage physical violence; great cruelty
Turmoil	A state of great disturbance, confusion, or uncertainty.
Barbaric	Savagely cruel; exceedingly brutal.



# Year 8 Term 1 Knowledge Organiser Booklet

Key term	
<b>Persuasion</b>	
<b>Alliteration</b>	The occurrence of the same consonant letter or sound at the beginning of adjacent or closely connected words.
<b>Fact</b>	Something that can be tested and proven to be true.
<b>False Fact</b>	Usually an opinion presented as a fact.
<b>Opinion</b>	Something someone believes to be true
<b>Statistic</b>	A fact expressed in numerical form usually as a percentage or fraction
<b>Rhetorical question</b>	A question that does not require an answer
<b>Imperative verbs</b>	Commanding verbs
<b>pronoun</b>	A word that can function by itself as a noun phrase and that refers either to the participants in the discourse (e.g., I, you) or to someone or something mentioned elsewhere in the discourse (e.g., she, it, this).
<b>Repetition</b>	When something is said more than once for effect.
<b>Triple</b>	Repeating an idea or phrase three times for effect.
<b>Direct Address</b>	Using pronouns such as 'you' or 'we' to speak directly to the audience.
<b>Emotive language</b>	Language that creates emotions in the reader.
<b>Superlative Adjectives</b>	An adjective or adverb expressing the highest or a very high degree of a quality e.g. bravest
<b>Viewpoint</b>	Point of view shown in a piece.
<b>Implicit</b>	Implied though not plainly expressed.
<b>Explicit</b>	Stated clearly and in detail, leaving no room for confusion or doubt.
<b>Ideas</b>	A thought or suggestion within a piece.
<b>Persuade</b>	Cause someone to do something through reasoning or argument.
<b>Argue</b>	Give reasons or cite evidence in support of an idea, action, or theory, typically with the aim of persuading others to share one's view.
<b>Key Text</b>	
<b>Dulce et Decorum est</b>	The title means 'It is sweet and right (pro patria mori) to die for one's country. It is a quote often used in WW1 propaganda but Owen satirises it in his poem.
<b>Anthem for Doomed Youth</b>	A war sonnet Owen wrote whilst recovering from shell-shock in a Scottish hospital. The sonnet form is usually associated with romance and love so the poet is being ironic by choosing it.
<b>War Horse</b>	A novel that tells the story of the horse Joey and his experiences as a horse in WW1

Semantic Field	A set of words grouped by meaning, referring to a specific subject.
Figurative Language	Using words or expressions to convey a meaning that is different from the literal interpretation.
Alliteration	The occurrence of the same consonant letter or sound at the beginning of adjacent or closely connected words.
Sibilance	A more specific type of alliteration that relies on the repetition of soft consonant sounds in words to create a whooshing or hissing sound in the writing.
Pathetic Fallacy	Pathetic fallacy is a kind of personification that gives human emotions to inanimate objects of nature; for example, referring to weather features reflecting a mood.
Stanza	A stanza is a group of lines that act like sentences. The sentences combine to make stanzas, or paragraphs of poetry.
Metaphor	A figure of speech that describes an object or action in a way that isn't literally true but helps explain an idea or make a comparison
Personification	Giving human characteristics to something non-human, or the representation of an abstract quality in human form.
Imagery	Visually descriptive or figurative language, especially in a literary work.
Structure	The way the poet has organised the poem on the page e.g. number of stanzas, lines per stanza, breaks in between lines and stanzas.
Intertextuality	The relationship between texts, especially literary ones.
Emotive Language	Language that creates emotions in the reader.
Simile	A single line of a poem, arranged rhythmically in metrical feet
Rhyme Scheme	The pattern of rhyme in a poem.
Simile	Comparison using 'like' or 'as'
Couplet	A two line stanza.
Quatrain	A four line stanza.
Sestet	A six line stanza.
Octet	An eight line stanza
Sonnet	A 14 line poem.



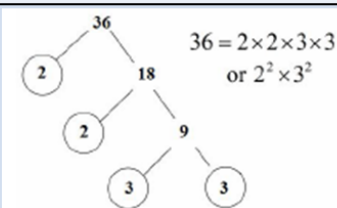
# Year 8 Term 1 Knowledge Organiser Booklet

## Number

Topic/Skill	Definition/Tips	Example
Integer	A <b>whole number</b> that can be positive, negative or zero.	$-3, 0, 92$
Sum	To find the <b>total</b> , or <b>sum</b> , of two or more numbers means add the numbers together 'add', 'plus', 'sum'	$3 + 2 + 7 = 12$
Difference	To find the <b>difference</b> between two numbers means you subtract one number from the other	$10 - 3 = 7$
Product	To find the product of two numbers means you multiply them.	$3 \times 6 = 6 + 6 + 6 = 18$
BIDMAS	An acronym for the <b>order</b> you should do calculations in. BIDMAS stands for ' <b>B</b> rackets, ' <b>I</b> ndices, ' <b>D</b> ivision, ' <b>M</b> ultiplication, ' <b>A</b> ddition and ' <b>S</b> ubtraction'. Indices are also known as 'powers' or 'orders'. With strings of division and multiplication, or strings of addition and subtraction, and no brackets, work from left to right.	$6 + 3 \times 5 = 21, \text{not } 45$ $5^2 = 25$ , where the 2 is the index/power. $12 \div 4 \div 2 = 1.5, \text{not } 6$
Terminating decimal	A decimal number that has <b>that has an end</b> .	$0.78, 12.056$
Recurring Decimal	A decimal number that has <b>digits that repeat forever</b> .  The part that repeats is usually shown by placing a dot above the digit that repeats, or dots over the first and last digit of the repeating pattern.	$\frac{1}{3} = 0.333 \dots = 0.\dot{3}$ $\frac{1}{7} = 0.142857142857 \dots = 0.1\dot{4}285\dot{7}$ $\frac{77}{600} = 0.128333 \dots = 0.128\dot{3}$
Multiple	The result of multiplying a number by an integer. The <b>times tables</b> of a number.	The first five multiples of 7 are: $7, 14, 21, 28, 35$
Factor	A number that <b>divides exactly</b> into another number without a remainder.  It is useful to write factors in pairs	The factors of 18 are: $1, 2, 3, 6, 9, 18$ The factor pairs of 18 are: $1, 18$ $2, 9$ $3, 6$
Lowest Common Multiple (LCM)	The <b>smallest</b> number that is in the <b>times tables</b> of each of the numbers given.	The LCM of 3, 4 and 5 is 60 because it is the smallest number in the 3, 4 and 5 times tables.



# Year 8 Term 1 Knowledge Organiser Booklet

Topic/Skill	Definition/Tips	Example
Highest Common Factor (HCF)	The <b>biggest</b> number that <b>divides exactly</b> into two or more numbers.	The HCF of 6 and 9 is 3 because it is the biggest number that divides into 6 and 9 exactly.
Prime Number	A number with <b>exactly two factors</b> .  A number that can only be divided by itself and one. The number <b>1 is not prime</b> , as it only has one factor, not two.	The first ten prime numbers are:  2, 3, 5, 7, 11, 13, 17, 19, 23, 29
Product of Prime Factors	Finding out which <b>prime numbers multiply</b> together to make the <b>original</b> number.  Use a <b>prime factor tree</b> .  Also known as 'prime factorisation'.	 $36 = 2 \times 2 \times 3 \times 3$ or $2^2 \times 3^2$
Significant Figure	The significant figures of a number are the digits which <b>carry meaning</b> (ie. are significant) to the size of the number.  The <b>first significant figure</b> of a number <b>cannot be zero</b> .  In a number with a decimal, trailing zeros are not significant.	In the number 0.00821, the first significant figure is the 8.  In the number 2.740, the 0 is not a significant figure.  0.00821 rounded to 2 significant figures is 0.0082.  19357 rounded to 3 significant figures is 19400. We need to include the two zeros at the end to keep the digits in the same place value columns.
Truncation	A method of approximating a decimal number by <b>dropping all decimal places</b> past a certain point <b>without rounding</b> .	3.14159265... can be truncated to 3.1415 (note that if it had been rounded, it would become 3.1416)
Error Interval	A <b>range of values</b> that a number could have taken before being rounded or truncated. An error interval is written using inequalities, with a <b>lower bound</b> and an <b>upper bound</b> .  Note that the lower bound inequality can be 'equal to', but the upper bound cannot be 'equal to'.	0.6 has been rounded to 1 decimal place. The error interval is: $0.55 \leq x < 0.65$ The lower bound is 0.55 The upper bound is 0.65
Estimate	To find something <b>close to the correct answer</b> .	An estimate for the height of a man is 1.8 metres.
Approximation	When using approximations to estimate the solution to a calculation, <b>round each number in the calculation to 1 significant figure</b> .  $\approx$ means 'approximately equal to'	$\frac{348 + 692}{0.526} \approx \frac{300 + 700}{0.5} = 2000$  'Note that dividing by 0.5 is the same as multiplying by 2'



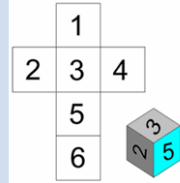
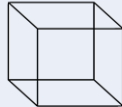
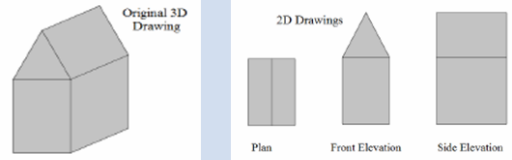
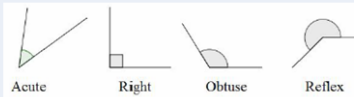
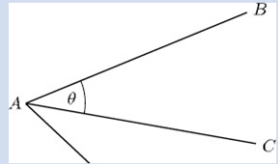
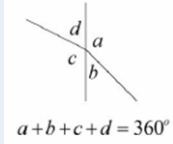
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Topic/Skill	Definition/Tips	Example
Square Number	The number you get when you <b>multiply a number by itself</b> .	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225... $9^2 = 9 \times 9 = 81$
Square Root	The <b>number you multiply by itself</b> to get another number. The reverse process of squaring a number.	$\sqrt{36} = 6$ because $6 \times 6 = 36$
Cube Number	The number you get when you <b>multiply a number by itself and itself again</b> .	1, 8, 27, 64, 125... $2^3 = 2 \times 2 \times 2 = 8$
Cube Root	The <b>number you multiply by itself and itself again</b> to get another number. The reverse process of cubing a number.	$\sqrt[3]{125} = 5$ because $5 \times 5 \times 5 = 125$
Multiplication Index Law	When <b>multiplying</b> with the same base (number or letter), <b>add the powers</b> . $a^m \times a^n = a^{m+n}$	$7^5 \times 7^3 = 7^8$ $a^{12} \times a = a^{13}$ $4x^5 \times 2x^8 = 8x^{13}$
Division Index Law	When <b>dividing</b> with the same base (number or letter), <b>subtract the powers</b> . $a^m \div a^n = a^{m-n}$	$15^7 \div 15^4 = 15^3$ $x^9 \div x^2 = x^7$ $20a^{11} \div 5a^3 = 4a^8$
Brackets Index Laws	When raising a power to another power, multiply the powers together. $(a^m)^n = a^{mn}$	$(y^2)^5 = y^{10}$ $(6^3)^4 = 6^{12}$ $(5x^6)^3 = 125x^{18}$
Notable Powers	$p = p^1$ $p^0 = 1$	$99999^0 = 1$
Negative Powers	A negative power performs the reciprocal. $a^{-m} = \frac{1}{a^m}$	$3^{-2} = \frac{1}{3^2} = \frac{1}{9}$
Standard Form	$A \times 10^b$  $where\ 1 \leq A < 10, \quad b = integer$	$8400 = 8.4 \times 10^3$  $0.00036 = 3.6 \times 10^{-4}$



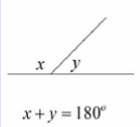
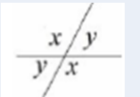
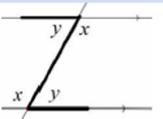
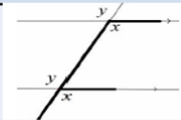
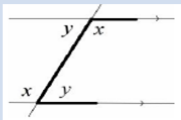
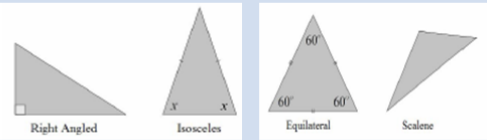
# Year 8 Term 1 Knowledge Organiser Booklet

## Shape

Topic/Skill	Definition/Tips	Example
Net	A pattern that you can cut and fold to make a model of a 3D shape.	
Properties of Solids	<b>Faces</b> = flat surfaces <b>Edges</b> = sides/lengths <b>Vertices</b> = corners	<p>A cube has 6 faces, 12 edges and 8 vertices.</p> 
Plans and Elevations	This takes 3D drawings and produces 2D drawings.  <b>Plan View:</b> from above <b>Side Elevation:</b> from the side <b>Front Elevation:</b> from the front	
Types of Angles	<b>Acute angles</b> are less than $90^\circ$ . <b>Right angles</b> are exactly $90^\circ$ . <b>Obtuse angles</b> are greater than $90^\circ$ but less than $180^\circ$ . <b>Reflex angles</b> are greater than $180^\circ$ but less than $360^\circ$ .	
Angle Notation	Can use <b>one lower-case</b> letters, eg. $\theta$ or $x$  Can use <b>three upper-case</b> letters, eg. $BAC$	
Angles at a Point	<b>Angles around a point add up to <math>360^\circ</math>.</b>	 <p><math>a + b + c + d = 360^\circ</math></p>

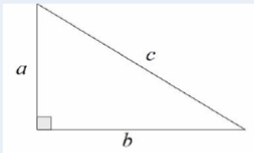
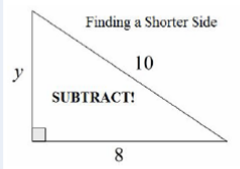


# Year 8 Term 1 Knowledge Organiser Booklet

Topic/Skill	Definition/Tips	Example
Angles on a Straight Line	Angles around a point on a straight line add up to $180^\circ$ .	
Opposite Angles	Vertically opposite angles are equal.	
Alternate Angles	Alternate angles are equal. They look like Z angles, but never say this in the exam.	
Corresponding Angles	Corresponding angles are equal. They look like F angles, but never say this in the exam.	
Co-Interior Angles	Co-Interior angles add up to $180^\circ$ . They look like C angles, but never say this in the exam.	
Angles in a Triangle	Angles in a triangle add up to $180^\circ$ .	
Types of Triangles	<p>Right Angle Triangles have a <math>90^\circ</math> angle in.</p> <p>Isosceles Triangles have 2 equal sides and 2 equal base angles.</p> <p>Equilateral Triangles have 3 equal sides and 3 equal angles (<math>60^\circ</math>).</p> <p>Scalene Triangles have different sides and different angles.</p> <p>Base angles in an isosceles triangle are equal.</p>	
Angles in a Quadrilateral	Angles in a quadrilateral add up to $360^\circ$ .	
Polygon	A 2D shape with only straight edges.	



# Year 8 Term 1 Knowledge Organiser Booklet

Topic/Skill	Definition/Tips	Example
Regular	A shape is regular if all the <b>sides</b> and all the <b>angles</b> are <b>equal</b> .	
Names of Polygons	3-sided = <b>Triangle</b> 4-sided = <b>Quadrilateral</b> 5-sided = <b>Pentagon</b> 6-sided = <b>Hexagon</b> 7-sided = <b>Heptagon/Septagon</b> 8-sided = <b>Octagon</b> 9-sided = <b>Nonagon</b> 10-sided = <b>Decagon</b>	
Sum of Interior Angles	$(n - 2) \times 180$ where n is the number of sides.	Sum of Interior Angles in a Decagon = $(10 - 2) \times 180 = 1440^\circ$
Size of Interior Angle in a Regular Polygon	$\frac{(n - 2) \times 180}{n}$ You can also use the formula: $180 - \text{Size of Exterior Angle}$	Size of Interior Angle in a Regular Pentagon = $\frac{(5 - 2) \times 180}{5} = 108^\circ$
Size of Exterior Angle in a Regular Polygon	$\frac{360}{n}$ You can also use the formula: $180 - \text{Size of Interior Angle}$	Size of Exterior Angle in a Regular Octagon = $\frac{360}{8} = 45^\circ$
Pythagoras' Theorem	For any <b>right angled triangle</b> : $a^2 + b^2 = c^2$  Used to find <b>missing lengths</b> . a and b are the shorter sides, c is the <b>hypotenuse (longest side)</b> .	<div>  </div> <div> <math display="block">a = y, b = 8, c = 10</math> <math display="block">a^2 = c^2 - b^2</math> <math display="block">y^2 = 100 - 64</math> <math display="block">y^2 = 36</math> <math display="block">y = 6</math> </div>






# Year 8 Term 1 Knowledge Organiser Booklet

## Algebra

Topic/Skill	Definition/Tips	Example
Expression	A mathematical statement written using <b>symbols, numbers or letters</b> ,	$3x + 2$ or $5y^2$
Equation	A statement showing that <b>two expressions are equal</b>	$2y - 17 = 15$
Identity	An equation that is <b>true for all values</b> of the variables An identity uses the symbol: $\equiv$	$2x \equiv x+x$
Formula	Shows the <b>relationship between two or more variables</b>	Area of a rectangle = length x width or $A = L \times W$
Simplifying Expressions	<b>Collect 'like terms'.</b>  Be careful with negatives. $x^2$ and $x$ are not like terms.	$2x + 3y + 4x - 5y + 3 = 6x - 2y + 3$ $3x + 4 - x^2 + 2x - 1 = 5x - x^2 + 3$
Expand	To expand a bracket, <b>multiply each term in the bracket</b> by the expression <b>outside</b> the bracket.	$3(m + 7) = 3m + 21$
Factorise	The <b>reverse of expanding</b> . Factorising is writing an expression as a product of terms by ' <b>taking out</b> ' a <b>common factor</b> .	$6x - 15 = 3(2x - 5)$ , where 3 is the common factor.
Solve	To find the <b>answer/value</b> of something  <b>Use inverse operations</b> on both sides of the equation (balancing method) until you find the value for the letter.	Solve $2x - 3 = 7$  Add 3 on both sides $2x = 10$  Divide by 2 on both sides $x = 5$
Inverse	<b>Opposite</b>	The inverse of addition is subtraction. The inverse of multiplication is division.
Rearranging Formulae	<b>Use inverse operations</b> on both sides of the formula (balancing method) until you find the expression for the letter.	Make x the subject of $y = \frac{2x-1}{z}$  Multiply both sides by z $yz = 2x - 1$  Add 1 to both sides $yz + 1 = 2x$  Divide by 2 on both sides $\frac{yz + 1}{2} = x$  We now have x as the subject.



# Year 8 Term 1 Knowledge Organiser Booklet

Topic/Skill	Definition/Tips	Example
Writing Formulae	Substitute letters for words in the question.	Bob charges £3 per window and a £5 call out charge. $C = 3N + 5$ Where N=number of windows and C=cost
Substitution	Replace letters with numbers.  Be careful of $5x^2$ . You need to square first, then multiply by 5.	$a = 3, b = 2$ and $c = 5$ . Find: 1. $2a = 2 \times 3 = 6$ 2. $3a - 2b = 3 \times 3 - 2 \times 2 = 5$ 3. $7b^2 - 5 = 7 \times 2^2 - 5 = 23$
Inequality	An inequality says that two values are <b>not equal</b> . $a \neq b$ means that a is not equal to b.	$7 \neq 3$ $x \neq 0$
Inequality symbols	$x > 2$ means x is greater than 2 $x < 3$ means x is less than 3 $x \geq 1$ means x is greater than or equal to 1 $x \leq 6$ means x is less than or equal to 6	State the integers that satisfy $-2 < x \leq 4$ .  -1, 0, 1, 2, 3, 4
Inequalities on a Number Line	Inequalities can be shown on a number line.  Open circles are used for numbers that are less than or greater than ( $<$ or $>$ )  Closed circles are used for numbers that are less than or equal or greater than or equal ( $\leq$ or $\geq$ )	 $x \geq 0$  $x < 2$  $-5 \leq x < 4$
Quadratic	A quadratic expression is of the form $ax^2 + bx + c$ where $a, b$ and $c$ are numbers, $a \neq 0$	Examples of quadratic expressions: $x^2$ $8x^2 - 3x + 7$ Examples of non-quadratic expressions: $2x^3 - 5x^2$ $9x - 1$
Factorising Quadratics	When a quadratic expression is in the form $x^2 + bx + c$ find the two numbers that <b>add to give b</b> and <b>multiply to give c</b> .	$x^2 + 7x + 10 = (x + 5)(x + 2)$ (because 5 and 2 add to give 7 and multiply to give 10) $x^2 + 2x - 8 = (x + 4)(x - 2)$ (because +4 and -2 add to give +2 and multiply to give -8)
Difference of Two Squares	An expression of the form $a^2 - b^2$ can be factorised to give $(a + b)(a - b)$	$x^2 - 25 = (x + 5)(x - 5)$ $16x^2 - 81 = (4x + 9)(4x - 9)$



# Year 8 Term 1 Knowledge Organiser Booklet

## Year 8 Science Term One Digestion

Each person needs a different amount of energy depending on factors such as:

- gender (male or female)
- age
- amount of daily activity

If you look on the side of food packets you will see the food's energy content.

This is usually measured in kilojoules, kJ.

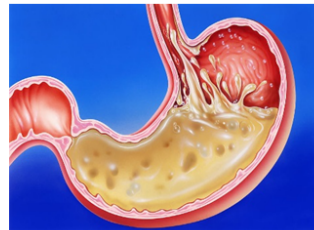
To keep healthy, it is vital to eat a **balanced diet**. This means eating foods that contain **nutrients** in the correct amount.

Oesophagus contains rings of muscle to move food

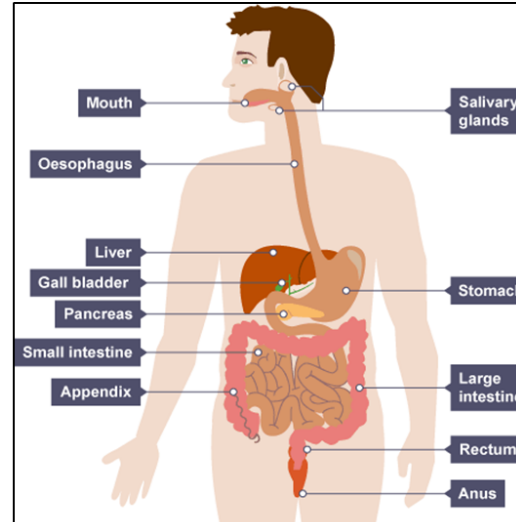
Nutrient	Use in the body
Carbohydrate	To provide energy
Protein	For growth and repair
Lipids (fats and oils)	To provide energy. Also to store energy in the body and insulate it against the cold.
Minerals	Needed in small amounts to maintain health
Vitamins	Needed in small amounts to maintain health
Dietary fibre	To provide roughage to help to keep the food moving through the gut
Water	Needed for cells and body fluids

If you have too little of a particular nutrient, we say that you have a **deficiency** in that nutrient.  
Vitamin C → Scurvy  
Vitamin D → Rickets  
Iron → Anaemia

Stomach contains hydrochloric acid to kill bacteria. It also has strong muscles which churn up the food.



Enzymes are not living things. They are just special proteins that can break large molecules into small molecules. Different types of enzymes can break down different nutrients:  
amylase and other carbohydrase enzymes break down starch into sugar  
protease enzymes break down proteins into amino acids  
lipase enzymes break down lipids (fats and oils) into fatty acids and glycerol



After we swallow, our food passes through these organs in turn:

- oesophagus
- stomach
- small intestine
- large intestine

### Stages of digestion

Different things happen to food as it passes through the digestive system:

- food is digested in the mouth, stomach and small intestine
- digested food is absorbed into the bloodstream in the small intestine
- excess water is absorbed back into the body in the large intestine
- any undigested food passes out of the anus as faeces when we go to the toilet

### Liver and pancreas:

The liver and the pancreas play an important part in digestion. The liver produces bile, which helps the digestion of lipids (fats and oil). The pancreas produces biological catalysts called digestive enzymes which speed up the digestive reactions. **FOOD DOES NOT PASS THROUGH THE LIVER OR THE PANCREAS**

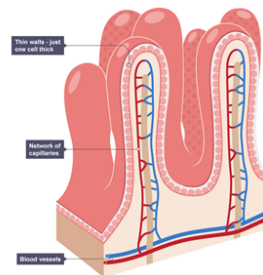
These are the processes that happen in the digestive system:

ingestion (eating) → digestion (breaking down) → absorption → egestion (removal from the body)

### Absorption:

Digested food molecules are absorbed in the small intestine. This means that they pass through the wall of the small intestine and into our bloodstream. Once there, the digested food molecules are carried around the body to where they are needed.

Only small, soluble substances can pass across the wall of the small intestine. Large insoluble substances cannot pass through.



Structure of the villi in the small intestine

Small intestine contains muscle and enzymes to help digestion.



Year 8  
Science  
Term One  
Periodic  
table

Name of element	Symbol
Hydrogen	H
Oxygen	O
Nitrogen	N
Carbon	C
Iron	Fe
Zinc	Zn
Copper	Cu
Sulfur	S
Aluminium	Al
Iodine	I
Bromine	Br
Chlorine	Cl
Sodium	Na
Potassium	K
Magnesium	Mg

Ceramic materials:

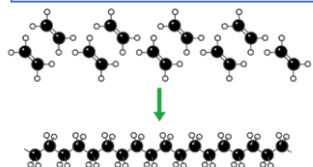
- are solids made by baking a starting material in a very hot oven or kiln
- are hard and tough
- have very many different uses

Composite materials are made from two or more different types of material. The materials for a composite material are chosen because they have different properties that combine to make a more useful material.

Compound	Formula	Elements present	Ratio of atoms
Sodium hydroxide	NaOH	Sodium, Oxygen, Hydrogen	1:1:1
Sodium Nitrate	NaNO <sub>3</sub>	Sodium, Nitrogen, Oxyegn	1:1:3
Copper sulfate	CuSO <sub>4</sub>	Copper, Sulfur, Oxygen	1:1:4

Polymer: large molecule made up of a very long chain of smaller molecules

Monomer: a small molecule that becomes chemically bonded to other monomers to form a polymer

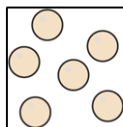


Monomers of ethene joined together to make polyethene.

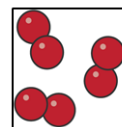
Polymer name	Typical use	Properties
Poly(ethene) or polythene	Plastic bags	Strong and hard-wearing
PVC (Polyvinylchloride)	Water pipes	Strong, hard-wearing, chemically unreactive
Nylon	Clothing	Can be made into fibres, strong and flexible

There is a periodic table in your planner!

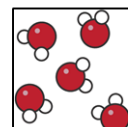
Atom	Basic building block of an element
Element	Made of only one type of atom
Compound	Made of two or more elements chemically joined
Molecule	Two or more atoms joined together



ATOMS of Helium.  
Helium is an ELEMENT.



Molecules  
of the  
ELEMENT  
Oxygen.



Molecules of  
the  
COMPOUND  
water.

Group 0 is the noble gases: helium, neon, argon, krypton, xenon and radon. They are all unreactive, colourless, odourless gases.

Chemical change: A new product is made  
Physical change: A change of state, no new product is made

Magnesium + Oxygen  $\rightarrow$  Magnesium Oxide

## Reactants

## Products

The halogens are in group 7 and they are non-metals. Fluorine is the most reactive and iodine is the least reactive.

The elements are arranged in order of increasing atomic number

- the horizontal rows are called periods
- the vertical columns are called groups
- elements in the same group are similar to each other

1	2											3	4	5	6	7	8	
Li	Be																	H
Na	Mg																	
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	
Fr	Ra	Ac																

 Metals  Non-metals

<u>Group 1 metal</u>	<u>Reaction with water</u>
Lithium	Floated, fizzed until it dissolves
Sodium	Floated, moves around quickly in a ball until it dissolves
Potassium	Floated, moves rapidly, sets on fire with a lilac flame, small explosion at the end

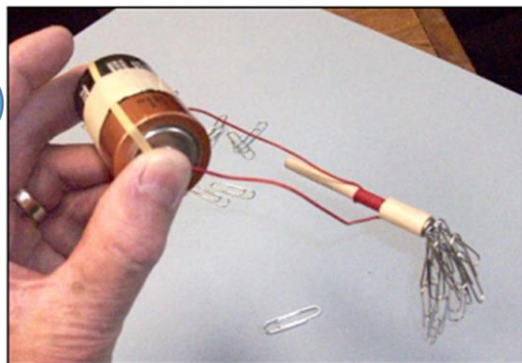
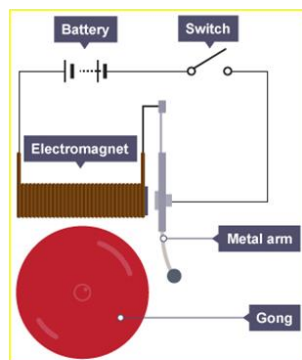
Group 1 metals are called the alkali metals because they form an alkali solution with water.

Halogen	Appearance	Use
Fluorine	Pale yellow, highly flammable gas	Toothpaste, added to drinking water
Chlorine	Green gas	Disinfectant in bleach or swimming pools
Bromine	Brown/orange liquid	Pesticides, making plastics or in swimming pools
Iodine	Grey solid	Antiseptic, cleaning skin before operations



# Year 8 Term 1 Knowledge Organiser Booklet

Year 8 Science  
Term One  
Electromagnets



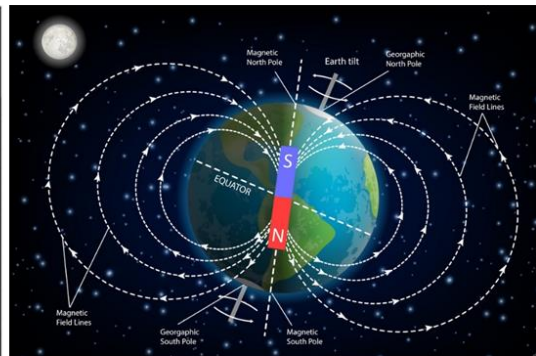
We can make our own electromagnets using:

- An iron nail as the core
- A battery to provide the electric current
- Copper Wire to act as the solenoid
- Paperclips to check our electromagnet works!

To make an electromagnet more powerful you can increase the number of coils of wire

Electromagnets have many uses:

- Electric bells
  - When the switch is closed current flows.
  - The iron core of the electromagnet becomes magnetised.
  - The iron bar called the armature is attracted to the electromagnet and moves towards it.
  - The hammer connected to the armature moves to strike the gong.
  - The bell starts ringing.
  - The spring above the metal arm moves away from the contact which breaks the circuit.
  - The bell stops ringing.
- Circuit breakers
- Computers
- At the dump to move cars

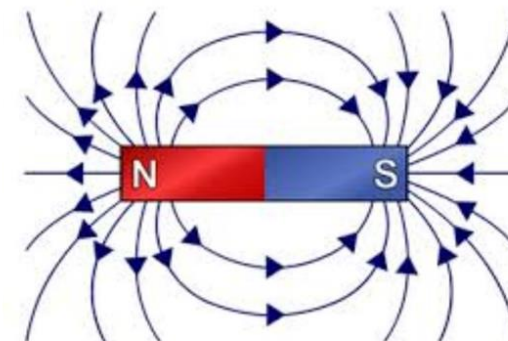
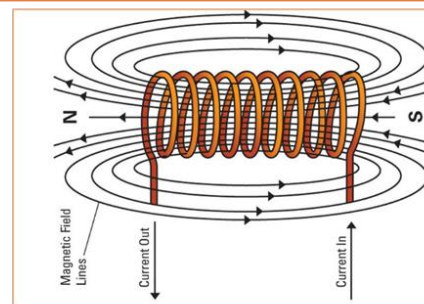


The Earth has a magnetic field which is why compasses always point to magnetic north. This is slightly different to the north pole

Electromagnet= Type of temporary magnet that is magnetic only when an electric current passes through it

Solenoid = A cylindrical coil of wire acting as a magnet when carrying electric current

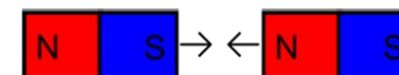
Core = Piece of iron inside the coil of an electromagnet which makes the magnetic field stronger



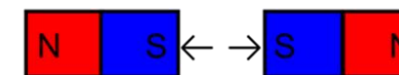
Magnets have a North pole and a South pole.

The magnetic field is the area in which you can feel the magnetic force.

The field lines move from North to South.



Opposite poles **attract**

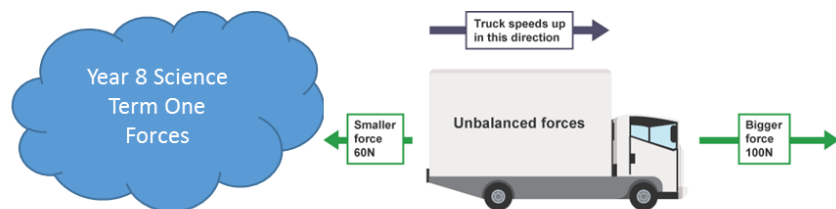


Same poles **repel**

Attract = Pull towards; a magnet will attract any magnetic material that is close enough  
Repel = Push away; eg north pole of a magnet will repel the north pole of another magnet

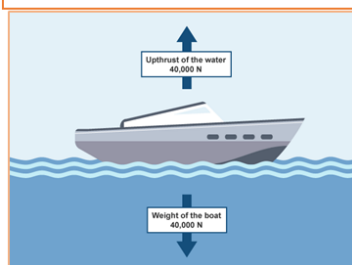


# Year 8 Term 1 Knowledge Organiser Booklet



Equilibrium	When forces are balanced
Contact Force	Force arising when objects are touching
Non-contact force	Force that arises although objects are not touching
Resultant force	A single force which has the same effect on an object as a set of forces it replaces
Newton	Unit of force (N)
Drag	Resistive force of air or water
Streamlined	Has a shape that helps an object to move easily through a fluid with very little friction
Friction	A force that opposes movement
Compression	Force squashing or pushing together
Tension	A force applied to a material which tries to stretch it
Deformation	Change of shape
Linear relationship	A relationship between 2 variables; changing the independent variable causes the same change in the dependent variable
Pressure	Force on a certain area
Density	Mass of material per unit volume

## How do objects float?



## Balanced forces

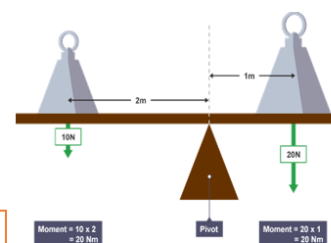
When two forces acting on an object are equal in size but act in opposite directions, we say that they are balanced forces.

If the forces on an object are balanced (or if there are no forces acting on it), this is what happens: a stationary object stays still a moving object continues to move at the same speed and in the same direction

Remember that an object can be moving, even if there are no forces acting on it.

## Force diagrams

In a force diagram, an arrow represents each force. The arrow shows: the size of the force (the longer the arrow, the bigger the force) and the direction in which the force acts. The arrow should be labelled with the name of the force and its size in newtons. Textbooks often show a force with a thick coloured arrow so that it looks nice, but it is more accurate if you just use a ruler and pen or pencil to draw an arrow with a single line.



## Calculating moments

To calculate a moment, you need to know two things: the distance from the pivot that the force is applied the size of the force applied  
moment = force  $\times$  distance

## Hooke's Law

The extension of a material or a spring is its increase in length when pulled. Hooke's Law says that the extension of an elastic object is directly proportional to the force applied to it. In other words:

if the force applied is doubled, the extension doubles if no force is applied, there is no extension

You can investigate Hooke's Law using a spring:

1. hang the spring from a stand and clamp
2. measure its length with a ruler
3. hang an empty slotted mass carrier from the lower end and measure the new length of the spring
4. keep adding more slotted masses, measuring the new length each time

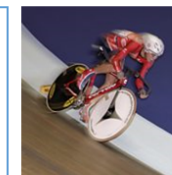
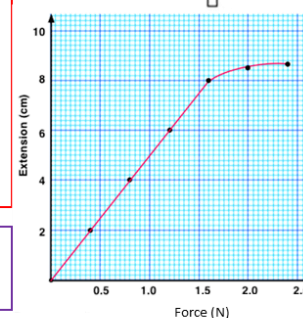
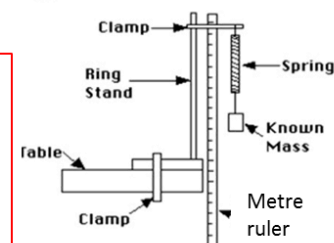
$$\text{Pressure} = \text{Force} \div \text{Area}$$

The bigger the area, the less pressure

## Streamlining:

Streamlining reduces air resistance (drag). Racing cyclists crouch down low on their bikes to reduce the air resistance on them. This helps them to cycle faster. They also wear streamlined helmets. These have special, smooth shapes that allow the air to flow over the cyclist more easily

Apparatus for Hooke's Law Lab





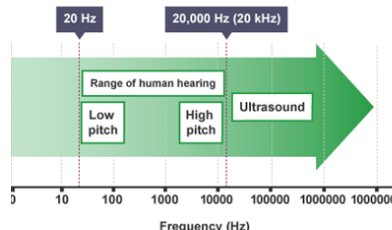
# Year 8 Term 1 Knowledge Organiser Booklet

## Year 8 Science Term One Waves

The frequency of sound waves is measured in hertz, which has the symbol Hz. The bigger the number, the greater the frequency and the higher the pitch of the sound. Human beings can generally hear sounds as low as 20 Hz and as high as 20,000 Hz (20 kHz).

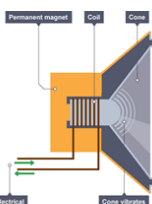
Sound with a frequency of more than 20,000 Hz is called ultrasound. It is too high pitched for humans to hear, but other animals (such as dogs, cats and bats) can hear ultrasound.

Ultrasound has many applications in medicine, including ultrasound scans to check on the health of unborn babies.



Ultrasound can be used to clean jewellery. The jewellery is placed in an ultrasonic bath, where the rapid vibrations shake the dirt loose. Ultrasound can also be used for physiotherapy. Its energy is absorbed by soft tissue in the body, bringing relief from sprains and arthritis (painful joints).

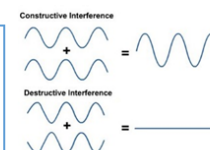
Sound waves are produced by all vibrating objects. Loudspeakers work by converting electrical energy into kinetic energy. This moves the cone which creates the sound waves.



If the wavelength is less than 400nm then it is ultraviolet light. Ultraviolet light is released from the Sun; it stimulates the production of vitamin D which strengthens bones but it can also burn skin and increase the chance of developing skin cancer.

### Microphones:

Mobile phones and telephones contain microphones. These devices contain a diaphragm, which does a similar job to an ear drum. The vibrations in air make the diaphragm vibrate, and these vibrations are changed to electrical impulses. In the lab, the electrical impulses can be sent to an oscilloscope, which represents them as a graph on a screen.



The top image shows two waves, if the crests coincide then the waves are added together (superposition). The bottom image shows the crest and trough in line; the waves cancel out.

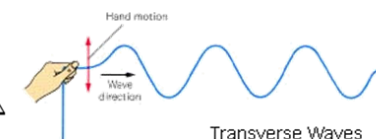
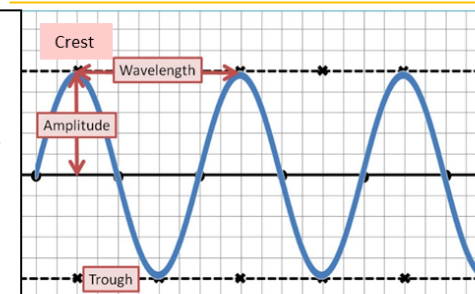
### The spectrum of visible light:

Here are the seven colours of the spectrum listed in order of their frequency, from the lowest frequency (fewest waves per second) to the highest frequency (most waves per second):

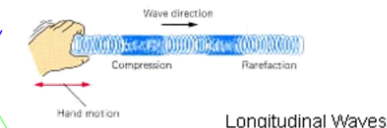
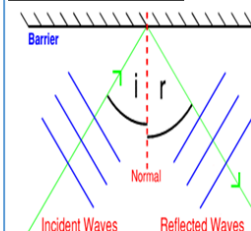
red  
orange  
yellow  
green  
blue  
indigo  
violet

This mnemonic is one way to remember the order: 'Richard Of York Gave Battle In Vain'.

Red light has the longest wavelength 700nm, violet has the shortest wavelength 400nm.

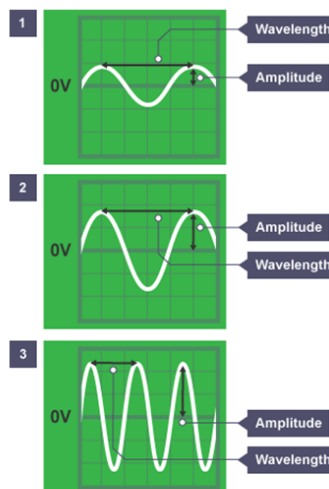


Transverse Waves



Longitudinal Waves

Transverse Wave	A wave at which the oscillations are at right angles to the direction of energy transfer
Oscillation	Movement back and forth in a regular rhythm
Longitudinal Wave	Wave in which the vibrations are parallel to the direction where energy is transferred
Amplitude	Maximum distance moved in a vibration, measured from the middle position
Pitch	How high or low the frequency of the sound is
Frequency	Number of waves produced in 1 second, measured in Hertz (Hz)
Wavelength	Distance along a wave from crest to crest or trough to trough



Diagrams 1 and 2 show two sounds with the same wavelength and frequency, so they will have the same pitch. The sound in diagram 2 has a greater amplitude than the one in diagram 1, so it will be louder.

Diagrams 2 and 3 show two sounds with a different wavelength and frequency. The sound in diagram 3 has a higher frequency than the one in diagram 2, so its pitch will be higher.



## Year 8 Term 1 Knowledge Organiser Booklet

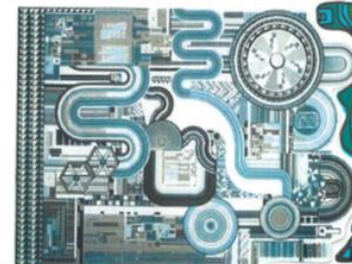
Key terms and definitions		Key terms and definitions	
Contrast	Difference and variety i.e. Dark against light	Graduated Shading	Shading with a pencil/ pencil to create depth. Where dark gradually turns into light without any imperfections
Composition	A formal element in art. The placement and arrangement of your artwork and how shapes relate within it. i.e. The layout and positioning of your work	Guidelines	Creating a series of lines to draw within so everything is the same size i.e. A title in your sketchbook so you can get all your letters the same size
Mark- Making	Different patterns, lines, textures and shapes made with a pencil i.e. scribble, cross- hatching	Primary Colour	A group of colours which all other colours are made from: Red , Yellow and Blue
Proportion	Comparison of size. The relative size of parts of a whole i.e. Are the eyes the right size for the face?	Secondary Colour	A colour resulting from mixing two primary colours together i.e. Red and Yellow = Orange
Formal Elements	Formal Elements are parts used to make a piece of art work. The 8 elements are Line, Form, ,Shape, Tone, Pattern, Texture, Colour and Composition	Blending	Gently bringing together two or more colours to create the softening of lines i.e. shading blue and yellow together to create blue graduating to green graduating to yellow.
Block colour	Apply one even coat of colour to a surface without any imperfections	Definition	To make something “Stand out” and become obvious
Texture	Is a formal element which has an actual surface quality i.e. adding sawdust to paint or creating an illusion of a surface i.e. furry, scratchy etcetera	Depth	Creating 3 dimensions by using graduated shading
Shape	Is a formal element in art; it is an enclosed space. Shapes are limited to 2 dimensions which are length and width	Form	Creating a drawing of object which has the appearance of length, width & depth i.e. Creating a 3 dimensional effect
Pop Art	Pop art emerged in the 1950’s. Artists explored popular and mass culture such as comic books, advertising and mundane everyday objects such as soup cans. Famous Pop artists include Andy Warhol and Roy Lichtenstein	Tone	Is an formal element in art and literally means light and dark



# Year 8 Term 1 Knowledge Organiser Booklet

## PAOLOZZI

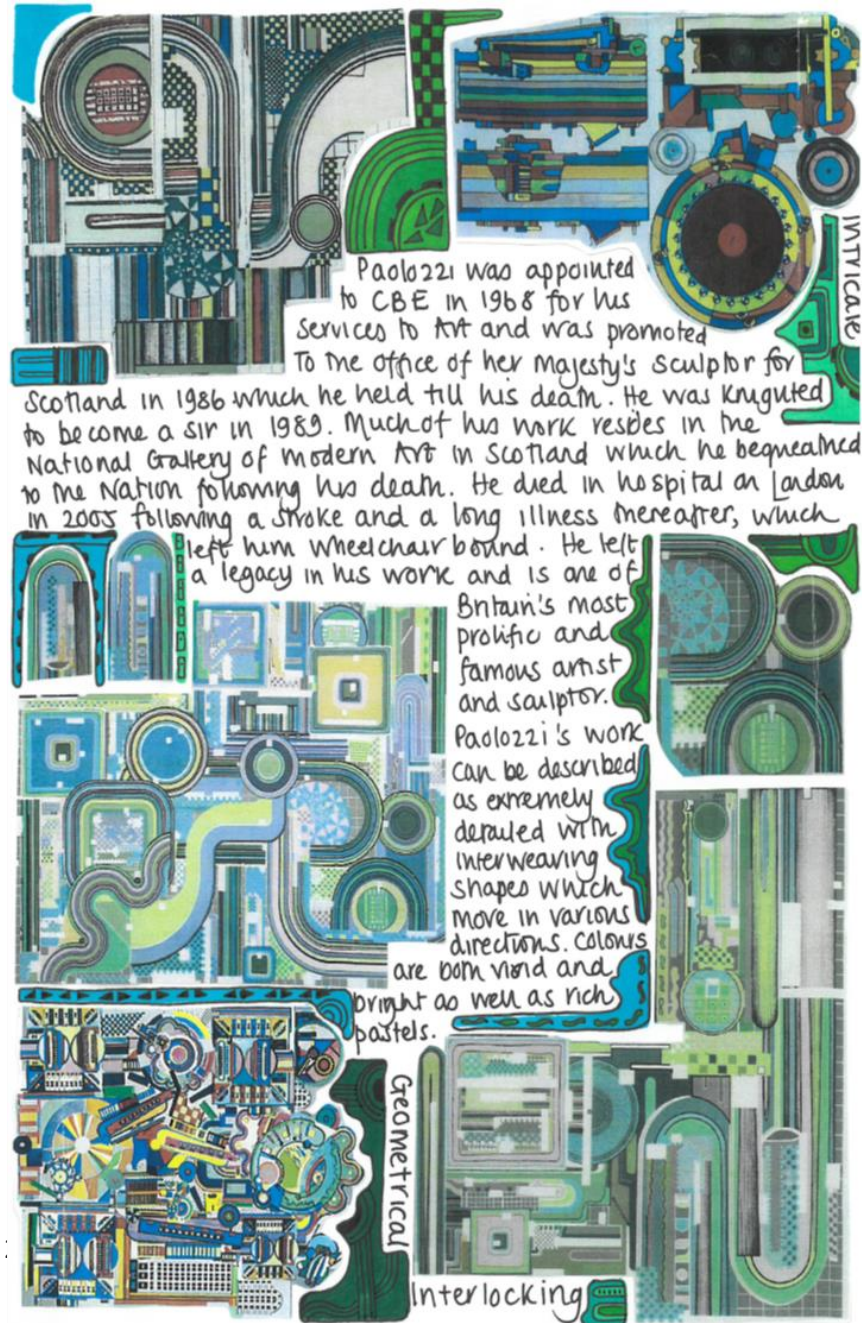
Eduardo Paolozzi was born in 1924 in Scotland. He belonged to the Surrealist and Pop Art movement in art. He came to the public's attention in the 1950's by producing a striking range of screenprints and collages. He always described his style as Surrealist which means dream like. He was also a famous sculptor who was inspired by and intrigued by how things work. He regularly took mechanical objects apart and then put them back together.



To see how they worked. His work has a very industrial and mechanical feel about it. In the 1960's Paolozzi illustrated popular science books by the German doctor Fritz Klein.



Layering



Paolozzi was appointed to CBE in 1968 for his services to art and was promoted to the office of her majesty's sculptor for Scotland in 1986 which he held till his death. He was knighted to become a sir in 1989. Much of his work resides in the National Gallery of modern art in Scotland which he bequeathed to the nation following his death. He died in hospital in London in 2005 following a stroke and a long illness thereafter, which left him wheelchair bound. He left a legacy in his work and is one of Britain's most prolific and famous artists and sculptors.

Paolozzi's work can be described as extremely detailed with interweaving shapes which move in various directions. Colours are both vivid and bright as well as rich pastels.

Interlocking



## Year 8 Term 1 Knowledge Organiser Booklet

Key terms and definitions		Key terms and definitions	
Asymmetrical	Means each side is not the same, so one eye may appear bigger than the other and lower down the face than the other.	Graduated Shading	Shading with a pencil/ pencil to create depth. Where dark gradually turns into light without any imperfections
Composition	A formal element in art. The placement and arrangement of your artwork and how shapes relate within it. i.e. The layout and positioning of your work	Guidelines	Creating a series of lines to draw within so everything is the same size i.e. A title in your sketchbook so you can get all your letters the same size
Mark- Making	Different patterns, lines, textures and shapes made with a pencil i.e. scribble, cross- hatching	Primary Colour	A group of colours which all other colours are made from: Red , Yellow and Blue
Proportion	Comparison of size. The relative size of parts of a whole i.e. Are the eyes the right size for the face?	Secondary Colour	A colour resulting from mixing two primary colours together i.e. Red and Yellow = Orange
Formal Elements	Formal Elements are parts used to make a piece of art work. The 8 elements are Line, Form, ,Shape, Tone, Pattern, Texture, Colour and Composition	Blending	Gently bringing together two or more colours to create the softening of lines i.e. shading blue and yellow together to create blue graduating to green graduating to yellow.
Block colour	Apply one even coat of colour to a surface without any imperfections	Definition	To make something “Stand out” and become obvious
Texture	Is a formal element which has an actual surface quality i.e. adding sawdust to paint or creating an illusion of a surface i.e. furry, scratchy etcetera	Depth	Creating 3 dimensions by using graduated shading
Shape	Is a formal element in art; it is an enclosed space. Shapes are limited to 2 dimensions which are length and width	Form	Creating a drawing of object which has the appearance of length, width & depth i.e. Creating a 3 dimensional effect
Contrast	Difference/ Variety i.e. dark and light	Tone	Is an formal element in art and literally means light and dark



# Year 8 Term 1 Knowledge Organiser Booklet





# Year 8 Term 1 Knowledge Organiser Booklet

## Mysteries of the Universe

Key terms and definitions		Key terms and definitions	
Multi Faith	Lots of religions OR different religions, are allowed to co-exist and be followed or practiced.	Near Death Experience	When someone close to death as an out of body experience (almost dying).
Cohesion	The act of working together for a course.	Stereotype	A widely held, fixed and oversimplified image or idea about something or someone.
Religious Freedom	The right to practise your religion or change religions	The Cycle of Life	Buddhist belief that when you die you are reborn and live again until you reach enlightenment.
Respect	A feeling of deep admiration for someone or something because of their abilities, qualities, or achievements.	Dukkha	Buddhist term meaning suffering exists.
Creator	A person or thing that brings something into existence	Nirodha	Buddhist term meaning there is an end to suffering.
Creationists	Christians who believe that God created the world as it is written in the Bible.	Enlightenment	Buddhist belief that you reach this when you have perfect knowledge or wisdom.
Belief	An opinion that something is true often without any real evidence.' (Ideas that you accept without question e.g. Jesus is the Son of God).	Reincarnation	The belief that the soul, upon death of the body, comes back to earth in another body or form.
Faith	Faith is when a person believes something to be true and puts their 'trust' in what they believe to be true.	Values	The principles or standards that are important to you and society, that are used to judge what is and is not acceptable behaviour.
Peace	A state or period of time, where there is freedom from disturbance and everyone can co-exist together without conflict or tension.	The Eight Fold Path	A Buddhist belief in a set of steps to try and follow every day.
Mystery	Something that is difficult or impossible to explain.	Samudaya	Buddhist term meaning there is a cause for suffering.
Creation	The beginning of the world.	Magga	Buddhist term meaning in order to end suffering, you must follow the Eightfold Path.
Big Bang	A scientific explanation for how the world began.	Nirvana	A Buddhist belief that this is the ultimate goal, that is achieved when you reach a state of enlightenment.



# Year 8 Term 1 Knowledge Organiser Booklet

## Mysteries of the Universe

Key terms and definitions		Key terms and definitions	
Theory	An idea that accounts for a situation or justifies a course of action.	Evolution	The gradual development of something over a period of time.
Omnipotent	All powerful	Benevolent	All Loving
Omniscient	All knowing	Diversity	Many or different.
Design	The appearance of order and purpose.	Analogy	A way of comparing two similar things to highlight their similarities.
Eternal	Everlasting, will last forever.	Trinity	A Christian belief, that there is one God with three elements e.g. The Father, The Son and the Holy Spirit.
Atheist	Someone who is certain that God does not exist.	Agnostic	Someone who is uncertain of God's existence.
Theist	Someone who is certain that God does exist.	Omnipresent	Always present
Spirituality	The feeling of being concerned with or connected to something greater.	Misconception	Believing something to be true when it isn't.
Incarnation	To become human. A Christian belief that God came to earth as Jesus, so became human.	Society	People living together in communities.
Heaven	A Christian belief in a place of paradise where God is.	Hell	A Christian belief in a unpleasant place away from God..
Bible	Christian Holy Book and source of authority.	Qur'an	Holy book of Islam and source of authority.
Akhirah	Belief in Islam in life after death.	Al'Jannah	A Muslim belief in a place of paradise where God is.
Jahannam	A Muslim belief in an unpleasant place away from God.	Evil	Wickedness or a wicked deed or person, harmful, unpleasant, morally bad.
Suffering	To cause pain either mental, emotional or physical to a human being.	Paranormal	Unexplained things, which are thought to have a spiritual cause.



# Year 8 Term 1 Knowledge Organiser Booklet

## Our Beliefs and Responsibilities

Key terms and definitions		Key terms and definitions	
Multi Faith	Lots of religions OR different religions, are allowed to co-exist and be followed or practiced.	Belief	An opinion that something is true often without any real evidence.' (Ideas that you accept without question e.g. Jesus is the Son of God).
Cohesion	The act of working together for a course.	Faith	Faith is when a person believes something to be true and puts their 'trust' in what they believe to be true.
Religious Freedom	The right to practise your religion or change religions		
Respect	A feeling of deep admiration for someone or something because of their abilities, qualities, or achievements.	Conscience	The inner feeling or sense of what is right or wrong, used by people to judge their moral actions.
Law	Rules made by parliament and enforced by the courts, which we must all live by.	Addiction	A recurring compulsion to engage in an activity regardless of its bad effects.
Reconciliation	Restoring relationships and bringing people together who hold different views/beliefs to accept their differences.	Harmony	Living peacefully together, getting along with everyone.
Benevolent	All Loving	Charity	The voluntary giving of help or aid to those in need.
Omnipotent	All powerful	Omniscient	All knowing
Sin	An act against the will of God (something that is wrong to do).	Omnipresent	Always present
Responsibility	Taking ownership of your actions or behaviour.	Rehabilitation	Restore to normal life.
Eternal	Everlasting, will last forever.	Stewardship	Looking after something so it can be passed on to the next generation.
Atheist	Someone who is certain that God does not exist.	Rules	Laws which say how you should behave or the way in which you should behave.
Theist	Someone who is certain that God does exist.	Agnostic	Someone who is uncertain of God's existence.
		Environment	The surroundings in which plants and animals live and on which they depend to live.



# Year 8 Term 1 Knowledge Organiser Booklet

## Our Beliefs and Responsibilities

Key terms and definitions		Key terms and definitions	
Natural Resources	Naturally occurring materials (not made by humans), for example oil and fertile farm land, which can be used by humans.	Pollution	The contamination of and damage to the environment caused by human waste and actions.
Global Warming	An increase to the temperature of the earth's atmosphere, also known as Climate Change.	Situation Ethics	The idea that people should base moral decisions on what is the most loving thing to do.
Compassion	Showing sympathy, empathy and concern for the feelings, sufferings or misfortunes of others.	Morality	Principles held by people concerning the difference between right and wrong, good and bad.
Social Change	The way in which society has changed or is changing (and also the possibilities for future change).	Genetic Engineering	A scientific process where the structure and characteristics of genes are changed.
Quality of Life	The idea that life must have some benefits for it to be worth living.	Sanctity of Life	The belief that life is holy and belongs to God.
Poverty	The state of being extremely poor.	Wealth	A plentiful supply of something that is desirable or valuable for example money.
Victim	Someone or something that has been hurt, damaged, suffered or lost something either because of the actions of someone or something else or because of illness or due to chance.	Values	The principles or standards that are important to you and society, that are used to judge what is and is not acceptable behaviour.
Justice	Doing what is right and fair based on the law.	Conflict	A serious disagreement.
Interfaith Dialogue	Different religions talking to each other.		



# Year 8 Term 1 Knowledge Organiser Booklet

## Paths to Peace

Key terms and definitions		Key terms and definitions	
Multi Faith	Lots of religions OR different religions, are allowed to co-exist and be followed or practiced.	Belief	An opinion that something is true often without any real evidence.' (Ideas that you accept without question e.g. Jesus is the Son of God).
Cohesion	The act of working together for a course.		
Religious Freedom	The right to practise your religion or change religions	Faith	Faith is when a person believes something to be true and puts their 'trust' in what they believe to be true.
Respect	A feeling of deep admiration for someone or something because of their abilities, qualities, or achievements.	Peace	A state or period of time, where there is freedom from disturbance and everyone can co-exist together without conflict or tension.
Symbols	An image or logo which represents something with a deeper meaning.	Signs	A way of giving information or instructions.
Reconciliation	Restoring relationships and bringing people together who hold different views/beliefs to accept their differences.	Harmony	Living peacefully together, getting along with everyone.
Benevolent	All Loving	Charity	The voluntary giving of help or aid to those in need.
Omnipotent	All powerful	Omniscient	All knowing
Rituals	Actions that you perform e.g. Kneeling to pray	Prayer	An act of communication with God in religion.
Communication	Exchanging of information in written or verbal form.	Diversity	Many or different.
Eternal	Everlasting, will last forever.	Community	A group of people that are connected or have shared characteristic in common such as: Meeting to worship e.g. The Congregation of a Church
Atheist	Someone who is certain that God does not exist.	Rules	Laws which say how you should behave or the way in which you should behave.
Theist	Someone who is certain that God does exist.	Agnostic	Someone who is uncertain of God's existence.
		Omnipresent	Always present



# Year 8 Term 1 Knowledge Organiser Booklet

## Paths to Peace

Key terms and definitions		Key terms and definitions	
Spirituality	The feeling of being concerned with or connected to something greater.	Misconception	Believing something to be true when it isn't.
Sectarianism	A form of prejudice and discrimination based on perceived differences between different subdivisions within a religion (or political movement).	Forgiveness	To stop blaming someone or pardon them for what they have done wrong and move on.
		Church	Christian religious building and place of worship.
Compassion	Showing sympathy, empathy and concern for the feelings, sufferings or misfortunes of others.	Stereotype	A widely held, fixed and oversimplified image or idea about something or someone.
Mosque	Religious building and place of worship in Islam.	Extremism	Views or beliefs (e.g. political), held which are highly disagreeable with the majority of people.
Terrorism	The use of violence and intimidation in the pursuit of political aims, to create fear and suffering.	Values	The principles or standards that are important to you and society, that are used to judge what is and is not acceptable behaviour.
Radicalisation	When an individual or group become extreme in a political, social, or religious way. It is a process which somebody goes through in order to become involved in extremist activities or terrorism, from a starting point of having no particular strong opinions.	Conflict Resolution	Bringing a fight or struggle to a peaceful conclusion.
		Pacifism	The belief that all wars and violence are unjustifiable and should always be settled peacefully without violence.
Just War	A war which is fought for the right reasons and in the right and proper way.	Peacemaker	Someone who works for and to establish peace and to end conflicts.
		Conflict	A serious disagreement.
Victim	Someone or something that has been hurt, damaged, suffered or lost something either because of the actions of someone or something else or because of illness or due to chance.	Non-violent protest	Standing up for something without using violence.
		Prejudice	A perceived opinion (negative), which is not based on any reason or fact.
Conscientious Objector	Someone who refuses to go along with something for ethical reasons e.g. join in with acts of violence.	35	
Justice	Doing what is right and fair based on the law.		
Interfaith Dialogue	Different religions talking to each other.		
Inspirational	Someone or something that gives you hope and encouragement to do something.		
Discrimination	Unjust and unfair treatment /behaviour towards certain people or groups based on prejudice.		



## Year 8 Term 1 Knowledge Organiser Booklet

Key term	Definition	Key term	Definition
<b>Choral Speaking</b>	Can be used to create atmosphere or communicate an intended meaning to an audience. It uses layered language of key words and phrases.	<b>Vocal Skills</b>	Are the use of voice used to communicate meaning, such as pitch, pace and pause
<b>Narration</b>	Narration is a technique where performers speak to the audience directly to give information, or comment on the action of the scene or the motivation of the character.	<b>Direct Speech</b>	When the actor speaks directly to the audience reporting their thoughts or their feelings about the situation.
<b>Still Image</b>	A frozen moment that communicates meaning to the audience. The movement skills used are vital for telling a story to the audience.	<b>Nurture Vs Nature</b>	The nature vs nurture debate involves whether human behaviour is determined by the environment and experiences or by their genes
<b>Grotesque</b>	A very ugly, distorted, outrageous figure or image.	<b>Devised Drama</b>	Is the creation of an original piece of theatre, with an intended message to communicate to an audience
<b>Facial Expressions</b>	Where emotions are conveyed to the audience through the use of movement in the face	<b>Verbatim Theatre</b>	Is theatre that is created using real life accounts, recordings, interviews – also known as documentary drama
<b>Body language</b>	Is a movement position with the body that communicates meaning for the audience	<b>Mythology</b>	A set of stories or beliefs about a particular person, institution or situation, especially when exaggerated or fictitious
<b>Gestures</b>	A hand movement that communicates meaning and emotions to the audience	<b>Flashforward</b>	Can be used to take the drama forward in time, giving the audience additional information
<b>Movement Skills</b>	Can be used by the actor to communicate meaning and emotion, these can be facial expressions, gestures, body language	<b>Flashback</b>	Can be used to take the drama back in time, giving the audience information about what has happened previously
<b>Forum Theatre</b>	A rehearsal technique where the audience take on the role of the spec-actors to give immediate feedback to the actors. The spec – actor may give verbal feedback or swap places with the actor to model improvement.	<b>Stimulus / Stimuli</b>	An artefact that is used to explore and develop an original piece of theatre



# Year 8 Term 1 Knowledge Organiser Booklet



## ACCOMMODATION

Youth hostel	El albergue juvenil
Accommodation	El alojamiento
To stay / lodge	Alojarse / quedarse
To rent	Alquilar
Campsite	El camping
Abroad	Al extranjero
Island	La isla
In the mountains	En la montaña
Guest house	La pensión
Full board	La pensión completa
Half board	La media pensión
An inn	Un parador
On the coast	En la costa
In the country	En el campo
Next to the beach	Al lado de la playa
In the town centre	En el centro de la ciudad
A caravan	Una caravana
Tent	Una tienda de campaña
Cabin	Una cabina
Sea shore	A orillas del mar
Ski lodge	Un chalet de esquí
To go on a cruise	Irse de crucero
Near to	Cerca de
In the outskirts	En las afueras
North	El norte
East	El este
South	El sur
West	El oeste
Far from	Lejos de
Place	El sitio
In the middle of	En el medio de
To be situated	Estar situado
	Encontrarse

## ACTIVITIES

To bathe	Bañarse
To walk	Caminar
Water sports	Los deportes acuáticos
To relax / rest	Descansar
To ski	Esquiar
To relax	Relajarse
To take photos	Sacar fotos
To sunbathe	Tomar el sol
To get a tan	Broncearse
To sail	Hacer vela
To swim / go swimming / go to the pool	Nadar / hacer natación / ir a la piscina
To do yoga	Hacer yoga
To go on a bike ride	Dar una vuelta en bici / hacer ciclismo
To see places of interest	Ver lugares de interés
To ride a horse / do horse riding	Montar a caballo / hacer equitación
To ice skate / go to the ice rink	Patinar / hacer patinaje / ir a la pista de hielo
To go climbing	Hacer alpinismo
To sky dive	Hacer caída libre
Visit the tourist sights	Visitar monumentos
To dance	Bailar
To meet lots of people	Conocer a mucha gente
To go on a trip	Ir de excursión
To go sailing	Ir a navegar
To visit museums and historical places	Visitar museos y lugares históricos
To buy presents / souvenirs	Comprar regalos / recuerdos
To go for a walk	Pasear / dar un paseo
To go to a bullfight	Ver una corrida de toros
To go to a bar	Ir a un bar

## MORE ACTIVITIES

To go to a restaurant	Ir a un restaurante
To go on holiday	Ir de vacaciones
To go out with my family / friends	Salir con mi familia / amigos
To see the boats in the port	Ver los barcos en el puerto
To read	Leer
To go shopping	Ir de compras
To eat something	Comer algo
To drink cocktails	Beber cocteles
To go to a party	Ir de fiesta
To go for something to eat	Ir a comer
To do kayaking	Hacer piragüismo
To try the food	Intentar la gastronomía
To enjoy splendid views	Disfrutar de unas vistas espléndidas
To spend entire days	Pasar días enteros + present participle
To go fishing	Pescar
When I go	Cuando voy
For	Para
Through, by, in, for	Por
Some (quantity)	Unos
Nightclub	La sala de fiestas
To do sports	Hacer deporte
To go horse riding	Hacer la equitación
To do sailing	Hacer la vela

## QUESTIONS

¿Adónde?	Where?
¿Cómo?	How?
¿Cuándo?	When?
¿Por qué?	Why?
¿Qué?	What?
¿Quién?	Who?
¿Para/por cuánto tiempo?	For how long?
¿Qué fecha?	What date?





# Year 8 Term 1 Knowledge Organiser Booklet



## PLACES OF INTEREST

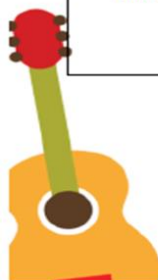
Aquarium	Un acuario
Roller coaster	Una montaña rusa
Tourist sights	Los monumentos
Theme park	Un parque de atracciones
Theme park	Un parque temático

## SIMPLE FUTURE TENSE

Ir	To go
voy	I am going
vas	You are going
Va	He / she is going
Vamos	We are going
Vais	You guys are going
van	They are going

## PROPER FUTURE TENSE

Infinitive + future endings	é
	ás
	á
	emos
	éis
	án



## COUNTRIES

I usually go to....	Suelo ir a....
Germany	Alemania
Canary islands	Las Islas Canarias
Scotland	Escocia
Spain	España
The United States	Los estados unidos
Europe	Europa
Great Britain	Gran Bretaña
Greece	Grecia
England	Inglaterra
Ireland	Irlanda
London	Londres
The Mediterranean	El Mediterráneo
France	Francia
Wales	Gales
To...	A
Abroad	El extranjero
A country	El país
Home	El hogar

## IRREGULAR FUTURE TENSE STEMS

Decir – to say	Dir-
Hacer – to do	Har-
Poder – to be able to	Podr-
Querer – to want	Querr-
Saber – to know	Sabr-
Salir – to go out	Saldr-
Tener – to have	Tendr-
Venir – to come	Vendr-

Add future tense endings to the stem

## TIMES

Anoche	Last night
El año	Year
Ayer	Yesterday
El día	Day
Durante	During
La mañana	Morning
El mes	Month
La noche	Night
Próximo	Next
Que viene	Next
Quince días	A fortnight
La tarde	Afternoon

## TRANSPORT

Plane	En avión
Bus	En autobús
Boat	En barco
Ferry	En ferry
By foot	A pie
On horse	A caballo
Lorry	En camión
Car	En coche
Scooter	En moto
Coach	En autocar
Bike	En bicicleta
Train	En tren
Tram	En tranvía
Subway	El metro
The journey	El viaje
The flight	El vuelo
Airport	El aeropuerto
The return	El regreso
High speed train	El AVE
Spanish railways	Renfe/RENFE
Motorway	La autopista

## ADVERBS

Por lo general	Generally
Lentamente	Slowly
Rápidamente	Quickly
Ruidosamente	Loudly
Silenciosamente	Quietly
Perezosamente	Lazily
Energéticamente	Energetically
Habitualmente	Usually
Normalmente	Normally





# Year 8 Term 1 Knowledge Organiser Booklet

## IMPORTANT VERBS

To look for	Buscar
To change	Cambiar
To take / to catch	Coger (irr)
To cross	Cruzar (irr)
To turn	Doblar
To wait	Esperar
To find out	Informar (se)
To arrive	Llegar
To take	Llevar
To stop	Parar
To spend time / to go through / to pass	Pasar
To lose	Perder (irr)
To get lost	Perderser (irr)
To remember	Recordar
To go back	regresar
To reserve	Reservar
To bring	Traer (irr)
To take time	Tardar
To turn	Torcer
To come	Venir (irr)
To see	Ver (irr)
To travel	Viajar
To return	Volver (irr)

## USEFUL VOCABULARY

Sun cream	La crema solar
Sunstroke	La insolación
Sunshade / parasol	La sombrilla
Camera	La maquina
Guidebook	La guía
Guide	El guía
Leaflet / pamphlet	El folleto
Postcard	La postal / la tarjeta
Sleeping bag	El saco de dormir
Tent	La tienda
Fan	El abanico
Suitcase	La maleta
Luggage	El equipaje
Travel agents	La agencia de viajes
Atmosphere	El ambiente
Tourist information	La oficina de turismo
Sunglasses	Las gafas de sol
Ice-cream	El helado
Travellers' cheque	El cheque de viaje
Sandcastle	Un castillo de arena
Have a good trip	¡Buen viaje!
Have a good holiday	¡Felices vacaciones!
Have a good time	¡Que lo pase(s) bien!
See you soon	¡Hasta pronto!
Swimming costume	El bañador
Flight attendant	La azafata

## OPINION PHRASES

Por un lado/por otro lado	On the one hand/on the other hand
Por una parte/por otra parte	
En mi opinión	In my opinion
Diría que	I would say that
Me parece	I find it
Para mi	For me...
Lo bueno es...	The good thing is
Lo malo es...	The bad thing is
No puedo esperar a	I can't wait to

## WEATHER

Cuando	When
Si	If
Hace calor	It's hot
Hace sol	It's sunny
Hace frío	It's cold
Hace buen tiempo	It's good weather
Hace mal tiempo	It's bad weather
Hace viento	It's windy
Hay tormenta	It's stormy
Llueve	It rains
Nieva	It snows
En verano	In summer
En invierno	In winter
En otoño	In autumn
En primavera	In spring
Caliente	Hot
El hielo	Ice
Seco/a	Dry
El tiempo	The weather

## NEGATIVES

No...	Not/do not
Ni...ni	Neither...nor
Nada	Nothing
Nadie	Nobody
Nunca	Never
Jamás	Never
Ya no	Not any more



# Year 8 Term 1 Knowledge Organiser Booklet



## QUANTIFIERS

Bastante	Quite
Demasiado	Too (much)
Muy	Very
Poco	Not very
Mucho tiempo	A long time
Tan	Really/so
De verdad	Really
Mucho	A lot
Extremadamente	Extremely
Sólo	Only

## COMPARATIVES

Más...que	More than
Menos...que	Less than
El/la mejor	The best
Mejor que	Better than
El /la peor	The worst
Peor que	Worse than
Tan...como	As...as
Tanto... como	As much...as
Parecido a	Like/similar to
Prefiero a	I prefer

## POSSESSIVE ADJECTIVES

Mi/mis	My
Tu/tus	Your
Su/sus	His/her
Nuestro/a/os/as	Our
Vuestro/a/os/as	Your (pl)
Su/sus	Their

## ADJECTIVES

Aburrido/a	Boring
Activo	Active
Agradable	Pleasant
Alegre	Happy
Animado	Lively
Barato	Cheap
Bonito	Pretty
Bueno	Good
Caro	Expensive
Decepcionante	Disappointing
Desagradable	Unpleasant
Divertido	Amusing, entertaining
Encantador	Charming
Entretenido	Entertaining/amusing
Espléndido	Fantastic, great
Estupendo	Fantastic, marvellous
Fatal	Awful
Fenomenal	Awesome
Feo	Ugly
Genial	Brilliant, great
Guay	Cool
Hermoso	Beautiful
Horroroso	Horrible
Impresionante	Impressive, striking
Increíble	Incredible
Malo	Bad
Maravilloso	Marvellous
Nuevo	New
Precioso	Beautiful
Tranquilo	Peaceful, quiet

## FREQUENCY WORDS

Un rato	While, a short time
Pocas veces	A few times
A menudo	Often
Siempre	Always
Todos los días	Everyday
Habitualmente	Usually
Normalmente	Normally
A veces	Sometimes
De cuando en cuando	Sometimes
Raramente	Rarely
La mayoría de las veces	Most of the time

## CONNECTIVES

Y	And
Pero	But
También	Also
Porque	Because
Puesto que	Because
Ya que	Because
Con	With
Sin embargo	However
No obstante	However
Asimismo	Additionally
Mientras	While / whilst
En lugar de	Instead of
Así como	Just as
Entre	Amongst
Aunque	Although / even though
Así que	So, therefore
Por eso	For that reason
Por lo tanto	Therefore
Pues	Then, since
Si	If



# Year 8 Term 1 Knowledge Organiser Booklet

## Badminton

### Skills and Techniques

**Forehand**- A forehand shot is when you hit the shuttle on the racket side of your body. For example, if you are right handed you will hit the shuttle on the right side of your body.

**Backhand**- A backhand shot is where you hit the shuttle on from non-racket side. For example, if a right handed player needs to hit a shuttle on the left side of their body they will move their racket arm across their body to play the shot.

**Serve**- The first shot in a rally and must abide by serving laws. A serve can be performed either forehand or backhand. The best serves are either short serves and so land on or just beyond the service line, or long serves and land into the rear tramlines (or just in front of the tramlines in doubles). In full court games serves must travel diagonally.

**Return of serve**- The next shot after a serve and so the second shot in the rally.

**Grip**- There are 2 different grips. Forehand (for playing forehand shots) is like shaking hands with your racket. Backhand (for backhand shots) is where your thumb lies flat along the fat side of the racket handle and your fingers wrap around with your knuckles facing the ceiling.

**Footwork**- Badminton footwork consists mostly of side stepping, chasseeing and running steps. Correct footwork allows you to move around the court faster and more efficiently. Regardless of the direction you are moving in or your position on the court your head should always face the net.

**Square on stance**- Standing square on means both of your shoulders are facing the net. This stance is useful when playing serves and net shots.

**Side on stance**- A side on stance is required when hitting any shots over head or when moving to the rear of the court.

### Why play badminton?

It is an extremely popular competitive, recreational and school sport. It is one of the UK's most gender balanced sports.

Badminton is the fastest racket sport in the world and is brilliant for all round fitness.

### Key words

**Forehand**

**Backhand**

**Serve**

**Service line**

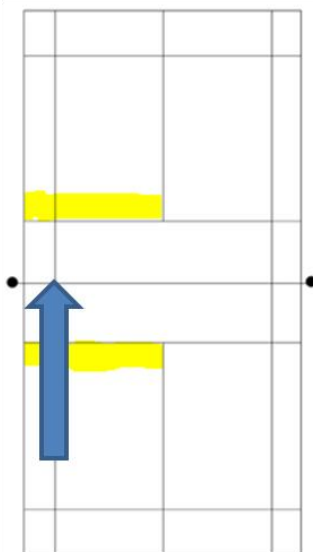
**Opponent**

### Equipment needed for 1 court

- Up to 4 Badminton rackets
- Up to 2 Shuttlecocks
- 2 Badminton posts
- 1 Badminton net



# Year 8 Term 1 Knowledge Organiser Booklet



Ideal area to short serve to

Short backhand low serve



## Shots

**Net shot-** A net shot travels from the net area of the court on your side to the net area of the court on your opponents side. Good net shots travel low over the net and ideally lands in front of the service line. Net shots should be hit gently and the best net shots will hit the top of the net (the tape) and trickle over the net.

**Short serve-** Players stand just behind the service line. Short serves travel low over the net therefore are difficult to attack. The best short serves will skim the tape and land on the service line. A short serve is good as it allows the server to play an attacking shot from the very start of the rally.

**Long serve-** Players can stand wherever they like, but must still be behind the service line. A good long serve will reach the rear tramlines in singles or the rear of the service box in doubles. Although travelling deeper into the court long serves can still be hit flat in order to be attacking. This serve could be useful in pushing your opponent to the rear of the court in order to force them to play a weaker return.

**Clear-** A clear is a powerful shot hit from the rear of the court on one side of the net to the rear of the court on the other side. Clears should be played using a forehand grip with a side on stance and are a similar action to throwing a tennis ball. Hitting a clear will push your opponent deep into the court which makes it difficult for them to return.

## Scoring

A badminton match consists of the best of 3 games to 21 points.

To decide who serves first players perform a coin toss/ racket spin/ shuttle toss.

To score a point you need to land the shuttle on your opponent's floor within the court boundaries without them being able to return it. You can also score a point if your opponent hits the shuttle in the net or outside of the court boundary.



# Year 8 Term 1 Knowledge Organiser Booklet

## Service Laws

Both feet must remain in contact with the floor at all times (you cannot lift or drag your feet)

- You can only make 1 smooth movement towards the shuttle, you cannot fake a serve
- The shuttle must travel in an upwards direction upon leaving your racket
- Your racket head must be lower than your racket handle
- You must strike the shuttle below your lowest rib
- You must stand behind the service line (you cannot be on any part of it!)
- Your serve must travel over your opponents service line to be in
- Serving when it is not your serve
- Serving from the wrong side of the court

## Faults

- Touching the net whilst the shuttle is still in play
- Your racket or body being on your opponents side of the net whilst the shuttle is still in play
- Hitting the shuttle more than once before it travels over the net
- The shuttle touches a player
- Deliberately distracting your opposition

## Tactics

Get the shuttle over the net and in the court

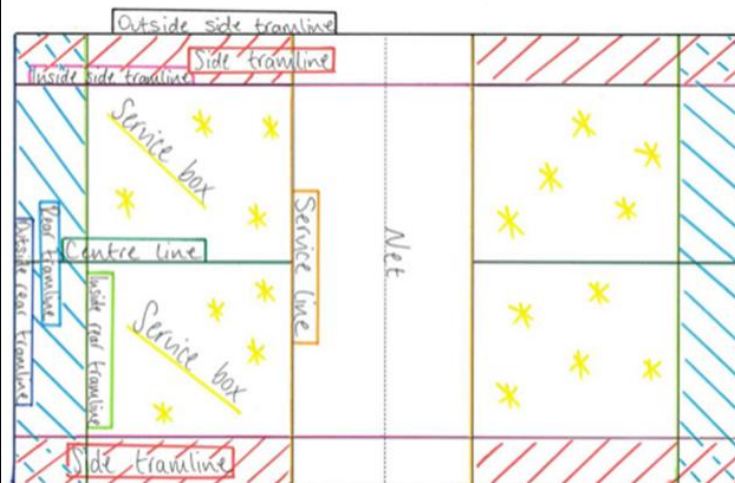
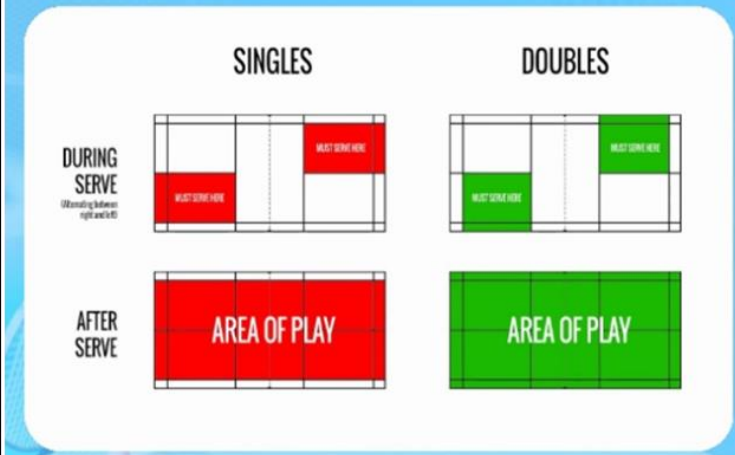
Hit a variety of shots

Play to your strengths

Play on your opponents weaknesses

Hit into space

## Badminton Court





# Year 8 Term 1 Knowledge Organiser Booklet

## Football

**KPI 1 - Effectively performs a range of actions, skills and techniques with control, combining them appropriately both in isolation and small group settings.**

**KPI 2 - Successfully employs simple tactics or creative processes in practical settings.**

The knowledge organiser will give you key information about the skills you will learn in year 7. It will include the key teaching points, aims of the skills and how it can be applied tactically. You can also look at the rules knowledge organiser for football to help you understand how to play the game.

Football club will be running during the academic year so keep an eye out on the PE OHSL sheet to find out when it is. There are also school fixtures as well so ask your PE teacher for further information if you are interested.

### Passing

**Aim of skill:** To keep possession of the ball for your team

**Tactics:** It is used to move the ball into space, spread the ball wide to use the width of the pitch and create goal scoring opportunities. It prevents the opposition from getting on the ball, meaning they cannot score.

**KTP:** *Place non kicking foot to the side of the ball, move kicking foot back in preparation, swing kicking foot forwards to contact the ball, use your arms for balance, have head up, lean over the ball to keep it down, follow through towards target for accuracy and power. You can use the side of your foot, outside of the foot and laces as techniques to pass.*

### Control

**Aim of skill:** To get the ball out of your feet so you can either pass, shoot or dribble.

**Tactics:** It is used to get the ball down on the floor and out of your feet so that you can perform your next skill and keep possession for your team. Depending on height of the pass you can use head, chest, thigh or feet.

**KTP:** Get in line with the ball, Keep your head up and have your eyes on the ball, Present the side of your foot to control the ball, Non control foot should be planted on the ground, Take weight of the pass as it contacts your foot, use your arms for balance, push the ball out of your feet slightly so you are ready to carry out your next skill.





# Year 8 Term 1 Knowledge Organiser Booklet

## Goalkeeping – Basic Handling

**Aim of skill:** To gather the ball in and keep possession so the opposition cannot get a rebound.

**Tactics:** You need to be in the correct position and then select the appropriate technique in order to gather the ball in. Consistency is important to ensure there are no mistakes.

**KTP:** Get in line with the ball so your body is behind it, Have your head up and keep your eyes on the ball, Select the appropriate type of handling based on the height of the ball, ensure you gather the ball in and avoid spilling it, once possession is gained look for a suitable pass.



## Dribbling

**Aim of skill:** To make up positive ground on the pitch and beat an opponent to create attacking opportunities for your team.

**Tactics:** It used to drive into open space on the pitch, beat an opponent to create space and draw other opponents out of position, and create goal scoring opportunities.

**KTP:** Use laces when dribbling at speed and driving into space, use side of foot and outside of foot when changing direction and needing close control, keep your head up, use your arms for balance, keep a low centre of gravity, use skills and body feints to fool opponents.



## Shooting

**Aim of skill:** To score goals for your team so you can win the game.

**Tactics:** It is used to finish off goal scoring opportunities created by your team or force the opposition goalkeeper into a save that could create a rebound. You should aim for corners of the goal to make your shots harder to save.

**KTP:** Place non kicking foot to the side of the ball, move kicking foot back in preparation, swing kicking foot forwards to contact the ball, use your arms for balance, have head up, lean over the ball to keep it down and lean back to lift the ball high, follow through towards target for accuracy and power. You can use the side of your foot for accuracy, and laces for power.



## Tackling – Block Tackle

**Aim of skill:** To win the ball back for your team so you have possession again.

**Tactics:** It is used when an opponent is attempting to dribble past you one on one, when there is a 50/50 tackle and when there is an opponent trying to pass or shoot. It is important to tackle at the right time so you do not get beat.

**KTP:** Stand between your opponent and the goal, stand in a slightly sideways stance so you can easily change direction, keep your body low, keep your eyes on the player and ball, wait for the right time to make the tackle, step into the tackle with non-tackling foot, use the side of the foot to make the tackle, follow through with the tackle to ensure you win the ball.





## Year 8 Term 1 Knowledge Organiser Booklet



# Rugby League Knowledge Organiser



### Regulations

Each team has 13 players

There are two halves that consist of 40 minutes.

4 points are awarded for a try and two points are awarded for a conversion.

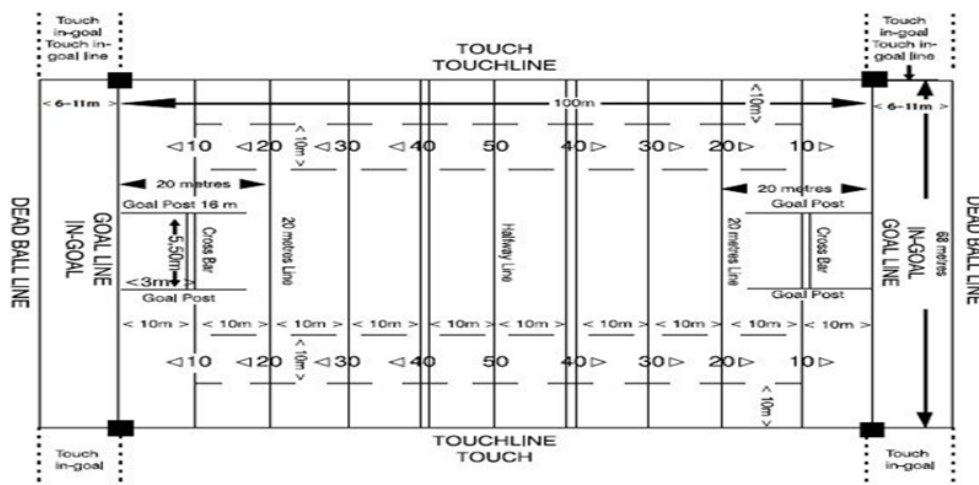
The conversion attempt is kicked in line with the place the try is scored.

The rugby league pitch is 112m by 68m.

Each team will have people who play in specific positions.

### Main rules

- Players must attempt to run forwards when the ball is in their hands aiming for the opposition try line
- Players must pass the ball laterally or backwards
- If a player fumbles the ball to the ground or the ball is passed forwards a 'knock on' is awarded and a scrum is called
- Players must tackle the opposing players below the shoulder and ground their opponent safely
- Once a player has been tackled they must 'play the ball' by standing up and passes the ball backwards with their foot.
- The defensive team must retreat 10 metres when the attacking team are playing the ball.





# Year 8 Term 1 Knowledge Organiser Booklet

## Trampolining Knowledge Organiser

### Key Teaching Points: Performing a Twist

- Knees and ankles together
- Extension through both fingers and toes. Maintain body tension throughout.
- On impact with the bed, push with your lead leg and rotate from the hip.

- Arms high above the head and slightly spread to slow the speed of the rotation

**Half Twist** = End facing the opposite direction to which you started.

**Full Twist** = End facing the same direction to which started.

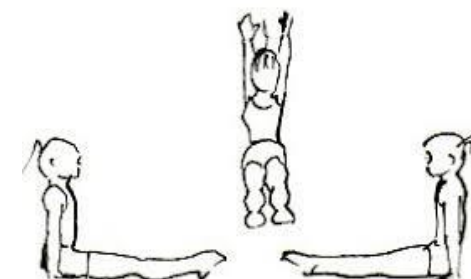


### Key Teaching Points: Performing a seat landing

- Press hips forward and upward during take-off
- Legs straight hips to heels.
- Hands are placed flat, slightly behind and to the side of the hips with the fingers pointing forwards.

#### **Common errors and corrections:**

- Landing hips behind the cross - Push hips forward on take-off.
- Landing with feet in the air – Keep body straight in the flight and do not pick feet up to land.
- Landing with hands beside thighs



### Key Teaching points: Performing Swivel Hips

- Perform seat landing, ensuring hands push off the trampoline bed for momentum.

- Push hips and raise arms up to allow rotation; arms to be up as shown in diagram.

- Body tension; keeping legs tight and straight, engage core muscles.
- Legs should travel under the body (not around the side).

- Once rotation has occurred return to seat landing to feet.

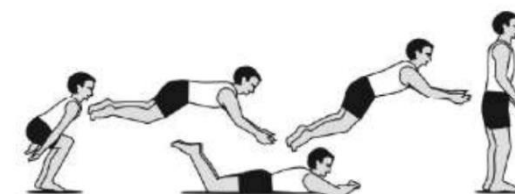


### Key Teaching points: Performing front landing

- Push feet back so centre of mass remains over cross or centre of the bed.
- Land with whole forearm in contact with the bed.
- Arms, stomach and thighs land at the same time.
- Push with hands to return to feet.

#### **Common errors and corrections:**

- Landing knees first - Insufficient forward rotation so need to push feet and hips back more.
- Diving forwards (chest first) – over rotation so must lift upper body.
- Travel – keep tummy on cross.

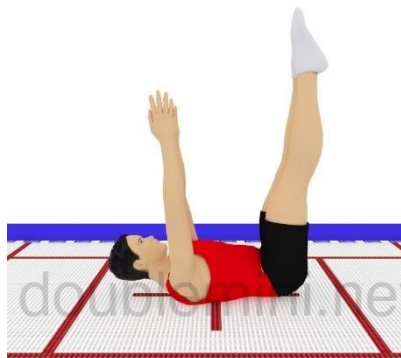




# Year 8 Term 1 Knowledge Organiser Booklet

## Key teaching points: Performing a back landing

- Start in an upright position with chest & hips pushed slightly forward as you jump upwards
- Extending your arms and legs as much as possible the initial hip displacement causes a small amount of backward somersault rotation
- The arms-extended position ought to be maintained throughout; just before landing the legs are raised
- Vision, focus on the end frame on the ascent and roof on landing.
- To return to feet, kick upwards and forwards.

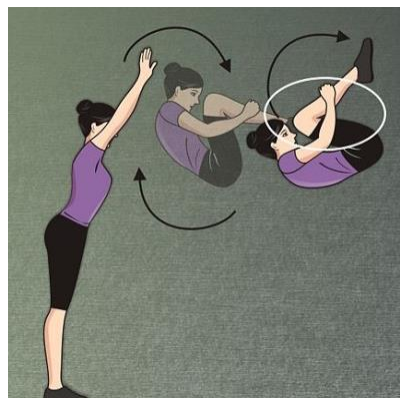


### **Common errors and corrections:**

- Under rotation – push hips forward.
- Over rotation – lift upper body.
- Rise to feet – kick over bar.

## Key teaching points: Performing a summersault

- Start in an upright position with chest & hips pushed slightly forward as you jump upwards
- Extending your arms and legs
- In flight perform a tuck whilst rotating forward
- full 360degrees rotation
- Once rotation has occurred return to landing to feet.

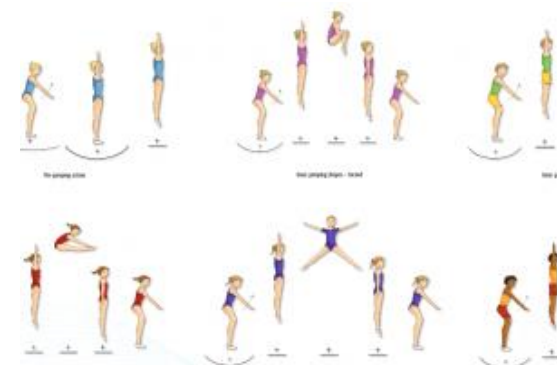


## Key Teaching points: Performing basic shapes:

**Tuck** - Straight bouncing, knees and hips bent to 90 degrees causing the knees to tuck into chest, hands grasp shins, ankles to remain straight and toes pointed.

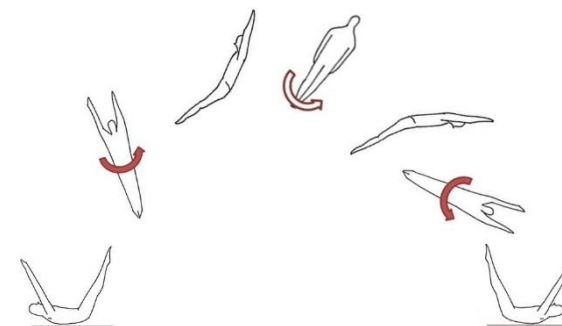
**Straddle** – At the top of the bounce split legs as wide as possible whilst remaining straight, grab shins / feet, toes straight and pointed, extend out, arms up, feet down to impact bed.

**Pike** – At the top of the straight bounce legs to be stretched out together and in front of the body, knees and ankles together, reach and grab shins / feet, toes straight and pointed, extend out, arms up, feet down impact bed



## Key teaching points: Performing a Cradle

- Start in an upright position with chest & hips pushed slightly forward as you jump upwards
- Extending your arms and legs as much as possible the initial hip displacement causes a small amount of backward somersault rotation
- fully extend arms upwards and slightly rotate shoulder to the left allowing the body to rotate half turn
- back landing position facing the opposite way,
- kick upwards and forwards to land on feet





## Year 8 Term 1 Knowledge Organiser Booklet

Key term	Definition	Key term	Definition
<b>Tension</b>	The state of being stretched tight	<b>Pike</b>	A position where the body is bent forward at the hips to 90degrees or more while the legs are kept straight with the thighs close to the upper body .
<b>Extension</b>	Enlarging a particular part of the body making it longer	<b>Seat drop/back drop</b>	A move starting on feet and rotating backwards and landing on bottom in a seated position or back position
<b>Planter Flexion</b>	Extension of ankle joint – technical name for point your toes	<b>Sequence</b>	a particular order in which related things follow each other.
<b>Kick out</b>	Extension of the legs to straight body position after the shape phase of a summersault completed	<b>Tuck</b>	A position where the knees are bent and drawn into the chest, with the upper body folded at the waste at an angle greater than 45 degrees.
<b>Spotter</b>	People positioned at points around the trampoline in order to ensure additional safety for performers	<b>Axis</b>	An imaginary line about which a body rotates
<b>Airborne</b>	In the air after taking off	<b>Kip</b>	Assistance given by the coach
<b>Front drop</b>	A move starting on feet and rotating ¼ of a summersault and landing on front	<b>Swivel hips</b>	A move starting on the seat, a ½ twist in upright position, landing again in a seating position
<b>Straddle</b>	A position where the legs are spilt at least shoulder width apart and the legs are kept straight whilst the upper body is aligned forward at the hips at an angle more than 45 degrees.	<b>Summersault</b>	An acrobatic movement where the body makes a complete revolution, heels overhead and lands back on feet.
<b>Routine</b>	A combination of skills into a sequence	<b>Execution</b>	The performance of a routine
<b>Cradle</b>	Back-drop half-twist to back-drop	<b>Turntable</b>	Front-drop full-twist to front-drop (twist around your bellybutton).



## Year 8 Term 1 Knowledge Organiser Booklet

Key terms and definitions		Key terms and definitions	
<b>Population</b>	All of the inhabitants (people that live there) of a place	<b>Species</b>	A set of animals or plants in which the members have similar characteristics to each other and can breed with each other
<b>Population growth</b>	An increase in the number of inhabitants of a place	<b>Acid rain</b>	Rainfall made so acidic by atmospheric pollution that it causes environmental harm, mainly to forests and lakes.
<b>Sparsely populated</b>	Few people living in an area	<b>Global warming</b>	The rise in average temperatures around the world
<b>Densely populated</b>	Many people living in an area	<b>Sustainable population growth</b>	To be able to maintain population growth without doing harm to the environment or other species
<b>Horn of Africa</b>	Region in East Africa where the first humans evolved into <i>homo sapiens</i> 200,000 years ago	<b>Ageing population</b>	A population that has a greater number of people who are aged over 65 compared people aged under 15
<b>Hunter gatherers</b>	Before 10,000 BC humans spent the vast majority of their time hunting for and gathering food to eat.	<b>Young population</b>	A population that has a greater number of people who are aged under 15 compared to people aged over 65
<b>Stone Age</b>	Very early period in human history, up until 3300BC where humans used stones to make tools	<b>Key dates and events</b>	
<b>Bronze Age</b>	3300BC humans discovered how to make bronze. Bronze replaced stones to make tools.	200,000 years ago	Humans ( <i>homo sapiens</i> ) first appeared in the Horn of Africa
<b>Iron Age</b>	1200BC humans learned how to produce iron. Tools and weapons were produced from iron.	60,000 years ago	Humans start to move to other parts of the planet away from Africa
<b>Industrial Revolution</b>	The period (about 1760-1840) when many new machines were invented, and many factories built.	2,000 years ago	World population reaches 170 million
<b>Birth rate</b>	The number of live births per 1000 of population per year.	1804	World population reaches 1 billion
<b>Death rate</b>	The number of live births per 1000 of population per year.	1927	World population reaches 2 billion
<b>Natural increase</b>	When birth rate exceeds death rate, so population grows.	1960	World population reaches 3 billion
<b>Population distribution</b>	How the people in a country are spread around.	1974	World population reaches 4 billion
<b>Climate region</b>	A region or area that has the same climate characteristics (average temperature and rainfall).	1987	World population reaches 5 billion
<b>Life expectancy</b>	How many years a person can expect to live for, on average.	1999	World population reaches 6 billion
<b>Poverty</b>	The state of being extremely poor. Not having enough money to provide for yourself or family.	2011	World population reaches 7 billion
<b>Resources</b>	Items that humans need in order to be able to survive. For example food, water, fuel.	<b>Key figures</b>	
		1.395 billion	Population of China. World's most populated country
		1.340 billion	Population of India. 2 <sup>nd</sup> highest world population
		308 million	Population of the USA. 3 <sup>rd</sup> highest world population
		66 million	Population of the United Kingdom.



## Year 8 Term 1 Knowledge Organiser Booklet

Key terms and definitions		Growth of towns and cities – key events	
<b>Rural</b>	An area that is mainly countryside; it may have villages and small towns.	<b>12,000 years ago</b>	Farming begins. People start to plant and store seeds.
<b>Urban</b>	A built-up area (large town or city); it's the opposite of rural.	<b>1200 – 1349</b>	Growth of 2,000 market towns in the UK. Farmers trade produce.
<b>Urbanisation</b>	The increase in the % of the population living in urban areas, as people move from rural areas.	<b>1760 – 1840</b>	Industrial Revolution. Machines replaced people on farms. Workers needed in factories.
<b>Settlements</b>	A place where people live; it could be a hamlet, village, town or city.	<b>1950's</b>	Growth of towns and cities slows down in Europe and USA.
<b>Market towns</b>	A small town in the countryside that regularly holds markets and acts as a business centre for surrounding farms.	<b>1950 – now</b>	Rapid urbanisation and growth in cities in low-income countries
<b>Industrial Revolution</b>	The period (about 1760-1840) when many new machines were invented, and many factories were built.	<b>Urbanisation – key facts</b>	
<b>Slums</b>	Area of very poor housing.	<b>5%</b>	Percentage of the world's population living in cities in 1800
<b>Tenements</b>	A large building which is divided into a number of individual flats.	<b>80%</b>	Percentage of people in the UK living in urban areas
<b>Rural-urban migration</b>	Movement of people from countryside (rural) areas into cities (urban).	<b>54%</b>	Percentage of the world's population living in urban areas.
<b>Push Factors</b>	Factors that push people out of a place (for example, there's no work there).	<b>70%</b>	Percentage of the world's population predicted to be living in urban areas by 2050.
<b>Pull Factors</b>	Factors that attract people to a place (for example, better wages).	<b>8.31 million</b>	Population of London – capital city of the UK.
<b>Speculators</b>	They take a risk, and spend money in the hope of making a lot of profit.	<b>36.92 million</b>	Population of Tokyo – world's most populated city
<b>Urban decline</b>	The deterioration of areas of cities due to lack of investment and maintenance. Buildings will become empty and derelict.	<b>Reasons why people are moving into cities</b>	
<b>Regenerate</b>	To restore an area that was in a poor state, and bring it back to life.	<b>PUSH FACTORS</b>	<b>PULL FACTORS</b>
<b>Sustainable</b>	Can be carried on into the future without harming people's quality of life, or the economy, or the environment.	Poverty in rural areas due to limited availability of jobs.	Availability of jobs in cities to be able to send money back to family.
<b>Self-help schemes</b>	Where the government provides money or resources to a community for them to improve their own lives e.g. improved housing.	Lack of education for children which limits their future.	Wide choice of education opportunities to develop career.
		Natural disasters which lead to the failure of crops and food shortages	Wide range of housing available to fit different budgets.
		Low wages and lack of opportunity.	Availability of healthcare services.



## Year 8 Term 1 Knowledge Organiser Booklet

Key terms and definitions		Key terms and definitions	
<b>Crust</b>	Earth's hard skin of rock. 8-65 km thick. Made of granite and basalt	<b>Destructive margin</b>	Where oceanic plate is moving towards continental plate. The oceanic plate is heavier so subducts under the continental plate. An example is where the Nazca plate is moving towards the South American plate
<b>Mantle</b>	Layer between the crust and core. 2900 km thick. Made of heavier rock. Upper mantle is hard. Lower mantle is hot, soft rock.		
<b>Core</b>	Made of metal, mainly iron mixed with nickel. Inner core is solid. Outer core is liquid.	<b>Subduction</b>	Where one tectonic plate moves under another due to weight and density. The subducted plate melts as it moves back into the mantle.
<b>Outer core</b>	2200 km thick. Located between mantle and inner core.	<b>Collision margin</b>	Where continental plate is moving towards continental plate. The Indo-Australian and Eurasian plates are pushing together to form the Himalaya Mountains
<b>Inner core</b>	1260 km thick. Temperatures around 6000°C.		
<b>Kola Peninsula</b>	Location in Russia where the deepest hole into Earth's crust was drilled. Over 12 km deep.	<b>Conservative margin</b>	Where two tectonic plates slide past each other, in the same direction or opposite directions, at different speeds. An example is where the Pacific plate is sliding past the North American plate, in the same direction but at different speeds.
<b>Continental crust</b>	Made of mainly granite. About 30 – 50 km thick on average.		
<b>Oceanic crust</b>	Made of basalt. Thinner than continental crust – about 7 km thick on average.	<b>Strain energy</b>	Pressure stored in rocks created by two tectonic plates pushing towards each other.
<b>Lithosphere</b>	Crust and upper mantle and hard. Together they form the lithosphere	<b>Seismic waves</b>	Stored energy released in waves when one tectonic plate slips at a plate margin. This causes the ground to shake.
<b>Convection currents</b>	A current of warmer material; when soft rock is heated from below, the warmer rock rises as a current.	<b>Focus</b>	Point below the Earth's surface where an earthquake starts
<b>Ocean trench</b>	Deep valleys located on the ocean floor formed by plate movement	<b>Epicentre</b>	Point directly above the focus on the surface of the Earth
<b>Earthquake</b>	Then shaking of the Earth's crust, caused by sudden rock movement	<b>Aftershock</b>	Smaller earthquakes felt after a major earthquake caused by the ground settling back into position.
<b>Volcano</b>	Forms when liquid rock bursts through Earth's hard surface (crust).	<b>Seismometer</b>	Machine placed on the Earth's surface that detects shaking.
<b>Tectonic plate</b>	Earth's hard outer layer is broken into big slabs of rock called plates, which move around.	<b>Magnitude</b>	The amount of energy that an earthquake gives out.
<b>Eurasian Plate</b>	The tectonic plate that the UK is located on – along with the rest of Europe and most of Asia.	<b>Richter scale</b>	Scale used to measure the magnitude of an earthquake. An increase of 1 means the shaking is 10 times greater and about 30 times more energy is given out.
<b>Plate margin (boundary)</b>	Where two tectonic plates meet	<b>Fault</b>	Cracks created in tectonic plates near to plate margins caused due to movement of the plates.
<b>Constructive margin</b>	Where two tectonic plates are moving apart from each other. An example is the Mid-Atlantic Ridge, where the Eurasian plate is moving away from the North American plate.	<b>Tsunami</b>	Waves generated by an earthquake in the ocean floor.



## Year 8 Term 1 Knowledge Organiser Booklet

Key terms and definitions		Key terms and definitions	
<b>Primary impact (effects)</b>	Impacts/effects that happen immediately as a result of an earthquake/tsunami/volcanic eruption, E.g. building collapse, people injured by falling debris.	<b>Geyser</b>	A spring of water which shoots into the air every so often; hot rock below ground heats it, and the pressure builds up.
<b>Secondary impact (effect)</b>	Impacts/effects that happen in the hours, days and weeks after an initial earthquake/tsunami/volcanic eruption. E.g. People catch cholera due to drinking dirty water, People steal from shops due to no food available	<b>Fumerole</b>	A vent or opening in Earth's crust which emits steam and gases
<b>Immediate (short-term) response</b>	A response in the days and weeks immediately after a disaster has happened. Short-term responses mainly involve search and rescue and helping the injured.	<b>Geothermal energy</b>	Where cold water is pumped through pipes into the Earth's crust and heated to create steam, which is then used to drive turbines to generate electricity
<b>Long-term response</b>	Responses that go on for months and years after a disaster. It involves rebuilding destroyed houses, schools, hospitals, etc. It also involves kick-starting the local economy.	<b>Case Study: Sichuan Earthquake 2008</b>	
<b>Magma</b>	Melted rock below Earth's surface	<b>Primary effects/impacts</b>	<b>Secondary effects/impacts</b>
<b>Lava</b>	Melted rock at the Earth's surface.	87,150 killed and missing 374,000 injured 4.8 million left homeless 5 million buildings collapsed Two chemical plants collapsed releasing toxic gases into the air. 11,000 children died in schools that collapsed.	Areas cut off by landslides Flooding occurred due to landslides blocking rivers .
<b>Igneous rock</b>	Forms when melted rock hardens. Most common type is basalt.	<b>Immediate (short-term) responses</b>	<b>Long-term responses</b>
<b>Pumice</b>	Gassy lava that explodes out of a volcano.	20 helicopters were assigned. 140,000 Chinese troops parachuted in to help search and rescue. 100,000 volunteers helped with rescue and medical. The rescue effort was slowed down by the mountainous landscape and blocked roads Foreign governments and aid organisations sent aid Temporary camps were set up to house survivors	\$137.5 billion spent on rebuilding affected areas. One-child policy relaxed in Sichuan as many people lost their only child
<b>Viscous</b>	Thick lava, like tar, that flows slowly.	53 250,000 people evacuated due to fears from flooding by a blocked river	
<b>Pyroclastic flow</b>	Heavy cloud of very hot ash, lava fragments and gases erupted out of a volcano that moves at great speed. Deadly to anything caught in one.		
<b>Mudflow (lahar)</b>	A destructive mudflow on the slopes of a volcano created where a pyroclastic flow mixes with water (from a river or melting snow).		
<b>Volcanic gas</b>	Mainly steam and carbon dioxide, plus some sulphur dioxide and other gases. Smells of rotten eggs, and can suffocate you.		
<b>Crater</b>	A hollow formed around the vent in a volcano.		
<b>Main vent</b>	A weak point in the Earth's crust where hot magma is able to rise from the magma chamber to the surface		
<b>Magma chamber</b>	A large pool of liquid rock beneath the Earth's surface		



## Year 8 Term 1 Knowledge Organiser Booklet

Key Vocabulary	Definition
<b>Why did the English fight the English in 1642?</b>	
Reformation	When England broke from the Catholic Church in Rome and developed a protestant church called the Church of England
Puritan	An extreme form of protestant who lives there lives according to a number of strict rules.
Catholic	A type of Christianity. The bible is written in Latin and followers are loyal to the Pope in Rome.
Charles I	King of England from 1625-49
Henrietta Maria	A French princess who is married to Charles I. A devout Catholic.
Divine Right of Kings	The belief that the King has been sent directly by God to rule over people.
Ship money	A tax taken from people to build and maintain ships. Charles charged towns across the country.
Foreign policy	The actions of one country when dealing with other countries e.g. starting war with another country
Parliament	A group of MPs picked by the people, who help the king run the country.
House of Commons	The place where MP's meet in the houses of Parliament.
Eleven Years Tyranny	The eleven years that Charles I sent the parliament away for disagreeing with him.
Scotland	Scotland is ruled over by Charles I. The church in Scotland is different to the Church of England and does not want to accept changes that Charles wants to make.
<b>What were the differences between the Roundheads and the Cavaliers?</b>	
Civil War	When war breaks out between two sides in one country.
Roundheads	Supporters of the parliament. They fought to try and defeat the King.
Cavaliers	Supporters of the King. They fought to try and defeat the parliament.
Oliver Cromwell	Leader of the rebellion from Parliament. He wanted to stop the king from having total control.
The New model Army	The army created by Oliver Cromwell to try and defeat the King.
Self-Denying Ordinance	MP's should not command an army. They would hire people with experience to do this for them.
Pikemen	A soldier armed with a pike (large stick with a sharpe point on the end)
Artillery	Used cannons to weaken other enemy's army before sending soldiers in.
Cavalry	Soldiers who ride horses. They are popular for their speed and skill in battle.
Musketeers	Soldiers who would carry a gun called a Musket. They were unreliable and inaccurate to fire.
The Battle of Warrington Bridge	Fought on the 13 <sup>th</sup> August 1651. The battle was between the Scottish forces who were supporting the King and the Roundheads.
<b>Why did the English kill their King?</b>	
Treason	The crime of betraying the country.



## Year 8 Term 1 Knowledge Organiser Booklet

Execution	Carrying out the death penalty.
<b>Changing Ideas 1669-1789?</b>	
Lord Protector	Oliver Cromwell gave himself the title Lord Protector
Republic	Power is held by parliaments, who are voted for by the people of the country.
Commonwealth	Under the rule of Oliver Cromwell England became known as the Commonwealth.
Succession	Finding someone to take over the role of king after their death.
King Charles II	After the death of Oliver Cromwell the monarchy was restored and given to Charles II who was the son of Charles I.
Social and moral laws	Under the rule of Oliver Cromwell there were a number of laws that told people how to behave in England.
<b>What made the Restoration in London exciting?</b>	
Overcrowding	A large number of people living in one small space. Leads to poverty and disease.
The Great Plague	The Great Plague began to spread in England in 1665. In one week over 7,000 Londoners died.
The Great Fire of London	In 1666 a terrible fire swept through London. In total it burnt 300 houses to the ground.
The Enlightenment	The time period where people began to use logic and reason over religious explanations.
Isaac Newton	A great scientist from the enlightenment. He discovered gravity.
Architecture	The creation of new buildings around London.
Christopher Wren	One of the many men given the task of re-designing London after the Great Fire.
<b>Who ran the country: Crown or Parliament?</b>	
Constitutional monarchy	A king or queen that has limited powers and works alongside parliament
James II	The brother of Charles II. He became king in 1685 as Charles had no children.
The Glorious Revolution	James eldest daughter Mary invaded England with her husband William of Orange and threw James off the throne.
Mary II and William III	Ruled side by side as King and Queen. Mary was the daughter of James II.
The Bill of Rights 1689	A document that explained the importance of the parliament and the role the King or Queen played.



## Year 8 Term 1 Knowledge Organiser Booklet

Key terms and definitions		Key terms and definitions	
<b>Primary research</b>	Primary research is research you conduct yourself It involves going directly to a source, usually customers and prospective customers in your target market, to ask questions and gather information	<b>Wax</b>	Basic wood finishing procedure. Once the wood surface is prepared and stained, the finish is applied. It usually consists of several coats of wax
<b>Secondary research</b>	Secondary Research is a common research method; it involves using information that others have gathered through primary research.	<b>Waste lines</b>	Highlight area that will be cut off and discarded.
<b>Quality control</b>	A system of maintaining standards in manufactured products by testing a sample of the output against the specification.	<b>Wood joints</b>	A joint formed by two boards, timbers, or sheets of wood that are held together by nails, fasteners, pegs, or glue.
<b>Marking out</b>	To mark out an area or shape means to show where it begins and ends	<b>Dowel joint</b>	Dowels are round wooden pins of small diameter used to strengthen (reinforce) a joint
<b>Glass paper</b>	Paper covered with powdered glass, used for smoothing and polishing	<b>Chisel</b>	A long-bladed hand tool with a bevelled cutting edge and a handle which is struck with a hammer or mallet, used to cut or shape wood.
<b>File</b>	A file is a tool used to remove fine amounts of material from a work piece. It is common in woodworking, metalworking, and other similar trades	<b>Tenon saw</b>	A small saw with a strong brass or steel back for precise work.
<b>Function</b>	The natural purpose of something, what does it do?	<b>Pine</b>	An evergreen coniferous tree which has clusters of long needle-shaped leaves. Many kinds are grown for the soft timber, which is widely used for furniture and pulp, or for tar and turpentine
<b>Scale</b>	Drawing which has been reduced or enlarged from its original size, to a specified scale	<b>Belt sander</b>	A belt sander or strip sander is a sander used in shaping and finishing wood and other materials. It consists of an electric motor that turns a pair of drums on which a continuous loop of sandpaper is mounted
<b>Bench hook</b>	A bench hook is a workbench accessory used in woodworking, and its purpose is to provide a stop against which the piece of wood being worked can be firmly held, without having to use the vice, this saves time.	<b>Disk sander</b>	A machine having one or more flat circular disks faced with abrasive for smoothing wood surfaces
<b>Pillar drill</b>	A pillar drill is a free standing machine that uses a motor to rotate a drill bit. This drill bit then can be used to cut holes of different diameters in different types of material	<b>Hand sander</b>	A sander is a power tool used to smooth surfaces by abrasion with sandpaper that is portable and fit in your hand.
<b>Complex</b>	Consisting of many different and connected parts	<b>Router</b>	A power tool with a shaped cutter, used in carpentry for making grooves for joints, decorative mouldings
<b>Square</b>	Having four straight equal sides	<b>Inlay</b>	An inlay is a design or pattern on an object which is made by putting materials such as wood. Inlay is the technique of putting designs or patterns onto the surfaces of objects.
<b>MDF</b>	Abbreviation for medium-density fibreboard: a type of board made from very small pieces of wood that have been pressed and stuck together, used for making furniture	<b>Plywood</b>	A type of strong thin wooden board consisting of two or more layers glued and pressed together with the direction of the grain alternating








## Year 8 Term 1 Knowledge Organiser Booklet

### ***Musical Elements- Key terms and definitions***

<b>Tempo</b>	<b><i>The speed of a piece of music.</i></b>	<b>Texture</b>	<b><i>The layers used in a piece of music.</i></b>
Vivace	<i>Lively and fast</i>	Monophonic	<i>One single layer</i>
Andante	<i>Walking pace</i>	Homophonic	<i>Thick layers following the same pattern</i>
Moderato	<i>Medium pace</i>	Polyphonic	<i>Lots of layers moving on their own</i>
Largo	<i>Slow</i>	Unison	<i>All doing the same</i>
Accellerando	<i>Getting faster</i>	<b>Harmony</b>	<b><i>The feel of the music.</i></b>
Rallentando	<i>Getting slower</i>	Major	<i>Happy sounding</i>
<b>Dynamics</b>	<b><i>The volume of a piece of music.</i></b>	Minor	<i>Sad Sounding</i>
Piano	<i>Quiet</i>	<b>Rhythm/Metre</b>	<b><i>The rhythmic patterns and timing in a piece of music.</i></b>
Forte	<i>Loud</i>	Beats in a bar	<i>How many beats are counted in the bar.</i>
Mezzo Piano	<i>Medium Quiet</i>	Time signature/Metre	<i>4/4, 3/4, 6/8, 2/4</i>
Mezzo Forte	<i>Medium Loud</i>	Polyrhythm	<i>Lots of rhythms played at once</i>
Crescendo	<i>Getting Louder</i>	Cross rhythm	<i>Rhythms crossing over each other</i>
Diminuendo	<i>Getting quieter</i>	Syncopation	<i>Rhythms off the main beat</i>
<b>Sonority</b>	<b><i>The instruments heard in a piece of music.</i></b>	<b>Melody</b>	<b><i>The main tune in a piece of music.</i></b>
Strings	<i>Violin, Cello, Viola, Double Bass, Harp</i>	Steps/Conjunct	<i>Notes in a tune close together</i>
Brass	<i>Trumpet, French Horn, Trombone, Tuba</i>	Leaps/Disjunct	<i>Notes in a tune far apart</i>
Woodwind	<i>Flute, Clarinet, Oboe, Bassoon, Saxophone</i>	Scales	<i>A pattern of notes to create a melody from</i>
Percussion	<i>Drums, Cymbal, Maracas, Things You Hit</i>	<b>Structure</b>	<b><i>The sections of a piece of music.</i></b>
Band Instruments	<i>Electric/Acoustic Guitar, Bass Guitar, Keyboard, Synthesiser</i>	Binary	<i>Section Order: A, B</i>
Voices	<i>Male/female voice, soprano, alto, tenor, bass</i>	Ternary	<i>Section Order: A, B, A</i>
		Rondo	<i>Section Order: A, B, A, C, A</i>
		Arch	<i>Section Order: A, B, C, B, A</i>
		Popular structure	<i>Intro, Verse, Chorus, Bridge, Outro</i>



# Year 8 Term 1 Knowledge Organiser Booklet

Idea Citizen Award Bronze Key Terms		    	
<b>Neuron</b>	Cells of the nervous system, called nerve cells or neurons, are specialized to carry "messages" through an electrochemical process	<b>Keeping safe online</b>	
<b>Axon</b>	A long and single nerve-cell process that usually conducts impulses away from the cell body	<b>Cyber Bullying</b>	The use of electronic communication to bully a person, typically by sending messages of an intimidating or threatening nature.
<b>DDoS</b>	This stands for "Distributed Denial-of-Service Attack" and is when multiple systems flood the resources of a target system (usually a website) in order to crash it.	<b>Netiquette</b>	A term referring to good behaviour while connected to the Internet
<b>Trojan</b>	This is a virus that disguises itself as something else within code to avoid detection.	<b>CEOP [Child Exploitation &amp; Online Protection]</b>	CEOP is a law enforcement agency and is here to help keep children and young people safe from sexual abuse and grooming online.
<b>Encryption</b>	The process of protecting data by converting it into a scrambled or unreadable format.	<b>Digital Citizen</b>	A digital citizen refers to a person utilizing information technology (IT) in order to engage in society
<b>Pomodoro Technique</b>	A time management method. The technique uses a timer to break down work into intervals, traditionally 25 minutes in length, separated by short breaks.	<b>OFCOM</b>	Is the communications regulator in the UK. The monitor all TV, radio and online activity
<b>Network</b>	Connect a computer to another computer, you create a "network of computers"	<b>Internet History</b>	
<b>Ethical hacking</b>	evaluate the security of and identify vulnerabilities in computer systems, networks for them to be improved .	<b>1962</b>	A global interconnection of computers was first proposed and described by J.C.R Licklider.
<b>Password</b>	A password is a string of characters used for authenticating a user on a computer system.	<b>1965</b>	The first Wide Area Network [WAN] expand more American computer scientists established the first <b>WAN</b> by connecting the TX-2 computer in Massachusetts to the Q-32 computer in California.
<b>Local Area Network [LAN]</b>	A group of computers and other devices that are connected together over a network and are all in the same location—typically within a single building like an office or home	<b>1969</b>	ARPANET is switched on and expand more In September 1969, the budding internet was off the ground.
<b>Server</b>	computer or computer program which manages access to a centralized resource or service in a network.	<b>1983</b>	Researchers began to assemble the "network of networks" that became the modern Internet. The online world then took on a more recognizable form in 1990, when computer scientist Tim Berners-Lee invented the World Wide Web.



## Year 8 Term 1 Knowledge Organiser Booklet

Spark Key terms and definitions		Design thinking key Stages	
CSS	Cascading Style Sheets is a style sheet language used for describing the presentation of a document e.g. the style	Empathise	Gain an empathic understanding of the problem you are trying to solve
HTML	Hypertext Mark-up Language, a standardized system for tagging text files to achieve font, colour and graphics	Define	You should seek to define the problem using the information you gained in empathise
MIRCOBIT	A small computer board designed by the BBC to be used for coding	Ideate	Start generating ideas
LOW RES PROTOTYPING	A simple prototype of an idea, normally low cost and takes little time	Prototype	Produce a number of inexpensive, scaled down versions of the solution
IDEATION	Forming an idea	Test	Test the solution then use the information gained in the test to empathise again.
CONCEPTUAL MODEL	Model constructed by the users in their mind to understand the working or the structure of objects	HTML / CSS	
EMPATHY	the ability to understand and share the feelings of another.	<title>	Defines a title for the document
DESIGN THINKING	Design thinking is a process for creative problem solving	<body>	Defines the document's body or content
CO-DESIGNING	When several different people for different fields design a product or object	<p>	Defines a paragraph
EXPERIENCE DESIGN	Designing based on the experience of the user	background-color	Defines the background colour in CSS
HOW MIGHT WE (HMW) QUESTIONS	Questions are short questions that launch brainstorm.	font-family	Defines the font in CSS
HUMAN-CENTERED DESIGN	Involving the human perspective in all steps of the problem-solving process	3D DESIGN	
CODING	The process of assigning a code to something for classification or identification.	CAD	Computer Aided Design. The use of computer-based models of objects
DATA	Facts and statistics collected together for reference or analysis	3D	Three-dimensional. Descriptive of a region of space that has width, height and depth.
		Fabricate	To construct or manufacture. To "make" your design. You can make almost anything through 3D printing or laser cutting.
		59	