

Knowledge Organiser

Year 9 Spring 2 2025

Create Your Future

“Don’t ever doubt yourselves or waste a second of your life. It’s too short, and you’re too special.

Ariana Grande

Suggested by: Casey Lowndes 9SRS

Name:

Tutor Group:



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Science, PE and Technology are on a rotation so have multiple pages in this booklet. Your teacher will direct you to the appropriate pages when setting work.

Timetable

Week 1	1	2	3	4	5
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					

Week 2	1	2	3	4	5
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					

In Class Expectations



Create Your Future

BE CURIOUS

BE RESPECTFUL

BE RESILIENT

BE CONFIDENT



BE THE BEST VERSION OF YOURSELF

BE BELPER

Out of Class Expectations



Create Your Future

BE INVOLVED

BE KIND

BE BRAVE

BE PROUD



BE THE BEST VERSION OF YOURSELF

BE BELPER

Being in school and being on time is crucial for success and preparing for the future. Lost learning can lead to additional anxiety and pressure to catch up work and risks the student falling even further behind.

Create Your Future



BE PRESENT
BE PUNCTUAL

THERE ARE 175 NON-SCHOOL DAYS DURING THE YEAR TO SPEND ON FAMILY TIME, VISITS, HOLIDAYS, SHOPPING, HOUSEHOLD JOBS AND OTHER APPOINTMENTS

DAYS OFF SCHOOL ADD UP TO LOST LEARNING

BE BELPER

100%

OUR TARGET FOR ALL STUDENTS

97%

6 DAYS ABSENCE
30 HOURS LOST LEARNING

EXCELLENT OR GOOD ATTENDANCE
BEST CHANCE OF ACADEMIC SUCCESS

95%

10 DAYS ABSENCE
50 HOURS LOST LEARNING
WORRYING
AT RISK OF MAKING IT HARDER TO PROGRESS

90%

19 DAYS ABSENCE
95 HOURS LOST LEARNING
CONCERN
LESS CHANCE OF SUCCESS AND SIGNIFICANTLY REDUCES LEARNING

Attendance

- 90% attendance is half a day missed every week
- 90% attendance in one school year is 4 whole weeks of lessons (100 lessons) missed in that year.
- 90% attendance over 5 years of secondary school is half a year of school missed.
- Evidence suggests that, on average, every 17 days of school missed by a student equates to a drop of 1 GCSE grade.

Punctuality

- 10 minutes late each day = 50 minutes of lessons missed each week
- 10 minutes late each day = 2000 minutes (33.3 hours, 5.5 days) every academic year
- 10000 minutes (166.5 hours, 27.5 days) of missed learning from year 7 to year 11.

“Everyday you show up, you’re investing in your future self. Don’t underestimate the power of attendance.”

BE PRESENT

BE PUNCTUAL

Guided Reading Tracker



Date	Title and author	Summary of reading (+interesting or new vocabulary learned)	Signed:	

As part of your library lessons, you are expected to complete **at least 20 minutes** of reading once a fortnight.

To track your reading, you need to complete a row of the table before each library lesson to show details of the book you have read.

Your table also needs to be signed by someone who has witnessed you reading. This will most likely be a parent/guardian but it can alternatively be signed by your tutor, classroom teacher, buddy reader, TA or Sarah in the library.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Patriarchy	A system of society or government in which men hold the power and women are largely excluded from it
Symbolism	The idea that words, phrases and images can represent other things
Authority	The power or right to give orders, make decisions, and enforce obedience
Maternal	Having the stereotypical characteristics of a mother
Determinism	The theory that everything in life is pre-decided and pre-planned.
Unrequited Love	Unrequited love or one-sided love is love that is not openly reciprocated or understood as such by the beloved
Elizabethan Era	The time in the Tudor period of the history of England during the reign of Queen Elizabeth I

Tier 2 vocabulary	Definition
Foreshadowing	To hint at something that will happen later in the play
Stage Directions	An instruction in the text of a play indicating the movement, position, or tone of an actor
Sonnet	A poem of 14 lines, in English typically having ten syllables per line
Prologue	An opening speech that introduces key themes within the play
Soliloquy	A speech delivered by a character that the other characters do not hear

Section 2: Key Skills/Strategies

Use the CPEAT format to write analytically about Shakespeare's play.

C	CONNECTIVE	Use a connective to introduce your ideas. E.g. Firstly, moreover, furthermore, in conclusion.
P	POINT	Use the wording of the question and identify what your paragraph will explore.
E	EVIDENCE	Find a relevant quotation and identify a language or structural device in it... ... and then explore the deeper meaning of this quote/technique and how it links to the question.
A	ANALYSIS	
T	THINK INTENTION AND IMPACT	Explore the intentions of the author and the effect/impact of this on the reader.

FEATURES OF A TRAGEDY

Tragedy: A play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character/s.

The Tragic Hero:

The tragic hero describes a virtuous character who must face adversity, either caused by their flawed persona or sealed by fate. Ultimately, they pay the price with their lives, but after recognising their mistake.

The Fatal Flaw: *Hamartia*

The tragic hero's flaw, that leaves them vulnerable and causes their disastrous end.

Tragic Waste:

Often the inevitable deaths of pivotal characters in the play.

Catharsis:

The audience's immersion in the play leads to an emotional roller coaster, with mixed feelings for the hero and their antagonists. The ending of the play leads to a release of often very conflicting emotions for the audience.

Section 3: Context and Themes

VERONA

R&J is set in Verona, Italy in the fourteenth century. Verona was a rich, lively, cultured city but it had been affected by violence for centuries. Political and religious leaders clashed over power, wealth and status and often the citizens had to take sides.

WOMEN & GENDER ROLES

Society was patriarchal: men were dominant and women were seen as inferior and expected to marry as young as twelve years old. Noblewomen like Juliet would have received some education but there was little freedom of choice in life for most women.

QUEEN ELIZABETH I

The Queen while Shakespeare was writing. Elizabeth I made Protestantism the official religion of England, which angered many Catholics, and led to much conflict. Shakespeare may be referencing this in 'Romeo and Juliet', with the two warring families.

NURSES

Nurses were employed by wealthy families to feed and care for their children.

FATE

The belief that your life is mapped out for you, or 'written in the stars'. Many Elizabethans believed God decided your fate, and that astrology could help you identify your course in life.

KEY THEMES IN THE PLAY

Conflict, Power, Fate, Loyalty, Family, Religion, Love, Hatred, Violence, Death

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Anaphora	Repetition of a phrase at the start of a line or sentence
Assonance	Words that share the same vowel sound
Caesura	A pause in a line of poetry
Enjambment	Where a line has no punctuation at the end and goes onto a new line, but carries on an idea
Motif	A repeated idea or theme throughout the poem
Sibilance	Making a 's' or 'sh' sounds
Plosive	Making a 'p' or 'b' sound
Tier 2 vocabulary	Definition
Stanza	A section of a poem sometimes referred to as a verse.
Rhyme scheme	What type of pattern the rhyme follows e.g abbcca
Rhythm	The beat or pace of the words. It can be regular or irregular, slow or fast
Poetic persona	When the poet takes on a voice in the poem.
Repetition	Repeating the same word or phrase

Section 2: Comparing poems	
<p>Compare the poet's use of language and structure in <i>Hurricane Hits England</i> and <i>Blessing</i>.</p> <p>Comparing poetic techniques</p>	
Hurricane	Blessing
<p>Simile to depict the weather e.g. 'trees falling heavy as whales'</p>	<p>Simile to depict the weather e.g. 'skin cracks like a pod'</p>
<p>Semantic field of nature</p>	<p>Semantic field of poverty</p>
<p>No structured rhyme scheme</p>	<p>No structured rhyme scheme</p>
<p>Comparative connectives to use in your writing</p>	
Similarities	Differences
<p>Likewise</p>	<p>However</p>
<p>Similarly</p>	<p>On the other hand</p>
<p>Equally</p>	<p>In contrast</p>

Section 3: Information about some of the poets
<p>Grace Nichols</p> <p>Grace Nichols is a poet whose work has been central to our understanding of the important cultural Caribbean-British connection for nearly 3 decades. Nichols was born in Guyana in 1950, and moved to live in the UK in 1977. Her work is influenced by the history and culture of her homeland, in particular the oral story-telling tradition with its fantastic folk tales, the landscape and its rural tasks and the history of enslavement.</p>
<p>Hurricane Hits England</p> <p>It took a hurricane, to bring her closer To the landscape. Half the night she lay awake, The howling ship of the wind, Its gathering rage, Like some dark ancestral spectre. Fearful and reassuring.</p>
<p>Kamu Braithwaite</p> <p>Kamu Braithwaite was born in Barbados, an island in the Caribbean. Braithwaite's ambition was to create a distinctively Caribbean form of poetry, which would celebrate Caribbean voices and language, as well as African and Caribbean rhythms evoking Ghanaian talking drums, calypso, reggae, jazz and blues.</p>
<p>Bermudas</p> <p>begins to breathe gently into green into light & light green until there are like blue ribs upon the water. dreaming and the ribs of water's colour are the gills of the first fish breathing</p>

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Prejudice	A liking or a dislike for someone or something, usually without good reason
Injustice	A lack of fairness
Exploitation	The action of treating someone unfairly in order to benefit from them
Vulnerability	Being exposed to the possibility of being attacked or harmed, either physically or emotionally
Thriller	Thriller is a genre of fiction which is characterised by giving readers heightened feelings of suspense, excitement, surprise, anticipation and anxiety.
Morality	The belief that some behaviour is right and acceptable and that other behaviour is wrong.
Trauma	A deeply distressing or disturbing experience

Tier 2 vocabulary	Definition
Dual Narrative	A story that is told from two different perspectives.
Colloquialisms	Colloquial language is casual, informal and conversational.
Morality Tale	A story or narrative from which one can derive a moral/lesson about right and wrong.
Protagonist	The leading character In a novel.
Antagonist	The opponent of the protagonist in a novel.

Section 2: Key Skills/Strategies		
Use the CPEAT format to write analytically about Shakespeare’s play.		
C	CONNECTIVE	Firstly, moreover, furthermore, in conclusion.
P	POINT	Use the wording of the question and identify what your paragraph will explore.
E	EVIDENCE	Find a relevant quotation and identify a language or structural device in it...
A	ANALYSIS	... and then explore the deeper meaning of this quote/technique and how it links to the question.
T	THINK INTENTION AND IMPACT	Explore the intentions of the author and the effect/impact of this on the reader.
Features of Thriller Novels		
<p>Suspense, Surprise and Anxiety</p> <p>The two seemingly distinct narratives in Stone Cold draw closer together, making the reader feel anxiety for poor Link!</p>	<p>Climax</p> <p>Thrillers generally build towards a key moment, in which all of the suspense built over the narrative are released in one scene. This is the case when Shelter attempts to murder Link.</p>	<p>Plot Twists and Cliff-hangers</p> <p>A plot twist is when the narrative changes from what the reader would (e.g. Ginger’s murder). Cliff-hangers are also used to keep the reader interested.</p>

Section 3: Context and Themes
<p><u>ROBERT SWINDELLS</u></p> <p>Robert Swindells is an English writer who was born in Bradford on March 20th 1939. He served in the Royal Air Force, before becoming a primary school teacher. It was at this time that he began writing novels, which he later took up full time. Swindells has stated that he feels ‘constantly aware of the presence of injustice in the world’, and that he tries to ‘point out various manifestations of injustice... which exist in our society.’ He draws upon these ideas in Stone Cold.</p>
<p><u>HOMELESSNESS</u></p> <p>The latest data shows that on any given night, there were an average of 2440 people sleeping rough in the UK. Remember this is on any given night, so the number who slept rough over the course of a year is likely to be many times more. A study by the Evening Standard showed that more than 7,500 people slept rough in London at some point in 2015. This included 880 under 25s.</p>
<p><u>THE ARMED FORCES</u></p> <p>The British Armed Forces are the military services responsible for the defence of the United Kingdom. They include the British Army, the Royal Navy, the Royal Marines, and the Royal Air Force. Service members can be discharged from service for a variety of reasons. A dishonourable discharge (DD – language more often used in the US military) is handed down for an offence that the military considers to be exceptionally poor conduct. Some members are also discharged on physical/ mental health grounds.</p>
<p><u>KEY THEMES IN THE NOVEL</u></p> <p>Threat – Homelessness – Injustice – Hopelessness - Exploitation, Vulnerability- Prejudice</p>

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Autobiography	A self-written account of one's life
Bias	A disproportionate weight in favour of or against an idea or thing
Emotive language	Word choices that are intended to get an emotional reaction
Exposure	The state of having no protection from something harmful
Graphology	The visual appearance of a text
Survival	The state of continuing to live or to exist, especially after a dangerous event
Tabloid	A newspaper which uses informal language and many pictures

Tier 2 vocabulary	Definition
Alliteration	Using the same letter at the start of closely connected words
Hyperbole	Language used to exaggerate information
Metaphor	A comparison where something is described to be something it is not
Secondary story	A less important story featured on the front cover of a newspaper
Sensationalism	The presentation of stories in a way that is intended to provoke the reader

Section 2: New Key Skills/Strategies

This will help you understand and explore key questions.

P Purpose	Is the writer trying to inform, entertain, explain, persuade or argue?
A Audience	Who is the target audience? Who would this text appeal to?
F Format	What are the key conventions of the text?
T Tone	What is the general attitude or mood of the writing?

When comparing the similarities and differences of non-fiction texts, you will need to use comparative phrases to structure your response:

Similarities	Differences
Similarly In addition to Furthermore Moreover This is mirrored in Likewise A common feature is	Alternatively However Nevertheless In contrast to Conversely On the contrary On the other hand

TOP TIP: Use a table format to plan your comparison of two non-fiction texts and consider the following features:

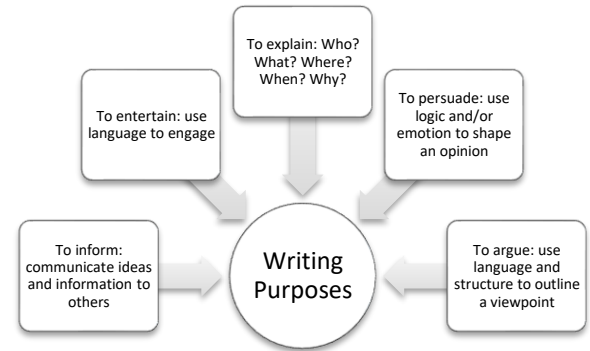
Text A	Text B

Language Audience
Graphology Tone
Structure Purpose

Section 3: Reading and Analysing Non-Fiction Texts

Writing Purposes

When reading and analysing non-fiction texts, you will need to consider the purpose in which they are written.



Newspaper Report Layout

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Sample Space	The collection of all possible outcomes
Conditional Probability	The probability of something happening based on the occurrence of another event
Dependent events	Those which depend on what happened in a previous event
Independent events	Those which do not depend on an event which has happened before
Mutually Exclusive Events	Events which cannot happen at the same time for example getting a Head and a Tail at the same time

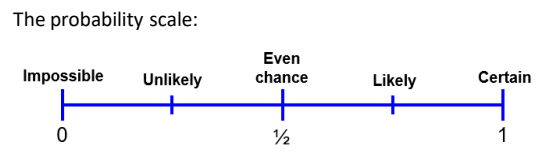
Tier 2 vocabulary	Definition
Probability	The chance of something happening
Fair	Outcomes have an equal chance of happening
Combined events	Two or more events that are considered to happen together either at the same time or in succession
Desired outcome	The result that is wanted
Listing	Writing down all the options/information.

Revision QR codes

Probability scale Calculating probabilities Venn diagrams

Listing strategies

Section 2: Representations and procedures



Probability of a single event:

$$\text{Probability} = \frac{\text{Number of desired outcomes}}{\text{Number of possible outcomes}}$$

the probability of rolling an even number on a fair dice

Desired outcomes are even numbers 2, 4 and 6 (**three** of them)

Possible outcomes are the numbers 1 to 6 (**six** of them)

so Probability = $\frac{3}{6}$, which simplifies to $\frac{1}{2}$

Listing strategies

Systematic listing strategies are ways of writing outcomes from an event in an organised way with none of the possibilities missed out or repeated.

To do this we need to use a method which makes listing items easier. A good method to use is to fix certain values, making only small changes between each item in the list.

A meal deal consists of a drink and a bag of crisps.

The drinks available are orange juice or apple juice. Drinks – *O* and *A*

The crisp flavours are bacon, cheese or plain. Crisps – *B*, *C* and *P*

Start by fixing the choice of drink to *O* and then change the crisp flavour.

Now change the drink flavour and repeat the crisp flavours in the same order as before.

O, B *A, B*
O, C *A, C*
O, P *A, P*

This gives us 6 combinations in total.

Section 3

Probability of two or more events:

To determine the probability of two independent events, we have to **multiply** the probability of the first event by the probability of the second event.

$$P(A \text{ and } B) = P(A) \times P(B)$$

Sample space diagrams

Sample space diagrams are useful for listing all possible outcomes of two events.

This sample space diagram shows the possible outcomes when 2 dice are rolled and are added together.

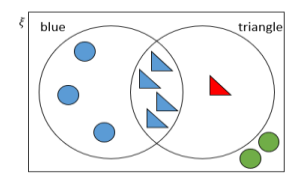
Space Diagram

	1 st Die					
2 nd Die	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

$P(4) = \frac{3}{36}$ ← There are 36 possible outcomes, three of the outcomes are 4

Venn diagrams

Venn diagrams help us to organise information that overlaps.



A shape is selected at random.

What is the probability that the shape is blue?

$P(\text{blue}) = \frac{7}{10}$ ← There are 10 shapes, 7 of them are blue.

Probability of blue

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Arithmetic sequence	A sequence of numbers where the gap between one term and the next is constant
Geometric sequence	A sequence of numbers where each term is found by multiplying the previous term by a number called the common ratio.
Triangular number	A sequence of numbers that are represented through a series of dots formed into equilateral triangles
Multiplicative relationship	A relationship between two quantities whereby the values are linked by a multiplier, e.g. $n \rightarrow 5n$
Additive relationship	A relationship between two quantities whereby the values are related by the addition of a number, e.g. $2n \rightarrow 2n + 3$

Tier 2 vocabulary	Definition
Sequence	A particular order in which related objects follow each other
Term	An individual number in a sequence, such as "6 is the 2nd term in the sequence 1,6,11,16"
Square number	The product of a number multiplied by itself
Cube number	The product of a number multiplied by itself three times
Natural numbers	The counting numbers, that is, the positive integers 1,2,3...

Revision QR codes			
term to term rule	Nth term	Special sequences	Position to term

Section 2: Representations

When we use the natural numbers for the upper number line, the multiplicative relationship shown by the double number line also shows a sequence.

1	2	3	n
—	—	—	—
4	8	12	4n

The n^{th} term rule ' $4n$ ' takes any number ' n ' and gives a term ' $4n$ '. This generates the sequence 4,8,12,... which we recognise as the 4 times table.

We can move from the 4 times table by adding or subtracting, to generate a different sequence that also moves by 4 each time:

1	2	3	4	5
—	—	—	—	—
4n	8	12	16	20

$+1$

4n + 1	5	9	13	17	21
—	—	—	—	—	—
5	9	13	17	21	

From the rule ' $4n + 1$ ' we can find any term in the sequence.

e.g. for the 20th term, substitute $n=20$
 $4 \times 20 + 1 = 81$
 The 20th term in the sequence 5,9,13,17... is 81

Section 3

Square Numbers:

1

1 x 1

4

2 x 2

9

3 x 3

16

4 x 4

Cube Numbers:

1 cubed
 $1 \times 1 \times 1 = 1$

2 cubed
 $2 \times 2 \times 2 = 8$

3 cubed
 $3 \times 3 \times 3 = 27$

Triangular Numbers:

$T_1 = 1$	$T_2 = 3$	$T_3 = 6$	$T_4 = 10$

Fibonacci sequence:

The next term is found by adding the previous two terms.

1, 1, 2, 3, 5, 8, 13, 21, ...

Tier 3 vocabulary	Definition
Catalyst	A substance that speeds up the rate of a reaction without being used up itself
Enzyme	A protein produced by living things that speeds up reactions without being used up itself (catalyst)
Substrate	A substance that is changed during a reaction
Active site	The space in an enzyme where the substrate fits during an enzyme controlled reaction
Product	A substance formed in a reaction
Monomer	A small molecule that can join with other molecules like itself to form a polymer
Polymer	A long-chain molecule made by joining molecules (monomers) together
Denatured	A denatured enzyme is one where the shape of the active site has changed so much that its substrate no longer fits and the reaction can no longer happen
Lock and key model	A model that describes the way an enzyme catalyses a reaction when the substrate fits within the active site of the enzyme
Optimum	the best conditions at which an enzyme's rate of reaction happens at the highest rate
Limiting factor	When the rate of reaction can not get any faster despite increasing one variable, because another variable is now holding it back

Section 2: New Knowledge/Skills

Lock and key mechanism

The active site holds the substrate molecules tightly in the right position for bonds to form between them and make a product molecule.

The product molecule is a slightly different shape to the substrate molecules so it no longer fits tightly in the active site and is released.

Factors affecting enzyme activity

Rate of reaction vs pH: At pHs below and above the optimum, the shape of the active site is affected and so the enzyme does not work so well.

Rate of reaction vs Substrate concentration: At low concentrations, many enzyme molecules have empty active sites so the rate of reaction is slow. At high concentrations, most enzyme active sites contain substrate molecules, and the rate of reaction is as fast as it can be.

Section 3 - core practical

Aim To investigate the effect of pH on the rate of digestion of starch by amylase.

Amylase is an enzyme made in the salivary glands in your mouth and in the pancreas. It catalyses the breakdown of starch into smaller sugar molecules. The iodine test identifies the presence of starch, but does not react with sugar.

A Drop one drop of iodine solution into each depression of the dimple tile.

B Measure 2cm³ of amylase solution into a test tube using a syringe.

C Add 1cm³ of your pH solution to the test tube using a second syringe. Record the pH.

D Using a third syringe, add 2cm³ starch solution to the mixture and start the stop clock. Use the pipette to stir the mixture.

E After 20 seconds, take a small amount of the mixture in the pipette and place one drop of it on the first iodine drop on the tile.

F If the iodine solution turns black, then there is still starch in the mixture and you should repeat step E (after 10 seconds). If it remains yellow, then all the starch is digested and you should record the time taken for this to happen

A blue/black colour indicates the presence of starch.

A yellow/orange colour that no longer changes indicates that the reaction is complete.

B iodine solution is used to indicate the presence of starch

pH	bacterium A (s)	bacterium B (s)
0	85	85
1	75	30
2	70	25
3	45	30
4	25	45
5	50	65
6	75	85
7	85	85
8	95	85

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Centripetal force	A force that causes objects to follow a circular path. The force acts towards the centre of the circle.
Inertial mass	The mass of an object found from the ratio of force divided by acceleration.
Action–reaction forces	Pairs of forces on interacting objects. Action–reaction forces are always the same size, in opposite directions, and acting on different objects. They are not the same as balanced forces.
Equilibrium	When a situation is not changing because all the things affecting it balance out.
Mass	A measure of the amount of material that there is in an object. Mass is a scalar quantity.
Weight	The force pulling an object downwards, it depends upon the mass of the object and the gravitational field strength.
Gravitational field strength	A measure of how strong the force of gravity is somewhere. It is the force on a 1 kilogram mass, so the units are newtons per kilogram (N/kg).
Free body diagram	A diagram with one simple object shown (circle or box) and all the objects acting on that object
Resultant force	One force (value and direction) that represents all the forces on an object.
Balanced forces	The resultant force equals zero.
Tier 2 vocabulary	Definition
Velocity	The speed of an object in a particular direction.
Acceleration	A measure of how quickly the velocity of something is changing.

Section 2: New Knowledge/Skills

Newton's laws of motion

1st Law
If the resultant force on an object is zero (balanced forces), then it will;

- Be stationary
- Or moving at a constant velocity

What is the missing force of Thrust the car is producing?

2nd Law
The amount an object accelerates is affected by the size of the force acting on and the object's mass.

These are shown in the equation;

Force = mass x acceleration

Section 3: Other subject specific things

3rd Law
Forces come in pairs. The action force and reaction force.

These are;

- Equal in size
- Opposite in direction
- Of the same type

Mass and weight

The mass of an object is a measure of how much matter it has. The units are kg.

Weight is a measure of the pull of gravity on an object and depends on;

- The mass of the object
- The strength of gravity

Weight = mass x gravitational field strength

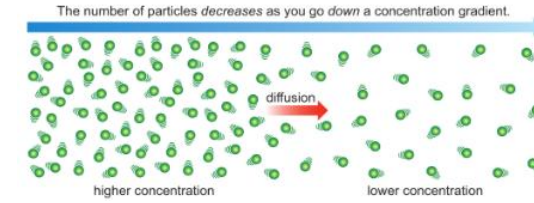
If your mass is say 50kg and you were to travel to the Moon you would still have the same mass but your weight would be less because there is a lower gravitational field strength there.

Tier 3 vocabulary	Definition
Diffusion	The movement of free moving particles from an area of a high concentration to an area of a low concentration
Osmosis	The movement of water molecules from an area of high water concentration to an area of low water concentration across a partially permeable membrane
Concentration gradient	The difference between two concentrations
Solute	A substance that dissolves in a liquid to make a solution
Solvent	A liquid in which a substance dissolves to make a solution
Partially permeable	A membrane that will allow certain particles to pass through it but not others. Another term for semi-permeable.
Active transport	The use of energy to transport substances against a concentration gradient (from a low concentration to a high concentration).
Passive transport	The transport of substances without the use for energy

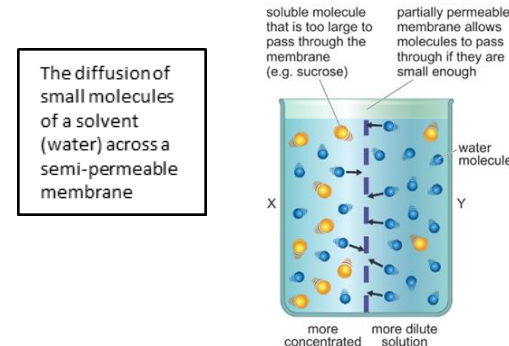
$$\text{percentage change in mass} = \frac{(\text{final mass} - \text{initial mass})}{\text{initial mass}} \times 100$$

Section 2: New Knowledge/Skills

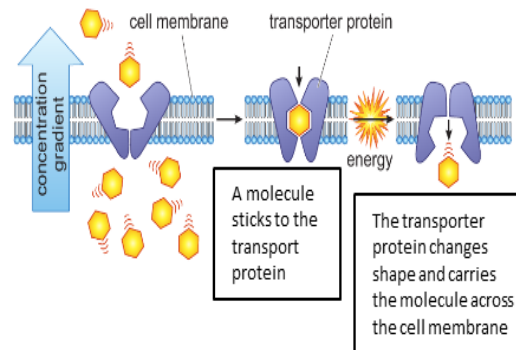
Diffusion



Osmosis



Active transport



A willow tree grows from 2.27kg to 76.74kg . Calculate the percentage change in mass.

Section 3: Core practical

Aim To investigate how solution concentration affects percentage change in mass of potato strips due to osmosis. (note other vegetables may be used)

A Using the waterproof pen, label each tube with the name of one of the solutions. Place the boiling tubes in the rack.

B Dry a potato strip carefully by blotting it with a paper towel. Measure its mass on the balance.

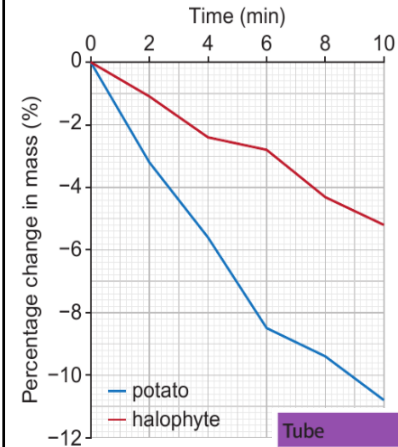
C Place the potato strip into one of the tubes. Record the label on the tube and the mass of the strip in your results table (see next page).

D Repeat steps B and C until all strips have been measured and placed in tubes.

E Carefully fill each tube with the appropriate solution, so that the potato is fully covered. Leave the tubes for at least 15 minutes.

F For each potato strip, use the forceps to remove it from its tube, blot dry on a paper towel and measure its mass again. Record all the masses in the results table.

Write a conclusion for the results in the table and the graph



Tube	A	B	C	D
Sucrose concentration (%)	0	10	30	50
Mass of potato at start (g)	4.81	5.22	4.94	4.86
Mass of potato at end (g)	4.90	4.96	4.39	3.69

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Ionic bond	Electrostatic forces between opposite charged ions.
Electrostatic forces	Forces attracting ions which have opposite charges.
Cation	Positive charged ions – formed when metals lose electrons.
Anion	Negative charged ions – formed when non-metals gain electrons.
Ionic compounds	Formed from positive and negative ions held together by ionic bonds.
Dot and cross diagram	A diagram which uses symbols (dots and crosses) to show the arrangement of electrons.
Ionic lattice	The alternating arrangement of positive and negative ions in an ionic solid.

Tier 2 vocabulary	Definition
Bonds	Forces of attraction that hold atoms together.
Ions	Charged particles formed when atoms gain or lose electrons.
Property	The way a substance behaves e.g. it conducts electricity.
Aqueous	A substance dissolved in water.
Molten	When a substance has been melted

Section 2: Ionic bonding

Ionic compounds always contain a metal and a non-metal.

Forming ions

When metals react they **lose** electrons forming **positive** ions called **cations**.

When non-metals react they **gain** electrons forming **negative** ions called **anions**.

Sodium atom

loses one electron

Sodium ion, Na⁺

Chlorine atom

gains one electron

Chloride ion, Cl⁻

Metal ions are positive because they have lost electrons and contain more positive protons than negative electrons.

Non-metal ions are negative because they have gained electrons and contain more negative electrons than positive protons.

Section 3: Ionic compounds

Common ions

Positive ion	Ion formula	Negative ion	Ion formula
sodium	Na ⁺	fluoride	F ⁻
lithium	Li ⁺	chloride	Cl ⁻
potassium	K ⁺	bromide	Br ⁻
magnesium	Mg ²⁺	oxide	O ²⁻
calcium	Ca ²⁺	sulfide	S ²⁻
aluminium	Al ³⁺	phosphide	P ³⁻

Ionic Lattice

Properties of ionic compounds

High melting points

- Lots of bonds to break
- Ionic bonds are **strong**
- Takes a **lot of energy** to break the bonds

Electrical Conductivity Solids

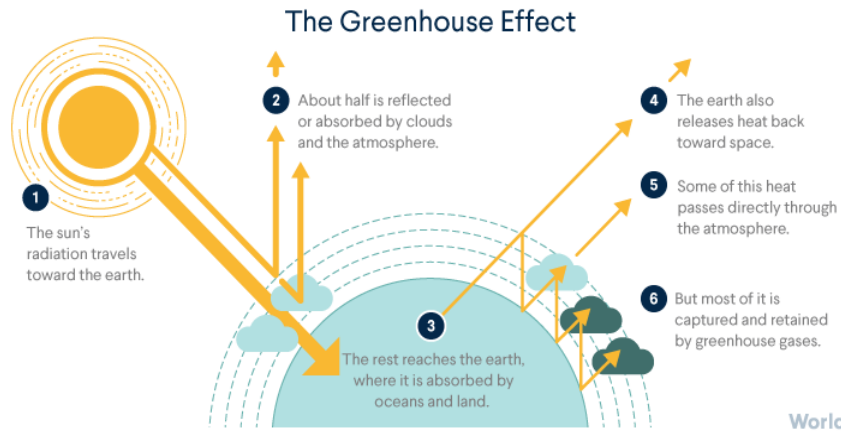
- Do **NOT** conduct electricity
- Because **ions cannot** move

Molten or dissolved

- **Do** conduct electricity
- Because **ions can** move

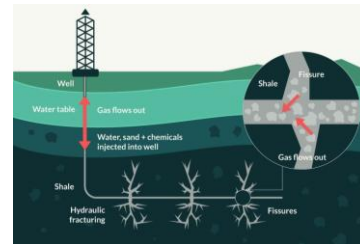
Tier 3 vocabulary	Definition
Climate change	How the long term average atmospheric conditions change over time.
Conservation	Managing nature to protect it from harm or putting it back how it was (restoration).
Ecosystem	The living and non-living parts of an environment and how they are connected.
Endangered	When a species is threatened and at risk of becoming extinct.
Enhanced greenhouse effect	How people's activities add gases to the atmosphere and this causes the climate to change.
Global warming	The gradual increase in the temperature of the Earth's atmosphere.
Greenhouse effect	The process whereby gases trap heat in the Earth's atmosphere, causing temperatures to increase.
Habitat	The place where an animal lives.
Non-renewable energy	Power sources that will run out eg. fossil fuels such as coal.
Recycling	Reprocessing a product or some of its parts to make something else.
Renewable energy	Alternatives to fossil fuels eg. solar, wind. These won't run out.
Tier 2 vocabulary	Definition
Sustainability	The practice of using natural resources responsibly, so they can support both present and future generations.
Social	Things affecting people and their community.
Economic	Things relating to money.
Environmental	Things relating to our surroundings.

Section 2: New Knowledge



Palm oil
 + Makes lots of money, creates jobs and provides money for governments and businesses.
 - Destroys the natural rainforest and the habitats of animals e.g. orangutans. Takes away the biodiversity and replaces it with monoculture (one type of plant).

Fracking
 For –Gas supply
 Relatively cheap
 Creates jobs
 Make places more independent.
 Against - Water pollution
 Earthquake risk
 Destroys habitats
 Locals may not benefit.

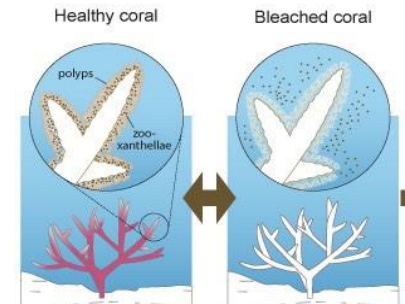


Renewable energy in Germany
 Solar power in Freiburg e.g. panels on football stadium and houses.
 Wind power in Feldheim e.g. 55 turbines.

Endangered animals
 Loss due to hunting, for medicines, deforestation, climate change.

World101

Coral reefs



Eg. Great barrier Reef, Australia
 At risk due to :
 Fishing, shipping, climate change, tourism and crown of thorns starfish.

Section 3: Geographical Skills

A geographical investigation has seven stages:

1. Decide on the hypothesis.
2. Plan the data collection.
3. Collect the data.
4. Present the results.
4. Analyse the results.
6. Conclusion.
7. Evaluation.

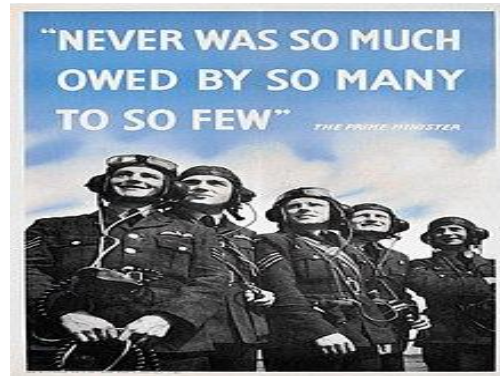
Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Aryan	People who settled in northern Europe thousands of years ago. Nazis believed they were the 'master race'
Antisemitism	Being hostile or prejudice to Jews
Holocaust	Usually used to describe the murder of millions of Jews by the Nazis
Concentration Camps	Places where large numbers of people were kept as prisoners under armed guard.
Death camp	Killing centres established by the Nazis
Ghetto	Areas in towns or cities where Jews were separated by force.
Einsatzgruppen	Special units that conducted mass shootings of Jews
Euthanasia Programme	Secret programme conducted by the Nazis to murder anyone that wasn't Aryan.
Work Camps	Where prisoners were forced to work as slave labourers.

Tier 2 vocabulary	Definition
Prejudice	An unfair opinion or judgement or feelings towards someone
Scapegoat	Blaming someone for something that wasn't their fault

Section 2: Unit Summaries

1. What events would be considered turning points of WW2?

In September 1939, Hitler's Nazi Germany invade Poland. This is the start of World War 2. There are many important events that happened during World War 2 but can all of them be considered a turning point? We will learn about events such as the evacuation of Dunkirk, the Battle of Britain and D-Day and assess which of these events can be considered to be a turning point of the Second World War.



Second order concept = Change and Continuity

2. How did antisemitism turn into mass murder?

This unit looks at the development of the Holocaust across different times and different places. We will begin looking at Jewish life in Nazi Germany in 1933 and how this changed over time. We will look at the events from Kristallnacht until the liberation of the concentration camps at the end of the Second World War. Did people have the same experience during the Holocaust? What factors might have changed their experience?



Task:
A Jewish man walks with his three young children alongside a deportation train in the Warsaw ghetto in 1942.

Second order concept = Change and Continuity

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Life	The existence of an individual human being or animal.
Purpose	A person's sense of resolve or determination. Or: The reason for which something is done or created or for which something exists.
Death	The action or fact of dying or being killed; the end of the life of a person or organism.
Hedonist	A person who believes that the pursuit of pleasure is the most important thing in life; a pleasure-seeker.
Euthanasia	The painless killing of a patient suffering from an incurable and painful disease or in an irreversible coma.
Abortion	The deliberate termination of a human pregnancy
Sanctity of Life	Human life is holy, precious and sacred.










Section 2: Sources of Authority
John 5:24-25
John 5:28-29
John 14:1-7
Corinthians 15:51-57
Revelations 21:1-4

Section 2: New Knowledge/Skills
<p>Key Questions: What do people believe about life? What do people believe about the afterlife? What is the sanctity of life? What is abortion? What is euthanasia? Has medicine gone too far? Why do we have funerals? What do Buddhists believe about life and death? Does death matter to Humanists? Is this life hell?</p>
<p>Abortion: UK Law Legal up to 24 weeks (in some circumstances) with the agreement of two doctors.</p> <p>Christianity Some argue we should be compassionate and permit abortion if the mothers life is in danger. Other Christians say it is a moral evil because every life is a gift from God.</p>
<p>Euthanasia:</p> <p>UK Law Illegal and considered either murder or manslaughter and carries a life in prison penalty. Hospices and palliative care offer pain relief and comfort as end of life care.</p> <p>Christianity Christians are generally against Euthanasia - "Do not commit murder" but some argue "the most loving action"</p>

Section 3: Assessment Essay Question:
<p>Assessment Essay Question:</p> <h2>Is Death the End?</h2> <p>In answering the question - you should consider:</p> <ul style="list-style-type: none"> A range of beliefs regarding the possibility of life after death. Consider where these beliefs come from? the importance of this life compared to the hope of an afterlife. (Remembering to consider different views). The impact of differing views of life after death on how individuals view earthly life. Similarities and differences between Humanists and Christian funeral services. Similarities and differences between Buddhist, Christian and Humanists on the purposes of life. <p>Skills checklist – As you write your essay check that you have included...</p> <p>Knowledge – facts and religious or non-religious beliefs,</p> <p>Impact of belief – how it affects what people think and do,</p> <p>Specialist terms,</p> <p>Sources of authority – where people get their ideas/beliefs from – quotations,</p> <p>Judgement – how strong, valid or sound the argument is,</p> <p>Opinion – at least 2 different points of view</p>

Section 1: Key Vocabulary/Questions	
Tier 2 vocabulary	Definition
Imperfect tense	used to say 'used to' do something or to describe something in the past, 'was, were'.
Comparative	used to compare two or more things
Adjectival agreement	Adjectives 'agree' with the subject in gender and number
Intensifiers	An adverb or adverbial phrase that strengthen the meaning of an adjective
Direct object pronouns	Him/her/it/them - used to replace a noun
Questions	Translation
1. Où vas-tu normalement le weekend ? Qu'est-ce que tu fais ? C'est comment et pourquoi ?	Where do you usually go at the weekend What do you do? What is it like?
2. Où es-tu allée le weekend dernier ? Qu'est-ce que tu as fait ? C'était comment ?	Where did you go last weekend? What did you do? What was it like?
3. Où vas-tu aller le weekend prochain ? Qu'est-ce que tu vas faire ? Ça va être comment et pourquoi ?	Where will you go next weekend? What will you do? What will it be like?
4. Qu'est-ce que tu faisais quand tu étais petit(e) ?	What did you used to do when you were young?
5. Qu'est-ce que tu regardais/écoutais/aimais/préférais...?	What did you used to watch/listen to /like/lprefer....?
6. C'était comment ? Pourquoi ?	What was it like? Why?
7. Comment tu trouvais....?	How did you find...?

Section 2: Grammar		
The imperfect tense		
Use: It is used to say 'used to' do something e.g. Je jouais avec mes amis = I used to play with my friends or to describe something in the past e.g. Mon prof était gentil = My teacher was kind		
Formation: Take the -ons of the nous form in the present tense and add these endings:		
Nous portons	portons → port-	
je portais tu portais il/elle/on portait nous portions vous portiez ils/elles portaient	I used to wear you used to wear he/she/we used to wear we used to wear you used to wear they used to wear	
Comparative Use the comparative to compare two or more things:		
plus + adjective (+que...)	more... (than...)	
moins + adjective (+que...)	less... (than...)	
The adjective must agree with the first noun mentioned ★ Ma prof de science est plus sérieuse que mon instituteur		
Direct object pronouns You use a direct object pronoun (him/her/it/them) to replace a noun. It goes in front of the verb.		
masculine	feminine	plural
Je le trouve... (I find him/it ...)	Je la trouve... (I find her/it ...)	Je les trouve... (I find them ...)
★ Abbreviate le and la to l' before a vowel sound. Je l'aime (I like him/her/it) Je l'adore (I love him/her/it)		

Section 3: WAGOLL	
<p>J'adore la musique! Mon chanteur préféré s'appelle Stromae. Sa musique est inspirante. J'adore les paroles et la mélodie de sa musique. Je les trouve originales. J'aime toutes sortes de musique mais j'écoute souvent du hip-hop. Ça me donne envie de danser. et je le trouve hyper cool! Pour écouter de la musique, j'utilise Spotify. Je ne joue pas d'un instrument en ce moment cependant je vais essayer de jouer de la clarinette à l'avenir.</p> 	
<p>Il y a cinq ans, je jouais du piano mais c'était trop difficile. J'étais assez paresseuse! À l'âge de dix ans, je faisais du judo tous les lundis après l'école mais je ne l'aimais pas beaucoup. Je préférais aller à l'école plus que faire du judo. Quand j'étais plus jeune, j'étais très travailleuse. Mon école primaire était de taille moyenne. Il y avait trois cents élèves. Mon instituteur était sympa et drôle. J'adorais lire et mon prof était moins sérieux que mes profs au collège. Je l'aimais beaucoup! Je suis née à Bergerac, j'habitais à Bordeaux avec ma famille. Maintenant j'habite à Limoges. Je l'apprécie vraiment car j'adore la région. À l'avenir, je veux devenir professeur car à mon avis c'est un métier varié.</p>	
À savoir: Question words are an extremely important part of learning a language because they allow us to expand our knowledge about the things happening around us. Can you recall the French for...	
How? How many? Who? What?	When? Which? Why?
<p>🎧 Les chanteurs francophones du passé</p>     <p>Édith Piaf Johnny Hallyday Jacques Brel Mireille Mathieu</p>	
<p>🎧 Les chanteurs francophones du présent</p>     <p>Louane Maître Gims Vidéo Club Angèle</p>	
<p>Listen to some of these musicians. Which songs do you like? Can you find any other Francophone singers/groups you like?</p>	

FRENCH Y9 Word list Spring 2.A

nm	le violon	violin
nm	le piano	piano
nf	la batterie	drums
nf	la clarinette	clarinet
nf	la flûte	flute
nf	la guitare	guitare
nf	la trompette	trumpet
nm	le saxophone	saxophone
nm	le violoncelle	cello
nm	le trombone	trombone

FRENCH Y9 Word list Spring 2.B

nm	le jazz	jazz
nm	le R'n'B	R'n'B
nf	la musique classique	classical music
nm	le hip-hop	hip-hop
nm	le rap	rap
nm	le hard rock	hard rock
nf	la techno	techno
nf	la mélodie	melody
nfpl	les paroles	lyrics
nm	le rythme	rhythm

FRENCH Y9 Word list Spring 2.C

Q	Comment tu trouves...?	How do you find...?
	Je le/la/les trouve ...	I find it/them...
adj	bête(s)	stupid
adj	émouvant(s)	moving
adj	original/originaux	original
adj	démodé(s)	old-fashioned
	ce n'est mon truc	It's not my thing
adj	ennuyeux	boring (ms, mpl)
adj	ennuyeuse	boring (fs)
adj	ennuyeuses	boring (fpl)

FRENCH Y9 Word list Spring 2.D

nmpf	les musiciens	musicians
nf	la chanson	song
Q	comment tu trouves...?	How do you find...?
	bête(s)	stupid
	... toutes sortes de musique	all sorts of music
DOP	Je le/la/les trouve...	I find it/them...
nf	la musique	music
nf	la musique francophone	Francophone music
adj	inspirant(e)	inspiring
vb	la musique) m'inspire	the music inspires me

FRENCH Y9 Word list Spring 2.E

inf	venir de/d'	to have just
prep	depuis	since/for
vb	ça me donne envie de/d' + inf.	it makes me want to
vb	ça me rend + adjective	it makes me
vb	je viens de manger	I have just eaten
vb	il vient de faire	he has just done
	depuis toujours	(since) forever
	depuis cinq ans	for 5 years
inf	jouer de/d'+ instrument	to play an instrument
vb	je joue du violon	I play the violin

FRENCH Y9 Word list Spring 2.F

inf	avoir peur	to be afraid
inf	avoir soif	to be thirsty
inf	avoir faim	to be hungry
inf	avoir besoin de/d'	to need
inf	avoir raison/tort	to be right/wrong
inf	avoir de la chance	to be lucky
inf	avoir quinze ans	to be 15 years old
inf	avoir chaud / froid	to be hot/cold
inf	avoir l'air	to seem
inf	avoir envie de/d'	to crave for

REVISION: Scan the QR code below to access the word lists on Quizlet!

This QR code links to all [the French Y9 Quizlet sets.](#)



Phonics: -gn	
campagne	gagner
ligne	Espagne

Phonics: eu v. ou	
deux	joue
peu	beaucoup

Phonics: liaison	
mes amis	deux heures
aux États-Unis	nous allons
très intéressant	vous allez

Phonics: ê & è	
très	fête
collège	tête

Section 1: Key Vocabulary/Questions	
Tier 2 vocabulary	Definition
Modal Verb	A verb that expresses necessity or possibility. It needs an infinitive at the end of the clause
Imperfect tense	In German this is usually used to talk about the past in reports, articles and novels
Subordinate clause	A clause, introduced by a subordinating conjunction, which also needs a main clause to make sense. e.g. <i>als ich klein war, ...</i>
WO2/Inversion	The verb is the second idea in the German sentence, regardless of whether you start with the subject or something else. e.g. Mit 5 Jahren <u>konnte</u> ich...
Comparative	an adjective used to compare
Superlative	an adjective used to say something is 'the most...'

Question	Translation
Was hattest du, als du klein warst?	What did you have when you were small?
Was konntest du mit fünf Jahren machen?	What were you able to do at 5 years old?
Was durftest du in der Grundschule nicht machen?	What were you not allowed to do at primary school?
Wie war es in der Grundschule?	How was it at primary school?
Wie ist die Sekundarschule?	How is secondary school?
Würdest du gern eine Uniform tragen?	Would you like to wear a uniform?

Section 2: Grammar
<p>Imperfect Modals: modals are always used with the infinitive</p> <p>ich konnte... <i>I was able to...</i></p> <p>e.g. <u>Ich konnte</u> mit vier Jahren lesen. <i><u>I was able to read</u> at 4 years old.</i></p> <p>ich musste... <i>I had to...</i></p> <p>e.g. <u>Ich musste</u> um 20 Uhr ins Bett gehen. <i><u>I had to go</u> to bed at 8pm.</i></p> <p>ich durfte... <i>I was allowed to...</i></p> <p>e.g. <u>Ich durfte keine</u> Schokolade essen. <i><u>I was not allowed to eat</u> chocolate.</i></p> <p>ich wollte... <i>I wanted to...</i></p> <p>e.g. <u>Ich wollte</u> Schauspielerin werden. <i><u>I wanted to become</u> an actress.</i></p>

<p>Imperfect Tense: The imperfect tense is used for the past ('said', 'went', etc.) in German, usually when telling stories/writing reports</p> <p>For regular verbs (e.g. <i>sagen</i>), take <i>-en</i> off the infinitive to give the <u>stem</u> and add these endings:</p> <p>ich sag<u>te</u> wir sag<u>ten</u> du sag<u>test</u> ihr sag<u>tet</u> er/sie/es sag<u>te</u> Sie/sie sag<u>ten</u></p> <p>This is the same pattern for imperfect modal verbs!</p> <p>Irregular verbs (e.g. <i>gehen</i>) usually have a vowel change in the <u>stem</u> and add these endings:</p> <p>ich ging wir ging<u>en</u> du ging<u>st</u> ihr ging<u>t</u> er/sie/es ging Sie/sie ging<u>en</u></p> <p>Other common irregular verbs: <i>ich hatte, ich war, ich sah, ich kam, ich sprang, ich aß, es gab</i></p>

Section 3: WAGOLL
<p>Als ich klein war, hatte ich ein rotes Holzauto. Es war das beste Spielzeug! Mit fünf Jahren konnte ich lesen, aber ich konnte erst schwimmen, als ich neun war.</p> <p>In der Grundschule durfte ich nicht alleine zur Schule gehen. Das fand ich total ungerecht, weil ich dachte, ich war sehr selbstständig. Die Klassenzimmer in der Grundschule waren bunter und die Lehrer*innen waren freundlicher als in der Sekundarschule, aber wir mussten in einem Klassenzimmer bleiben und das war echt langweilig.</p> <p>In der Sekundarschule sind die Lehrer*innen strenger (mein Mathelehrer ist der Strengste) und es gibt zu viele Hausaufgaben (Meine Deutschlehrerin ist die Schlimmste mit Hausaufgaben!)</p> <p>Ich würde gern eine Uniform tragen, weil das schicker ist. Ich würde eine schwarze Hose und eine gestreifte Krawatte tragen.</p>

Gut zu wissen!
<p>als <i>als</i> can be used as a conjunction meaning 'when' if used to indicate when something happened in the past. It is a subordinating conjunction (like <i>weil</i>) and sends the verb to the end of the clause.</p> <p><i>als ich jung <u>war</u></i> - when I <u>was</u> young <i>als mein Bruder geboren <u>ist</u></i> - when my brother <u>was</u> born</p> <p>Superlative Add 'ste' to the end and an umlaut to a one-syllable adjective when using the superlative</p> <p>die/der Größte - the biggest die/der Strengste - the strictest die/der Freundlichste - the friendliest die/der Kälteste - the coldest</p> <p>Kulturzone! Many of the fairy tales we're familiar with are translated from the German. The brothers Grimm wrote Rapunzel, Hansel and Gretel, Cinderella, Sleeping Beauty, Snow White and many more. The original stories didn't always have the happy endings that we know today!</p>





REVISION: Scan the QR code above to access the word lists on Quizlet!
 This QR code links to all [the German Year 9 QUIZLET sets.](#)

GERMAN Y9 Word list Spring 2.A		
die Kindheit		childhood
als ich sieben war		when I was 7
als ich jünger war		when I was younger
Mit neun Jahren		At 9 years old
das Kleidungsstück		the piece of clothing
die Mütze		the hat
die Puppe		the doll
die Geschichte		history/the story
trotzdem		nevertheless
verstecken		(to) hide

GERMAN Y9 Word list Spring 2.B		
Mit welchem Alter?		At which age?
konntest du?		Could you/were you able to?
ich konnte		I could/was able to
sie konnte		she could/was able to
wir konnten		we could/were able to
lächeln		(to) smile
zählen		(to) count
ich durfte		I was allowed to
ich durfte nicht		I was not allowed to
ich musste		I had to

GERMAN Y9 Word list Spring 2.C		
wechseln		(to) change
die Grundschule		Primary school
Schüler*innen		pupils
der/die Älteste		the oldest (one)
der/die Größte		the biggest/tallest (one)
der/die Frechste		the cheekiest (one)
ungepflegt		scruffy
das Lieblingsspielzeug		the favourite toy
geweint		cried
zufrieden		satisfied/happy

GERMAN Y9 Word list Spring 2.D		
es war einmal		once upon a time
der Junge		the boy
das Mädchen		the girl
das Märchen		the fairy tale
das Wald		the forest
König*in		King/Queen
aß		ate
ging		went
sagte		said
sah		saw/watched

GERMAN Y9 Word list Spring 2.E		
traurig		sad
er wollte		he wanted
der Feind		the enemy
böse		evil, bad
dauern		(to) last (time)
die Küche		the kitchen
tief		deep
der Turm		the tower
als Kind		as a child
beschreiben		(to) describe

Phonics: ch (soft)	
nicht	Milch
abwaschen	Teich
Chef	modisch
ich	schlecht

Phonics: ch (hard)	
noch	acht
jedoch	Chor
auch	Buch
sechs	gedacht

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Credit	Acknowledging who created content - text, images, videos and sounds that you are making use of.
Copyright	People own the copyright of material they create.
Creative Commons license	Used when an author wants to give people the right to share, use and build upon work that they have created.
Digital footprint	The information about a person on the Internet.
e-waste	Electrical devices that have been thrown away.
GDPR	General Data Protection Regulation - one of the two main laws that protect data.
Data Protection Act	Everyone responsible for using personal data has to follow strict rules called 'data protection principles'.
Social media profile	A description of a person's characteristics that is used to identify them on social media sites.
Digital well-being	Having a healthy relationship with digital technology.
Deep web	The part of the World Wide Web that is not discoverable using standard search engines, including password-protected and encrypted networks.
Surface web	The surface web is the portion of the World Wide Web that is readily available to the general public and searchable with standard web search engines.
Dark web	The part of the World Wide Web that is accessed with special software, allowing users and website operators to remain anonymous or untraceable.

Tier 2 vocabulary	Definition
Ethics	Moral principles that govern a person's behaviour.
Illegal	When something is illegal it is against the law.
Immoral	When something is immoral, it is not necessarily against the law but it is against acceptable standards of behaviour.
Moral dilemma	A situation that requires a choice between two options, both of which can be viewed as immoral.
Censorship	Censorship is the suppression of speech, public communication, or other information done because such material is considered objectionable, harmful, sensitive, or "inconvenient".
Surveillance	Surveillance is the monitoring of behaviour, many activities, or information for the purpose of information gathering, influencing, managing or directing.

Section 2: New Knowledge/Skills

The Trolley Problem - In 1967, the moral philosopher, Philippa Foot, created the Trolley Problem. Imagine you are the driver of a runaway tram (a trolley).

All you can do is steer from one narrow track to another. Five men are working on one track and one man is working on the other track. Anyone working on the track when the tram enters it will be killed. Which track do you choose?

Now we have driverless cars and the Trolley Problem has become a very real moral dilemma.



Section 3: Other subject specific things

To credit a source, you must state who created it (author and/or company), the title of the article or page it came from, the date it was published, the web address of the page you found it on and the date you accessed the web page.

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How to stop Google from tracking your location history.

1. Go to myaccount.google.com/privacycheckup.
2. Find 'Location History' & choose 'Manage Location History'.
3. Tap 'Manage Location History' at the bottom of the screen again.
4. Toggle the button to turn off Location History.

To delete your history tap the settings button on the 'Location History' map.

Questions

1. Do you think it is right for mobile phone manufacturers to launch new models every year given the environmental impact of e-waste?
2. Why do you think the GDPR requires personal data to be 'accurate and, where necessary, kept up to date'?
3. Can you think of any technology that creates a moral dilemma for the programmer or the user?

PE: Netball

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Holding Space	Using your body to protect a space you want to move into.
Interception	Deflecting or catching the ball whilst it is on route to another player.
Repossession	Catching, dropping and then re-catching the ball.
Rebounding	Trying to reclaim the ball after an attempted shot at goal.
Driving onto the ball	Sprinting towards the ball when receiving a pass.
Throw-up	Method used to restart the game after two players simultaneously commit a foul.
Double Lead	Two players running out at an angle in different directions to give two passing options to a player in possession of the ball.

Section 2: New Knowledge/Skills

Within the netball module you will learn about :

Tactics used at the centre pass – both in terms of attacking and defending the centre pass in order to try and maintain/win possession of the ball. Think about why it is important to keep possession of the ball during your own team’s centre pass.

The correct technique for defending a shot at goal. Know where to move to in order to rebound a shot and then try to regain possession of the ball. Why is this important?

Holding space – you will be able to demonstrate the correct technique and know when to throw the ball to a player who is holding space. Can you identify when this technique would be effectively used?

Intercepting the ball - focusing on the correct technique and being able to intercept a pass without causing contact. Can you identify key points of how to carry out this technique?

Driving effectively onto the ball by running out at an angle, using a change of speed and direction and looking at double leads to help maintain possession of the ball.

PE: Hockey

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Penalty corner	An attacking set piece with the attackers lined up outside the circle and the defenders on the goal line.
Injection	Passing the ball into play from the penalty corner.
25m hit	Hockey’s version of football’s corner when a defender hits the ball behind their own goal line.
Jab tackle	A one-handed effort to reach in and knock the ball away from a dribbling player.

Section 2: New Knowledge/Skills

In Year 9 Hockey, you will be working towards playing the full **11 v 11** version of the game with some of the more advanced rules such as **penalty corners** and **25m restarts**.

You will develop your range of skills by considering different ways to **score** when you get in and around the **shooting circle**.

Part of your development in hockey will include leadership and you may be asked to set up a practice for your teammates, captain a team or umpire a game.

As you go through the lessons, you should be able to answer some of these questions:

- Explain the difference between the jab tackle and the block tackle?
- Why is a penalty corner awarded and how do the players line up for it to be taken?
- Where (exactly) is a 25m hit take from?
- What are your options if you find yourself dribbling towards the keeper and how would you choose which one to use?
- Name 5 rules you would be looking out for if you were umpiring a hockey game.
- Describe a playing formation you might use to set your team up if you were captain.

PE: Volleyball

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Set	Passing the ball from in front of the forehead using the fingers and thumbs of both hands.
Dig	Passing the ball with the forearms - between the wrists and the elbows.
Spike	Volleyball’s version of the smash - hitting the ball firmly over the net making it difficult for the opponents to return.
Block	The best defence against the spike is to jump up with both hands at the net to try to stop the ball coming over to your side.
Serve/service	The start of the rally can be done underarm or overarm. It must be taken by the player at the back right side corner.
Sideout	This is when the service transfers to the other team and the players move to a new position by rotating in a clockwise direction.

Section 2: New Knowledge/Skills

The Year 9 Volleyball module will provide an introduction to a sport which is hugely popular among Key Stage 4 students. You will learn the key rules and skills to enable you to take part in a 4v4 game.

You should be able to answer these questions as you go through your volleyball module:

Give 3 points of technique for performing a set.

Why should a player try to set the ball rather than dig it?

Give 3 points of technique for the dig?

How many shots is a team allowed to get the ball over the net?

How many players are there in a volleyball team?

Who takes the next serve in a game of volleyball?

Suggest 5 ways a volleyball rally comes to an end.

PE: Rugby

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Touch judge	An important officiating role which you may need to take on in lessons.
Gain line	An imaginary line across the pitch where the breakdown occurs.
Conversion	Kicking over the bar for after a try is scored.
Drop kick	A half-volley kick to start the game.
Drop goal	A drop kick over the posts.
Kick for touch	Kicking the ball off the side of the pitch when your team is under pressure.
Props	Two forwards that support the hooker in a scrum.
Hooker	The forward who goes in the front middle of the scrum and tries to hook the ball with their feet.
Fly-half	A back who receives the ball from the scrum-half and decides how the backs will attack.

Section 2: New Knowledge/Skills

In Year 9 rugby we are working towards playing the full 15-a-side version of the games with everyone able to contribute as a back or a forward in a specific position.

Try the following questions to check your knowledge of 15-a-side rugby:

Can you explain the full scoring system in rugby?

How many of the 15 positions on the field can you name?

What is the importance of the 'gain-line'?

How many players make up a full scrum?

Which players do most of the kicking in a game of rugby?

When might a team try for a drop goal?

Where is a conversion taken from?

PE: Table Tennis

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Back spin	Hitting down the back of the ball to make it travel more slowly over the net - a defensive tactic.
Top spin	Hitting over the top of the ball to give it topspin will cause it to dip as it goes over the net - an attacking tactic.
Variation	Doing different things to keep your opponent guessing - playing different shots to different parts of the table for example.
Attack	One playing is usually on the offensive, trying to hit the winning point.
Defence	If your opponent is on the offensive, you made need to adjust your position and your shot selection to effectively defend their shots.
Shot selection	The skill of knowing what shot to use at any point in the game.
Block	A defensive tactic of just putting your bat out to bounce the ball back over the net.
Loop	Playing the ball back high over the net when defending to give yourself time to get ready to defend the next shot.
Backhand flick	An attacking version of the backhand push. Just flick the wrist to add power.

Section 2: New Knowledge/Skills

Year 9 table tennis will provide plenty of opportunity for you to compete with your classmates. As you compete more, you will develop tactical 'answers' to what is happening in the game.

You should be able to recognise when you are in attack and when you are in defence and start to change your shot selection and your positioning.

You will be expected to umpire and keep score for your classmates, being confident in stopping rallies when faults occur.

PE: Gymnastics

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Partners/Pairs	Performing with 1 other student.
Trios/Groups	Performing in a group of 3 or more.
Cannon/ Mirror/ Unison	Performing 1 after the other/performing in time in opposition/performing in time.
Counter balance	Leaning inward or towards a partner or group to support or maintain a balance.
Counter tension	Leaning outward or away from a partner or group to support or maintain a balance.
Weight bearing	Acting wholly or partially as the base of support in a pair or group balance.

Section 2: New Knowledge/Skills

In Year 9 gymnastics, you will be challenged to develop more complex sequences with more people involved and more complex moves. This will not only develop your gymnastic skills, you will need to use good leadership and communication skills to get your group to work as a unit to create and perform the sequence.

Try these questions to check your understanding of Year 9 gymnastics:

Describe a weight-bearing balance as a trio?

Describe a counter-tension position for a group?

Explain how a group of 4 people could perform a counter-balance position?

What qualities does a leader need in order to organise a group into an effective sequence?

PE: Basketball

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Rebound	Catching the ball after a missed shot.
Offensive rebound	Taking a rebound when your team is in attack giving your team another chance to score.
Defensive rebound	Taking a rebound when you are in defence, preventing the other team from having another shot.
Assist	Setting a teammate up to score a basket.
Outlet pass	Making a quick pass out from under your own basket to set up an attack after you have taken a rebound.
Breakout dribble	Making a quick dribble out from under your basket (2 or 3 bounces) to set up an attack for your team.
Officiating crew	The team of officials needed to run a basketball game including a referee, an umpire, a scorer and a timekeeper.
Half court defence	Running back after your team lose possession to defend close to your own hoop.

Section 2: New Knowledge/Skills
In basketball this year, you will be working towards playing the full court version of the game, with some of the more advanced rules and tactics. Hopefully, after your lessons, you will be able to answer some of the following questions:
What is the backcourt rule?
What are some of the time limits that players have to be aware of in a game of basketball?
Why is half-court defence played most of the time?
When might a team use full-court defence?
What makes a good rebounder and why are they so important to a team's success?

PE: Health and Fitness

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Components of fitness	Our fitness can be broken down into 11 components of fitness which we all possess. Examples include speed, strength, agility.
Effects of exercise	The short term effects of exercise are changes in the body which occur as a result of physical activity. We should know why they occur.
Fitness testing	Each component of fitness can be measured by a test. Using fitness tests can help performers to see if their training is having a positive effect on their fitness.
Circuit training	A method of training which involves exercising at a station then having a rest before moving to the next station.
Weight training	Using a resistance such as a dumbbell to exercise a specific muscle.
Heart rate	How fast our heart beats can be a good measure of how hard we are working and a good measure of how fit we are.

Section 2: New Knowledge/Skills
The Health and Fitness module will give students a good foundation for taking responsibility for their own fitness.
You will look at a variety of ways to measure your own fitness and a variety of ways to improve your own fitness.
Many of the exercises and activities we do can be repeated at home with little or no equipment - you take responsibility!
The unit also provides a taste of some of the content students will experience should they opt for exam PE in KS4.
Try these questions as you complete this module: How many of the major muscles can you name? Can you link 5 components of fitness with their fitness test? Can you list 10 exercises you can do with a pair of dumbbells? Can you list 10 exercises you can do without any equipment? Which heart rate is an important measure of your health?

PE: Running

New Knowledge/Skills
You will use the same running route (3 laps/2200m) to work on endurance and work towards a personal best time. You will set your own targets based on previous times and set yourself interim targets (lap times and split times) to help you reach your goal.
We will continue to develop our mental approach to running by looking at some basic tactics (strategies) - when to run faster or when to conserve energy.
To improve our performance we will look at two training methods which can be used to improve running: fartlek and interval .
Fartlek training means running at different speeds for varying distances whereas interval training involves running a set distance or for a set time and then having a period of rest.

PE: Health and Fitness

New Knowledge/Skills
Our focus on health and fitness across the sports will be on the components of fitness and how they are required in different activities.
Question: Can you list the 11 components of fitness?
Hopefully, you will be able to identify the main components of fitness used in any sport you do.

PE: Leadership

New Knowledge/Skills
You will be challenged at times to take on the role of captain and help influence your team's performance.
You may be asked to lead a warm up in front of the class to help develop your confidence to stand in front of and speak to a large group of people.
You will also be given time in some activities to create your own practices for a group of classmates.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Emigre	a person who has left their own country to live in another.
Depiction	To represent or show something.
Fatalities	An occurrence of death by accident.
Conflict	war
Provocative	Causing anger or another strong reaction.
Dehumanizing	To deprive someone or something of human qualities or dignity.
Segregated	Set apart from each other, isolated or divided.

Tier 2 vocabulary	Definition
Charcoal	drawing media- black , crumbly stick made from burnt wood
Blend	merge tone/colour from one to another
Tone	light and shade
Proportion	comparative measurements
Ink	An ancient writing and drawing medium in a liquid or paste form, containing coloured dyes of pigment.

Section 2: New Knowledge/Skills

World War II was a global conflict between the Allies and the Axis powers. During this conflict there were around 50 to 85 million fatalities. Throughout this project, we will be looking at different artists depiction of predominantly black soldiers or of individuals overlooked in mainstream depictions of war.

Barbara Walker is a British artist known for her powerful and often provocative works that explore gender, identity, race and history. Walker's work doesn't focus on the traditional battlefield scenes or heroic depictions of soldiers, but rather on the intimate human aspects of war. Her work often combine elements of portraiture, abstraction and symbolism, creating compelling visual narratives. Her work is less about the glorification of conflict and more about the dehumanizing effect of violence, the emotional cost of war, and the resilience of individuals who endure it.



I was there IV
1964
Ink on tracing paper

Black people had participated in every major American conflict since the birth of the nation. And though by 1940, the War Department had removed a number of restrictions on permitting African Americans to join the armed forces under the Selective Service Act, society as a whole remained racially segregated. This separation of black and white people in the US was upheld by state and local laws, referred to as 'Jim Crow', and was particularly notable in the American deep south. These laws excluded black American citizens from economic and political rights.

Elizabeth Catlett was an American and Mexican sculpture and graphic artist. Her work spans over six decades and focusses on her own personal experiences as an African American women, mother and emigre living in Mexico.

"I am inspired by Black people and Mexican people, my two peoples."




Elizabeth Catlett's work directly addresses people whose perspectives and experiences, like hers, had historically been excluded from artistic representation.



Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Epic Theatre	A range of theatrical devices used to make the audience think.
Didactic Theatre	Theatre that educates and send a message to the audience.
Bertolt Brecht	A German Theatre Practitioner and playwright.
Gestus	A clear character gesture or movement used by the actor that captures a moment or attitude rather than delving into emotion.
Alienation	Familiar contents are presented in an unfamiliar way so that the audience does not empathise with the story of a drama.
Episodic Structure	Scenes are episodic , which means they stand alone and are constructed in small chunks, rather than creating a lengthy and slow build of tension.
Multi-Role	Actors play multiple characters within the same piece of theatre.
Tier 2 vocabulary	
Socio-Political Issues	Definition
Socio-Political Issues	Issues and political decisions that effect the peoples lives and the world.
3rd Person Narration	Commenting upon a character as an actor is a clear way of reminding the audience of theatricality.
Direct address	The actors speak directly to the audience, sometimes in the form of questions, this reminds the audience that what they are seeing isn't real and forces them to think about what they are watching. This is called 'breaking the fourth wall'.

Section 2: Who is Brecht?

Bertolt Brecht (1898-1956) was a famous German playwright and poet.




"Art is not a mirror with which to reflect reality but a hammer with which to shape it."
Bertolt Brecht

What is the Alienation effect?
The idea of Alienation or the *Verfremdungseffekt* was to constantly remind the audience they were in a theatre, watching a play.

These techniques break the illusion of drama. We do not get lost in the story or the characters.

Instead we are constantly reminded that these are actors communicating ideas and situations to us.

How did Brecht make the audience step back and view the message rather than the spectacle?



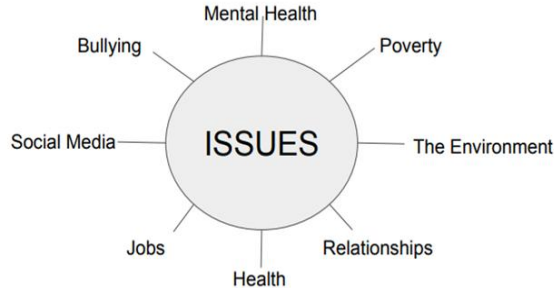

This short video explains the ideas of Epic Theatre.

Epic Theatre provokes the audience to think. It often uses a parable, a story with a wider meaning as a vehicle to address social issues or viewpoints and opinions.

Epic Theatre plays with short 'stand alone' scenes, the structure often ignores the usual constraints of linear timelines. These short contrasting scenes create humour, provoke thought and make the audience reflect.

Section 3: Exploring Social Issues

An Example of a socio-political Issues Mind Map

Pendulums Emporium is a production by local theatre company Maison Foo.

The production explores a wide range of social issues.




Section 3: Links to Prior Learning

In year 7 you studied Greek Theatre and were taught about the role of the narrator. In year 8 you studied Bullying and in year 9, Gangs. You were taught how to explore these issues through different drama techniques. In year 8 you were taught about abstract theatre when devising pieces of theatre about cyber bullying.

Section 1: Key VocabularyS	
Tier 3 vocabulary	Definition
Leitmotif	A frequently recurring short melodic or harmonic idea which is associated with a character, event, concept, idea, object or situation.
Diagetic Music	Music within the film for both the characters and audience to hear e.g. a car radio, a band in a nightclub or sound effects.
Non-diagetic Music	Music which is put “over the top” of the action of a film for the audience’s benefit and which the characters within a film can’t hear – also known as UNDERScore or INCIDENTAL MUSIC .
Underscore	Underscore is a soft, background soundtrack that plays quietly under dialogue or other audio in a performance.
Ostinato	A repeated music pattern.
Drone	A long held note.

Tier 2 vocabulary	Definition
Soundtrack	The music and sound recorded on a motion-picture film.
Melody	A combination of pitch and rhythm. Often the main tune.
Rhythm	A combination of different note values to create a pattern.
Notation	Written symbols used to represent the notes on the stave.
Composition	The creation of music.

Section 2: New Knowledge/Skills
<p>The purpose of music in films Film Music is a type of descriptive music that represents a mood, story, scene or character. It is designed to support the action and emotions of the film on screen.</p> <p>How musical elements can be used in film music Pitch and melody– rising melodies are often used for increasing tension, falling melodies for defeat. Westerns often feature an epic theme. Question and answer phrases can represent good versus evil. The interval of a fifth is often used to represent outer space with its sparse sound.</p> <p>Dynamics – forte (loud) dynamics to represent power; piano (quiet) dynamics to represent weakness/calm/resolve. Crescendos are used for increasing threat, triumph or proximity and Decrescendos or diminuendos are used for things going away into the distance. Horror Film soundtracks often use extreme dynamics or sudden dynamic changes to ‘shock the listener’.</p> <p>Harmony – Major chords are used to create a happy sound. Minor chords are used to create a sad sound. Dissonant (clashing) harmonies or chords create a felling of unease.</p> <p>Duration– long notes can be used to describe vast open spaces and short notes are often used to depict busy, chaotic or hectic scenes. Pedal notes, or drones, are long held notes in the bass line that can be used to create tension and suspense.</p> <p>Texture – Thin, sparse textures can be used for bleak or lonely scenes; A thick, full texture can be used for active scenes or battles.</p> <p>Articulation– Playing smoothly, or legato, is often used for flowing or happy scenes. The opposite is staccato, which means short and spikey notes. Accents are extra stresses that are put on notes – these can be used for extra shock within a scene.</p>

Section 3: Other/Previous Knowledge/Skills
<p>Leitmotif Leitmotifs a short, recurring melodies or harmonic ideas that are associated with a character, event, concert, idea, object or situation.</p> <p>Soundscape A soundscape in film is a combination of sounds that create a sense of place and atmosphere, and support the story.</p> <p>Another name for the soundscape in an underscore. The music happens under the dialogue or other audio in the film.</p> <p>Learn more about underscore here </p> <p>Composing music for film </p> <p>The Marvel Symphonic Universe </p> <p>Storyboard A storyboard is a series of pictures or illustrations that map out the key events of a story. It can be used during the film music composition process to plot the main action or mood points within a scene and to make initial plans on what compositional elements will be used.</p> <p><i>Links to prior learning: Mastering Performance (Film Music), Keyboard Skills, Strike a Chord, The Four Chord Trick, Hooks and Riffs.</i></p>

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Colostrum	The very first "Milk" produced when a baby is born. It is rich in nutrients and antibodies to protect the baby who is born with no immune system
Folic Acid	Folic Acid is the synthetic version of the Vitamin B9 (Folate). Recommended during pregnancy to prevent neural tube defects.
Anaemia	Deficiency disease caused by a lack of iron in the diet.
Body Mass Index	A method of calculating whether ADULTS are at the recommended weight for their height.
Osteoporosis	Sometimes known as "brittle bone" disease. More likely (but not only) to occur in older women. Occure
Anaphylaxis	Severe potentially life threatening allergic reaction

Tier 2 vocabulary

Tier 2 vocabulary	Definition
Infancy	. Birth to early years (toddlers)
Adolescence	Teenage years
Lactation	Breast feeding
Weaning	Moving from breast milk to soft foods
Menstruation	Also known as periods. Girls lose blood monthly and are more prone to anaemia
Menopause	As women age they stop having periods, their hormones change and their dietary requirements change.
Vegan	Eats no ingredients which have come from animals / fish /birds /insects
Vegetarian	Doesn't eat meat & fish but will eat eggs, milk & cheese

Section 2: New Knowledge/Skills

A food intolerance means that the body can't digest food properly, or that a particular food might irritate the digestive system. (e.g. coeliac disease) Symptoms include nausea, cramps, tummy ache, diarrhoea.

A food allergy happens when the body's immune system sees the food as an invader. This leads to an allergic reaction. Someone with a food allergy is always at risk for the next reaction being life-threatening. Eating a tiny amount of the food could lead to anaphylaxis. So anyone with a food allergy must avoid the problem food and always carry emergency injectable epinephrine. (Epi- pen)

The 14 allergens which must be labelled in bold are celery, cereals containing gluten (such as barley and oats), crustaceans (such as prawns, crabs and lobsters), eggs, fish, lupin, milk, molluscs (such as mussels and oysters), mustard, peanuts, sesame, soybeans, sulphur dioxide and sulphites

Red Tractor is a food assurance scheme showing the food has been farmed, processed and packed in the **UK**. It is **traceable**, safe to eat and has been produced responsibly.



Marine Stewardship Council
Using **sustainable methods** of fishing to prevent the decline in number of **fish** in our seas.

Organic means the food has been produced without using any chemicals. Only **natural fertilisers and pesticides** are used to help crops grow.



Foods that have this label mean the **animals** have had a good life and have been treated with respect & farms checked by the RSPCA

Section 3: Other subject specific things

Factors affecting food choice

Factor	
Cost	Some families have to budget due to low incomes
Age Group	Different age groups have different nutritional needs
Health	e.g. type 2 diabetes, anaemia, osteoporosis, obesity
Vegetarian Vegan	Don't eat meat/fish; don't eat or use any animal products
Religion	e.g. Hindu/Muslim/Jewish/ Buddhist etc
Intolerance	e.g. intolerance to wheat /gluten, dairy/lactose
Allergies	e.g. nuts/shellfish, eggs, wheat, dairy (14 allergens)

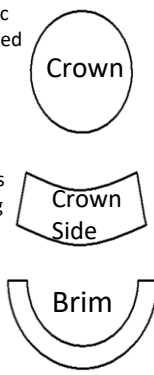
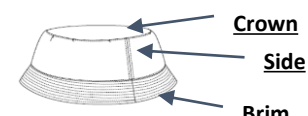
Heat Transfer

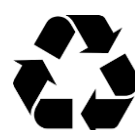
Conduction - heat transfer through physical contact e.g. the base of a pan on a hob
Convection - convection currents tend to occur in liquids (e.g. boiling water) and gases . Hotter particles rise and cooler particles drop.
Radiation - thermal radiation is emitted from a heat source e.g. the grill, and travels to the food via particles in the air (photons)

Homework

Read through the information in your booklet and on the Knowledge organiser about diet through life then complete the Google classroom quiz. (Ask your teacher for a paper copy if needed.)

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Top Stitching	A line of stitching that is decorative on the outside of a garment.
Stay Stitching	A row of stitching that helps to keep fabric in the correct shape. Stops it distorting or ripping.
Lining	A layer of different material covering the inside surface of something.
Interfacing	An extra layer of material that is applied to the facing of a garment to add support.
Crown	The top of a hat. Usually circular.
Brim	The part of the hat that sticks out at the bottom to provide shade whilst it is being worn.
Tier 2 vocabulary	Definition
Recycle	To convert waste into a useable material
Reuse	To use something more than once
Reduce	To make a smaller amount of waste
Refuse	Turning down the use of materials and processes that can harm the environment
Repair	Can the product be mended so that it have a longer life?
Rethink	Looking for alternatives to products that are less damaging to the environment

Section 2: Skills
<p>Sewing Patterns</p> <p>A sewing pattern is a set of shapes that have been DRAFTED to use as templates to cut fabric out. These shapes have been planned and tested to ensure that when you sew them together they will form the GARMENT you want to make!</p> <p>Sewing patterns are GRADED, this means that the templates are adjusted to fit different sizes of people. For example the hat you are making comes in a range of sizes SMALL, MEDIUM etc</p> <p>The size of the hat you chose to make will be based on the circumference of your head.</p> 
<p>Manufacturing Process for the Hat</p> <ol style="list-style-type: none"> 1. Sew the BRIM to the CROWN SIDE, repeat 4 times 2. Match the outside hat sides together, right sides together 3. Repeat for the lining pieces. 4. Sew each together down the sides. 5. Stay stitch around the top of both hats. 6. Snip into the top of the hat at 1cm intervals. Make sure not to cut through the stay stitching. Repeat for both hats. 7. Pin the outside CROWN onto the top of the outside hat. Repeat for the lining of the hat. 8. Machine around the top of the hat for both the lining and outside. 9. Put the hats together RIGHT SIDES TOGETHER. Match up the edges and pin in place. 10. Sew around the brim, leaving a gap big enough for your hand to get in! 11. Turn the hat right sides out through the gap you left. 12. Top stitch around the edge of the brim, also sewing up the gap. 

Section 3: Knowledge
<p>Textiles and the Environment</p> <p>Of all industries textiles is the second most pollutant. As designers and consumers we have a responsibility to be aware of the impact it has.</p> <p>As designers we should consider the environment when picking the materials we will use to make our designs. For example considering using recycled materials, or sustainably produced fabrics.</p> <p>FAST FASHION has led to a huge increase in the amount of textiles that end up in landfill. There is also the impact of the MANUFACTURE and CARE of the garments during their life. As consumers we have a responsibility to consider the impact our purchases have on the environment.</p> <p>Some facts to consider:</p> <ul style="list-style-type: none"> *2,700l of water is needed to produce 1 t-shirt. This is equivalent to enough drinking water for one person for 2.5 years. *10% of all greenhouse gases are produced by textile production. *0.5million tonnes of MICROFIBRES are released into the oceans each year as a result of washing SYNTHETIC textiles.
<p>The 6 R's</p> <p>Whilst we are all quite familiar with the idea of recycling materials there actually 6 different 'R' words that we can use to consider our impact on the environment. This is a list of 6 different guidelines that people can use to help them reduce their impact on the environment. These words can be applied by the designer when they are creating new products or the consider who is looking to decide what to do with a ripped t-shirt!</p> <div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>REDUCE RECYCLE REFUSE RETHINK REUSE REPAIR</p> </div> <div style="flex: 1; text-align: center;">  </div> <div style="flex: 1;"> <p>This is the MOBIUS loop it is the recognised symbol of recycling.</p> </div> </div>

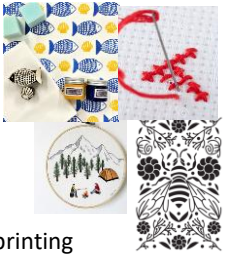
Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Aesthetics	What a product looks like, Colour, shape, style etc
Components	Anything in the textile product that is not made of fabric. Eg. Zip, button, press stud
Embellishment	The application of stitching, trimmings, threads, braid, ribbons and beads to decorate a fabric or textile.
Pattern	Paper templates that show the shape of the fabric pieces that must be cut out to make a product
Context	The setting for an event, statement, or idea.
Couching	The process used to secure threads, fibres or yarns to a surface using hand stitching or embroidery.
Tier 2 vocabulary	
Form	Definition
Form	The shape, aesthetics. What something looks like.
Function	How well does the product perform the job it was designed to do?
Customer	Who will use your product? What Are their needs, interests etc
Evaluation	Making a judgment about a product or design

Section 2: Skills

Surface Decoration

You have worked with many different types of surface decoration in your previous textile projects. In this project you will need to pick the most relevant ones to your design:

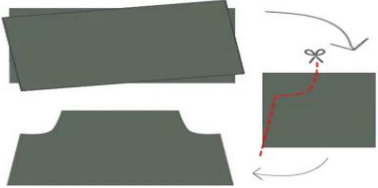
- Stencil
- Applique
- Block printing
- Embroidery
- Cross stitch
- Buttons/beads/sequins
- Fabric crayons
- Digital Fabric design and printing



You have also learned how to create patterns/templates and sew a zip in amongst other things! Can you explain how each of these processes work? Can you decide which are the most appropriate to use in your design?

Upcycling

Upcycling is taking an old garment and making it into something new. Often this is a garment that might be destined for landfill. You can add decorations to hide holes or stains. Combine garments, take the sleeves from one top and sew them onto another. Or completely remake some thing ie. take an old pillowcase and make it into a top.



Section 3: Knowledge

Textiles and the Environment

Of all industries textiles is the second most pollutant. As designers and consumers we have a responsibility to be aware of the impact it has.

As designers we should consider the environment when picking the materials we will use to make our designs. For example considering using recycled materials, or sustainably produced fabrics.

FAST FASHION has led to a huge increase in the amount of textiles that end up in landfill. There is also the impact of the MANUFACTURE and CARE of the garments during their life. As consumers we have a responsibility to consider the impact our purchases have on the environment.


Some facts to consider:

- *2,700l of water is needed to produce 1 t-shirt. This is equivalent to enough drinking water for one person for 2.5 years.
- *10% of all greenhouse gases are produced by textile production.
- *0.5million tonnes of MICROFIBRES are released into the oceans each year as a result of washing SYNTHETIC textiles.

The 6 R's

Whilst we are all quite familiar with the idea of recycling materials there actually 6 different 'R' words that we can use to consider our impact on the environment. This is a list of 6 different guidelines that people can use to help them reduce their impact on the environment. These words can be applied by the designer when they are creating new products or the consider who is looking to decide what to do with a ripped t-shirt!



- REDUCE
- RECYCLE
- REFUSE
- RETHINK
- REUSE
- REPAIR



Section 1: - Key Vocabulary	
Tier 3 Vocabulary	
Resistor	Electronic component designed to resist the flow of electricity by converting it into heat energy
Capacitor	Electronic component used to store and discharge a small amount of electricity
Integrated Circuit	Collection of electronic components combined together into a pre-designed 'chip', often with a fix program
Microcontroller	An integrated circuit which can be 'programmed to react to input and output variables
Voltage Regulator	Collection of transistors designed to create a 'stable' voltage supply
Flowchart	A changeable program which can be stored on a microcontroller
Tier 2 Vocabulary	
Soldering	The process of using a metal with a low melting point to fix two other metal wires permanently together
LED	Electronic component designed to emit light when electricity is passed through it in the correct direction
Wire Strippers	Hand held tool used to remove the protective plastic cover of the end of wire
Side Cutters	Handheld tool used to cut metal wire to length
CAD	Computer Aided Design – Software used to design a product
Laser Cutter	Machine which is controlled by a computer and using high energy light to cut and engrave wood and plastic

Section 2: Skills	
Soldering	Being able to solder 'of board' components to 'fly wires' Being able to solder 'on board' components to a PCB Be able to solder an integrated circuit to a PCB Soldered joints should be neat, use the correct amount of solder, they should be shiny to avoid 'dry joints'
Flowchart programming	Use electronic CAD software to design a flowchart program which be controlled, and control multiple inputs and outputs Use electronic CAD software to design a flowchart program which be controlled, and control inputs and outputs
2D design software	Use CAD software create a themed design, considering suitable and secure location of the PCB, power, and the inputs & outputs
Application of laser cutting	Understand the set up requirement needed to laser cut and engrave materials, including the use of colour to define cut type, and power/speed setting requirements for different materials
Product Assembly	Create a high quality, fully functioning, electronic product from a collection of parts. Including the use of glues and fixing techniques
Health and Safety	Consistently use a wide range of tools and equipment safety, always using the correct PPE

Section 4:- WAGOLL


Section 3:- New Knowledge

Specification Writing

- Understand the need for a product specification.
- Apply the use of ACCESSFM to write a multipoint, justified product specification


Flowchart Programming

Be able to use flowchart programming (coding) to control the inputs and outputs of a simulated and real circuit, using the following common flowchart commands




Start

Start – Beginning the flowchart program




Digital

Decision - Detect a digital input (on/off) signal to make a YES/NO decision




Outputs

Output – Turn on or off one or more outputs when commanded to



Wait

Wait – Make the program wait for a fixed time until moving onto the next command





Stop


Stop – End the flowchart program


CAD


- Use CAD to create and modify an outline shape
- Use CAD to Contour bitmaps in to line drawings which can be laser engraved
- Apply the use of the following CAD software functions


Select 


Circle 


Shape 


 Contour

Line between 2 points 

Arc 

Line between many points 

Zoom in/out 

Undo/Redo 

Section 1: - Key Vocabulary	
Tier 3 Vocabulary	
Biscuit Joint	Small oval shaped piece of wood used to join two sections of larger wood together
Light Dependant Resistor	LDR – A resistor which changes it's ability to resist the flow of electricity based on the light level
Pillar Drill	A machine drill used to accurately drill holes in wood, metal and plastic
Printed Circuit Board	PCB – Plastic board which is printed with copper track and soldering pads, used to link electronic components together
Tier 2 Vocabulary	
Cost	Details about the cost of materials, manufacture, and retail price of a product
Aesthetic	What the theme, colour scheme and look of a product
Function	What a product is intended to do and how
Ergonomic	Detailed about how easy it is to interact with a product, including how it feels
Quality	How well a product is made, and how it effects the durability and material choice
User	How is the intended target market of the product.
Environment	How does your product effect the environment, from raw materials to end of life

Section 2: Skills	
Soldering	Being able to solder 'on and off board' components based on a schematic diagram independently Soldered joints should be neat, use the correct amount of solder, they should be shiny to avoid 'dry joints', with errors being independently identified and repaired.
Biscuit Joint	Mark out joints, then uses a biscuit jointer under close supervision to joint join 2 panels of wood
Pillar Drill	Set up, including the changing the drill bit, to cut small and large diameter holes in wood to a fixed depth and through cut
2D design software	Use CAD software create a themed design, considering suitable and secure location of the PCB, power, and the inputs & outputs
Application of laser cutting	Understand the set up requirement needed to laser cut and engrave materials, including the use of colour to define cut type, and power/speed setting requirements for different materials
Product Assembly	Create a high quality, fully functioning, electronic product from a collection of parts. Including the use of glues and fixing techniques
Health and Safety	Consistently use a wide range of tools and equipment safety, always using the correct PPE

Section 4:- WAGOLL

Section 3:- New Knowledge

Product Analysis and Evaluation
Complete an in depth evaluation of your own completed practical work, and a similar commercial product using the common evaluation techniques, including CAFEQUE and LCA

Design Theme Research
Develop your knowledge of a well known designer or design house, being able to explain their style and ethos. Apply this design style to a product

PlaySam

Alessi

Memphis

De Stijl

Life Cycle Assessment
Understand the concept of LCA and how it applies to every stage of a products life. Apply the concept to your product during the evaluation.

Risk Assessment

- Understand the meaning off, and difference between a hazard and a risk.
- Identify people at risk and control measures which can be put into place to make an activity safer
- Complete a formal risk assessment for skills/tools/machines which are used to make the clock project

Processes
Be able to explain the competent safe use of the following machines using annotation and sketches.


- Pillar Drill
- Biscuit Jointer
- Strip Heater/Line Bender

Section 1: Key Vocabulary	
Tier 2 vocabulary	Definition
Digital footprint	A record of all the online activities you perform, including the information you share and the data collected about you.
Appropriate	Suitable or proper in the circumstances.
Influence	The capacity to have an effect on the character, development, or behaviour of someone or something.
Self-employment	Someone that earns income from a business they own and operate, rather than from an employer
Voluntary work	Individuals willingly dedicating their time and skills for the benefit of others without pay.
Moral dilemmas	A situation in which a difficult choice has to be made between two courses of action
Finances	The management of money and includes activities such as investing, borrowing, lending, budgeting, saving.

Tier 3 vocabulary	Definition
Extremism	The holding of extreme political or religious views; fanaticism.
Vocational	Work that is related to a specific career or job. It can also refer to education or training that prepares someone for a career.
Employment rights	Are both legal rights and human rights relating to labour relations between workers and employers.
Enterprise	A project or undertaking, especially a bold or complex one OR a business or company


Section 2: Key Themes:
<p>Assessing Content Online and Staying Safe: To make informed decisions about digital content and whether it is appropriate to view, skills to act on this, a range of views can be expressed on a range of issues, including extreme one.</p> <p>The Different Academic & Work Routes: About different routes into work including training opportunities, Both vocational and academic route that can be taken to progress towards a range of careers.</p> <p>Types of Work & My Future Aspirations: The different types of work and work patterns, how careers and pathways can change throughout life and how progress can be made through a career.</p> <p>Understanding Money: Values and attitudes related to debt and finances, managing emotions in their relation to money, evaluating social and moral dilemmas related to money including peer pressure and other external influences.</p> <p>My Future Employment & My Rights: Understanding young people's employment rights and responsibilities, managing our emotions in relation to future employment.</p> <p>Future Aspirations and Setting Myself up for Success: Setting realistic yet ambitious target and goals, learning the attributes an employer values and knowing the skills and qualities required to engage in enterprise.</p>

Section 3: Key concepts:



Richard Leach
Careers Coordinator
The Careers Office is located in the school library

Careers at Belper School
What we do:
Careers Advice & Guidance
We can support you with Year 9 Pathways, Sixth Form & College Courses. We also assist with Work Experience & Work Shadowing and organise events including Careers Inspiration Day & Mock Interviews.



EMPLOYEE RIGHTS!
WORKING HOURS
AGREEMENT
EMPLOYEE RIGHTS!

Financial Exploitation

- KNOW THE SIGNS
- PROTECT YOURSELF
- GET HELP

Spring 2: Extra – Curricular Timetable

Monday	Tuesday	Wednesday	Thursday	Friday
Lunchtime Clubs: 12.20 – 1.00				
<p>Football Year 7 With James 3G</p> <p>Table Tennis Year 10/11 With Tom GYM</p> <p>Book Group Year 9 With Sarah Phillips Library</p> <p>Art Club All Years With Lucy A4</p> <p>Wargaming Hobby Painting Club All years With Richard A3</p>	<p>Duolingo Club All Years With Sarah Knappett Languages Block</p> <p>Badminton (week 1) Year 8/9 With Tom Sports Hall</p> <p>Football Year 9/10 With James/Matt 3G</p> <p>Ultimate Frisbee (week 2) Year 7/8/9 With James Sports Hall</p>	<p>Technical Theatre Club All Years (max 10 students) With Sarah Holme A7</p> <p>Football Year 11/12/13 With Matt and Tom 3G</p> <p>Belper Band All Years Woodwind, Brass and Strings With Anna MU1</p> <p>Handball Year 8/9 With Tom Sports Hall</p>	<p>Digital Skills Drop In Yr10-13 With Jody A2</p> <p>Football All Years Girls With Leanne Sports Hall/3G</p> <p>Music Club All Years With Phil MU2</p> <p>Knitting and Crochet Club All Years With Emma T5</p> <p>Scalextric Racing/ Model Railways All Years (Max 15 students) With Phill T1</p> <p>Foreign Language Spelling/ Translation Bee practice Years 7, 8, 9 With Sarah Knappett Languages Block</p> <p>Belper Choir All Years With Anna MU1</p>	<p>Chess All Years With Carlos M2</p> <p>Football Year 8 With Tom 3G</p> <p>Games Club Years 7, 8 With Emma Library 12.20 – 1.00</p> <p>Multisports Club Year 7 (Yr10 Sports Leaders) With Rebecca and Matt Sports Hall & Gym</p>

Spring 2: Extra – Curricular Timetable

Monday	Tuesday	Wednesday	Thursday	Friday
After School Clubs				
<p>Gardening All Years With Marc and Tony Rosie's Garden 3.05 – 4.00</p> <p>More Than Robots Years 8, 9, 10, 11 With Sarah Speight T1 3.05 – 4.00</p> <p>Music Producers Club Years 9, 10, 11 With Phil MU2/Recording Studio 3.05 – 4.00</p> <p>Football Year 8 With Tom Field 3.05 – 4.00</p> <p>Sports Leadership Events Year 9/10/12 with Rebecca, Matt & AVSSP 3.05-4.00</p>	<p>Netball Years 7/8 With Rebecca Sports Hall 3.05 – 4.00</p>	<p>Litter Picking All Years With Marc P2 3.05 – 4.00</p> <p>Scalextric Racing/ Model Railways All Years (Max 15 students) With Phill T1 3.05 – 4.00</p> <p>Circuit Training Year 7/8/9 With James Gym 3.05 – 4.00</p> <p>'Your Time' Leadership Year 9 Girls with Rebecca and Matt Sports Hall 3.05-4.00 (week 1)</p> <p>A level PE Revision Year 13 with Rebecca/Tom/Matt 3.05-4.00</p> <p>Sports Studies/GCSE Sports Club Year 10/11 With Tom 3.05-4.00 (week 2)</p>		<p>Friday Night Sports Club Year 10/11/12/13/staff With Matt, Leanne, Tom & James 3G/Sports Hall</p>

2 Black/Blue Pens and 1 Coloured Pen



2 Pencils



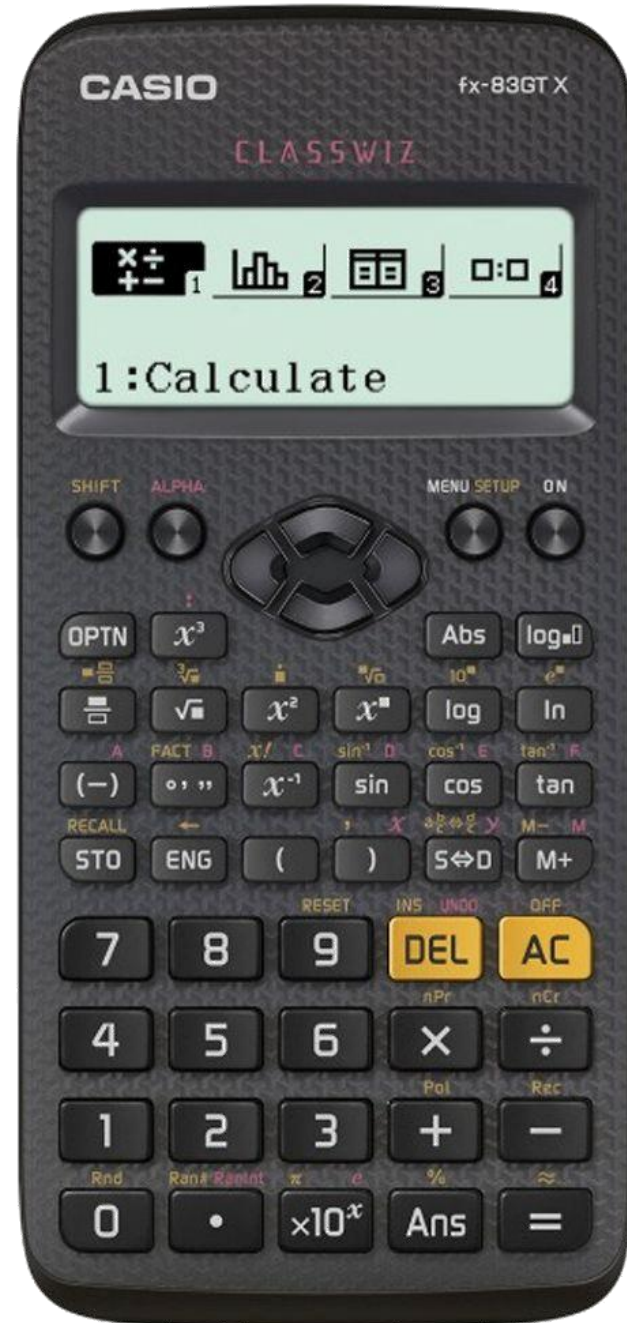
Eraser



Pencil Sharpener



Scientific Calculator



Knowledge
Organiser

Ruler

