

Knowledge Organiser

Year 9 Summer 1 2023

Name:

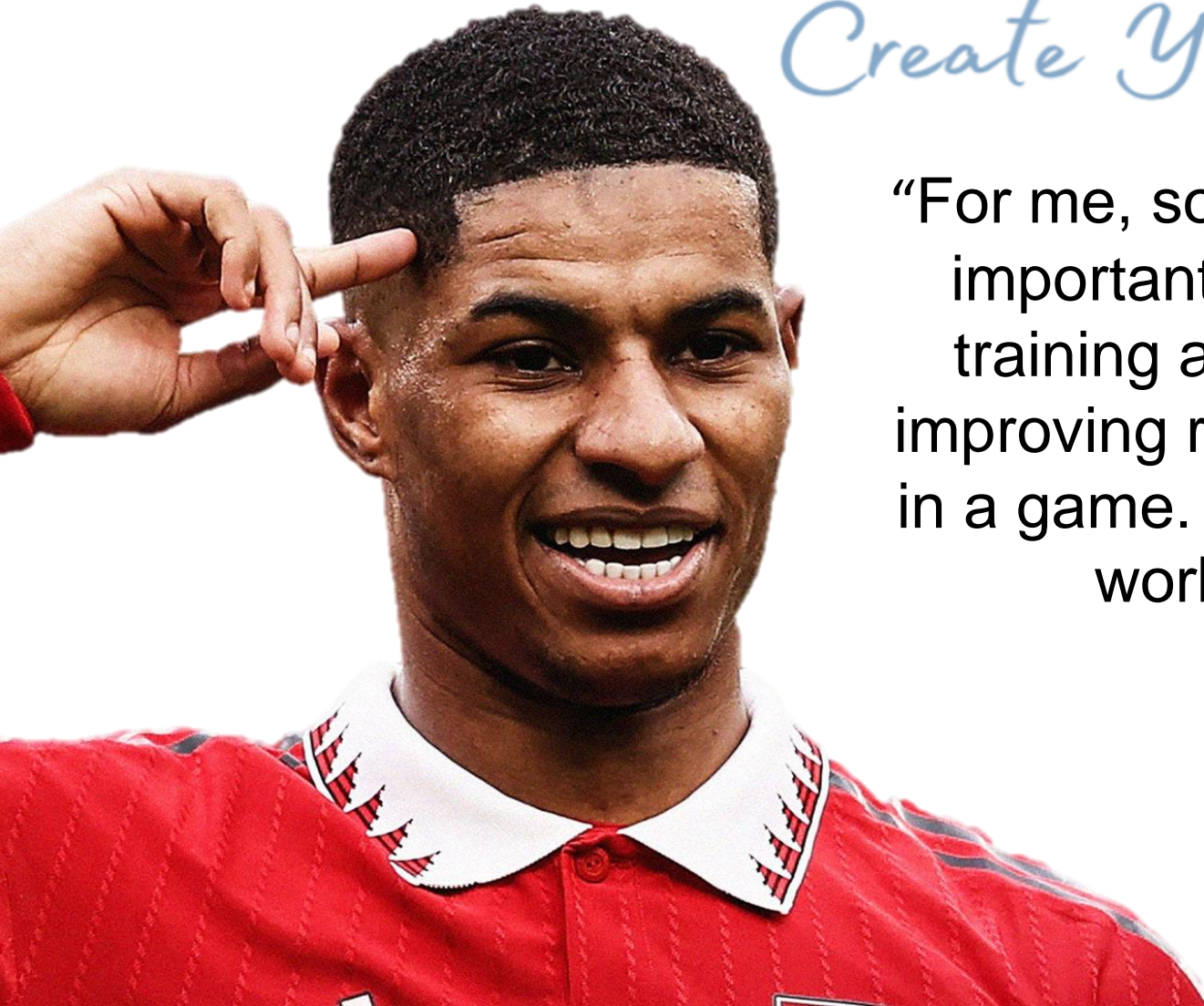
Tutor Group:

Create Your Future

“For me, sometimes it’s more important to perform well in training and know that I am improving rather than scoring in a game. It’s doing the hard work, day in, day out.”

Marcus Rashford MBE

Professional footballer and author



Contents Page

Classroom Expectations	3
Word of the Week	4
Subject: English	5
Subject: Maths	6
Subject: Science	9
Subject: Geography	14
Subject: History	15
Subject: World Views	16
Subject: French	17
Subject: German	19

Subject: Computing	21
Subject: PE	22
Subject: Art	24
Subject: Drama	25
Subject: Music	26
Subject: D&T Food	27
Subject: D&T Textiles	28
Subject: D&T 3D	29
Subject: PSHE	30
Extra-Curricular Timetable	31

Science, PE, Art 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.

Classroom Expectations

Everyone Involved. Everyone Engaged

WORK HARD

I am well-prepared for lessons, work hard at every task and take pride in my work



RESPECT FOR ALL, BY ALL



I behave in a way that supports my own and others' learning. I contribute to the positive learning atmosphere in the classroom

SHOW RESILIENCE

I keep trying, even when I find the work difficult.



MAKE A CONTRIBUTION

I offer valid and well considered contributions to lessons.



STRIVE FOR IMPROVEMENT

I have high expectations of myself. I follow advice on how to improve my work.



Beautiful Books

Write in **blue** or **black** pen

Date and title written and **underlined** with a ruler

Absolutely no graffiti or doodling in your book

Correct and annotate your work in a **different coloured pen**

All worksheets or loose paper to be stuck down

Diagrams and tables drawn with a pencil and ruler

Monday 5th September 2022

Title

Subtitle

- All work should be neat, tidy and clearly set out.
- Your book is a record of your work and should be brought to every lesson.
- There should be no graffiti or doodling either on the cover or inside your book.
- Mark your work in a different colour. Correct mistakes ✓ write corrections or annotate.
- Diagrams or tables should be drawn in pencil, with a ruler.

Victoria organises a concert.
Each adult ticket costs £9
Each pensioner ticket costs £6
Children tickets are free.

Some adults and pensioners have vouchers that give them a 25% off.

40 of the 200 tickets were for children.
14 of the adults had a voucher
Only 3 of the 25 pensioners had a voucher

Work out how much money Victoria raises through ticket sales.

Adult: Voucher, No voucher
Pensioner: Voucher, No voucher
Children: No voucher

3 BELPER SCHOOL

Cumulative

SYNONYMS

Increasing
Growing
Progressive
Accumulative
Collective

ADJECTIVE Increasing or increased in quantity, degree or force by successive additions.
E.g. "The cumulative effect of two years of drought".

How have you used the words this half term?

Words of the Week

Determined

SYNONYMS

Purposeful
Adamant
Resolved
Decided
Committed

ADJECTIVE Possessing focus, drive and purposefulness; having made a firm decision and being resolved not to change it.

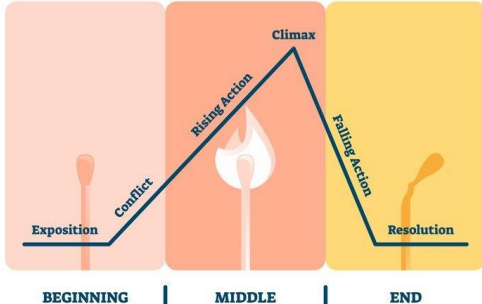
SYNONYMS

Inactive
Lost
Destroyed



Extinct

ADJECTIVE (of species, family or other group of animals or plants) having no living members; no longer in existence.

Section 1: Key Vocabulary		Section 2: New Key Skills/Strategies	Section 3: Genre Background
Tier 3 vocabulary	Definition	<p>Plot can be talked about in a number of different ways. This diagram shows one of the most common structures for a story.</p> <p style="text-align: center;">PLOT DIAGRAM</p> 	<p>The Science Fiction genre grew out of the advancement of science and development in areas of astronomy, physics and maths. It is a genre that sparks the imagination and unknown frontiers feature heavily which tie to the genre's notions of discovery and exploration. It is a blend of modern scientific interests and fantasy where anything is possible. Famous examples of science fiction include: War of the Worlds by H. G. Wells; A Journey to the Centre of the Earth. by Jules Verne and Nineteen Eighty-Four by George Orwell. Science fiction tends to look forward, imagining new technologies, worlds and creatures, or exploring the impact that these may have.</p> <p><u>Discussion Questions</u></p> <ul style="list-style-type: none"> - Why do you think science fiction remains such a popular genre? - Why do you think science fiction is so often linked with horror?
Non-Linear	a story told using a non-chronological structure		
Analepsis	a literary device in narrative, in which a past event is narrated at a point later than its chronological place in a story. Also known as a flashback		
Narrative perspective	the point of view a writer uses when telling a story		
Enigma	a person or thing that is mysterious or difficult to understand		
In Media Res	in the middle of a story / action		
Exposition	a literary device in which the author tells readers what is happening		
Syndetic listing	a list connected with conjunctions	<p><u>Possible Structure Questions</u></p> <ul style="list-style-type: none"> - Why has the writer focussed your attention on this at the start? - How does the writer end the piece of writing? - How does the writer create tension? 	<p><u>Reading for Context</u></p> <p>Science Fiction writers often use made up or complex vocabulary to help them set an alien scene. This can make it hard to read, so you often need to use <u>context clues</u> in order to work out what words might mean.</p>
Holophrastic	a single word sentence, such as 'Believe!'		
Tier 2 vocabulary	Definition	<p>Writing about structure</p> <p>When writing about structure, think about it like making a sandwich. I might like a sandwich with ham, mustard and lettuce in it. I might decide to put my bread first, then mustard, then ham, then lettuce and then bread on top of that. That's a conventional sandwich. Now imagine I started with my mustard, and put that on the outside of my sandwich – why would I do that? Writing about structure is the same kind of thing... why has the writer decided to start with the middle of their story rather than conventional beginning?</p> <p><u>Sentence Starters</u></p> <ul style="list-style-type: none"> - I think the writer has chosen to start in the middle of the action because... - I think the writer ended the story on a cliffhanger because... - Perhaps the author used a non-linear structure to... 	<p>1. Word Parts</p> <p>Break down the different parts of a word—base word (word stem or root word), prefixes, and suffixes—to figure out what it means.</p>
Ambiguous	something that is unclear or uncertain		<p>2. Definition/explanation</p> <p>Look for a definition or an explanation within the sentence.</p>
Structure	how something has been shaped or put together		<p>3. Synonym</p> <p>Words next to the unknown word can be a clue that there is a synonym.</p>
Explore	consider, think about and justify your ideas		<p>4. Example</p> <p>Providing examples of the unknown word can give readers a clue to meaning.</p>
Context	the background, individual, social and historical, that we bring to a text		<p>5. Antonym/contrast</p> <p>Opposite information about the unknown word can be offset by words and phrases such as unlike, as opposed to, different from.</p>
Analyse	focus in depth on how something is done and explain why with justification		<p>6. Analogy</p> <p>Comparisons of the word help to determine what it means.</p>

Section 1: Key Vocabulary

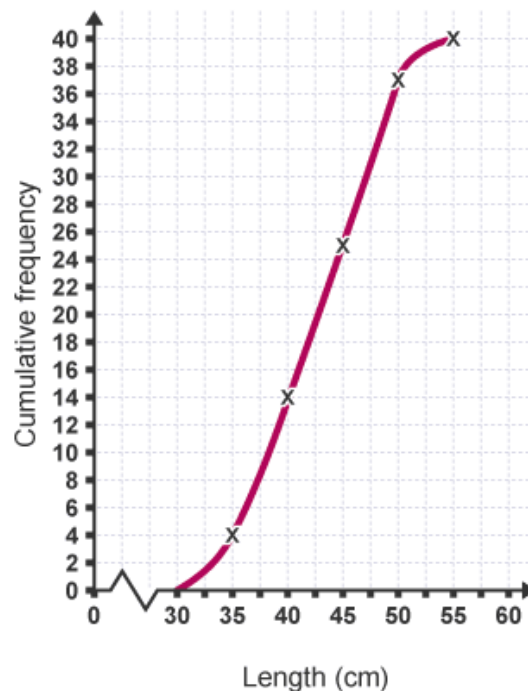
Tier 3 vocabulary	Definition
Mean	Total of the data values divided by how many values there are
Median	Middle value when the data has been listed in order
Mode	Most common data value
Range	Biggest data value – smallest data value
Lower quartile	The value that is one quarter of the way through the data
Upper quartile	The value that is three quarters of the way through the data
Interquartile range	Upper quartile – lower quartile Measure of consistency
Cumulative Frequency	The total of all frequencies so far in a frequency table
Box Plot	A visual way of representing the lowest and highest values, the upper and lower quartile and median of a set of data.

Tier 2 vocabulary	Definition
Cumulative	A running total
Frequency	Number of times, number of items
Consistency	How much things differ or remain the same

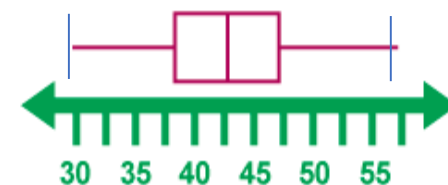
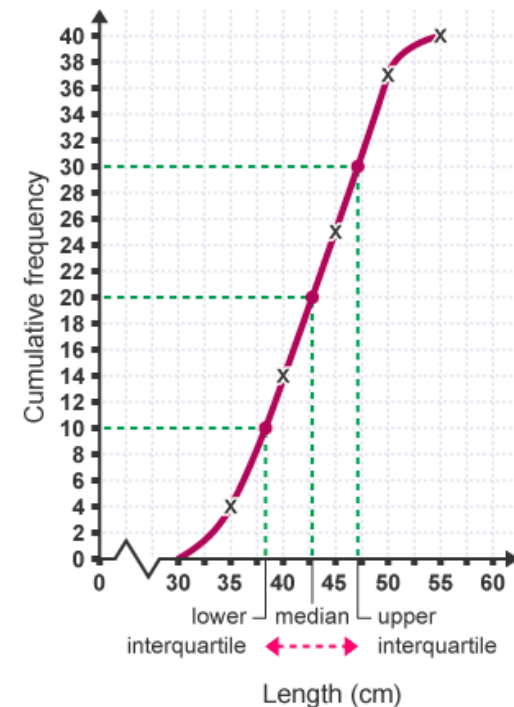
Section 2:

The table shows the lengths of 40 babies when they were born

Length (cm)	Frequency	Cumulative frequency
30<=35	4	4
35<=40	10	14
40<=45	11	25
45<=50	12	37
50<=55	3	40



Section 3:



length (cm)

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Proportion	An equation in which two ratios are set equal to each other
Graph	A diagram showing the relationship of quantities.
Inverse proportion	When two quantities are in inverse proportion, as one increases the other decreases.
Direct proportion	Two quantities are in direct proportion when they increase or decrease in the same ratio.
Multiplicative relationship	A relationship where two quantities can be expressed as multiples of each other.
Ratio	A ratio shows how much of one thing there is compared to another. Ratios are usually written in the form a:b.
Tier 2 vocabulary	Definition
Fraction	Represent equal parts of a whole or a collection
Best buy	An item or product which gives the best value for money out of all its competitors.
Debit	An amount of money taken out of an account: the opposite of credit.
Credit	The name given by accountants to an amount received: the opposite of debit.
Balance	An account balance is the amount of money present
Profit	Income minus all expenses
Loss	Loss occurs when you sell something for less than it cost.
Percentage	Percent means 'per 100' and it's shown using the symbol %.
Equivalent	Two values, numbers or quantities which are the same.

Section 2: Knowledge/Skills

Ratio notation

Ratios are written in the form a : b
It's important to notice what order the parts of the ratio are written in as 2 : 3 is not the same as 3 : 2.

Equivalent ratios

These ratios are all equivalent:

$$1 : 4 = 2 : 8 = 10 : 40$$

Both sides of the ratio can be multiplied or divided by the same number to give an equivalent ratio.

Reducing ratios to simplest form

To reduce ratios to their simplest form you keep finding smaller equivalent ratios until you can no longer divide both numbers by a number.

Simplify 6 : 12

Divide both numbers by 2

$$6 \div 2 = 3 \text{ and } 12 \div 2 = 6$$

Therefore, 6 : 12 = 3 : 6

Divide both numbers by 3

$$3 \div 3 = 1 \text{ and } 6 \div 3 = 2$$

So, 3 : 6 = 1 : 2

So 6 : 12 in its simplest form is 1 : 2

Sharing ratios

Dave and Lisa win £500 between them, they agree to divide the money in the ratio 2 : 3

The ratio 2 : 3 tells us for every £2 Dave receives, Lisa receives £3.
So, of the total amount, Dave will receive 2 parts and Lisa will receive 3 parts meaning that there are 5 parts in total.

If £500 represents 5 parts, £100 represents 1 part.

Dave receives 2 parts: $2 \times £100 = £200$

Lisa receives 3 parts: $3 \times £100 = £300$

So the money is split in the ratio £300:£200

Expressing ratios as fractions

In the above example there are five parts in total.

To work out the fraction of money Dave got you put his part of the ratio above the total parts which is $\frac{2}{5}$.

To work out what fraction of the money Lisa got you put her part of the ratio over the total parts which is $\frac{3}{5}$.

So Dave got 2 fifths of the money and Lisa got 3 fifths.

Writing ratios as linear functions

If you want to write the ratio 2:3 (how Dave and Lisa split their money) as a linear function where x is the amount Dave has and Y is the amount Lisa has as two equal things you would write $3x = 2y$. Because if you times Dave's money by 3 you get £600 and if you times Lisa's money by 2 you also get £600 so these are equal.

Section 2: Knowledge/Skills

Direct proportion

A babysitter's earnings are directly proportional to the number of hours worked.

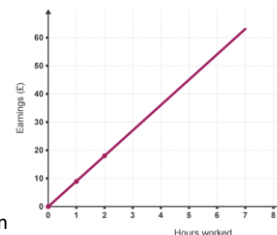
Earnings = £9 × hours worked

Hours = 0, earnings = £9 × 0 = £0

Hours = 1, earnings = £9 × 1 = £9

Hours = 2, earnings = £9 × 2 = £18

Two quantities that are in direct proportion will always produce a straight-line graph that passes through the origin.

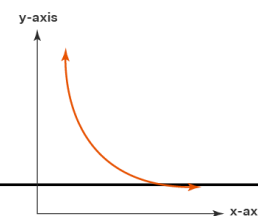


Inverse proportion

When the number of workers do a job takes decreases.

When the number of workers decreases the time the job takes increases.

When we graph this relationship we get a curved graph.



Section 3: Questions

- Write the ratio 40 : 28 in its simplest form
- Write the ratio 5 : 10 : 15 in simplest form
- A necklace is made using gold and silver beads in the ratio 3 : 2. If there are 80 beads in the necklace:
 - How many are gold?
 - How many are silver?
- Twelve pencils cost 72p. Find the cost of 30 pencils.
- Jenny buys 15 felt-tip pens. It costs her £2.85. How much would 20 pens have cost?
- Mr A and Mr B share some money in the ratio 4:1
 - Write an equivalent ratio to this
 - How many parts are there all together?
 - What fraction does Mr A get?
 - If x is how much Mr A gets and y is the amount Mr B gets, write the ratio as a linear function
 - If they were to share £1000 how much would they get each?

Section 1: Key Vocabulary

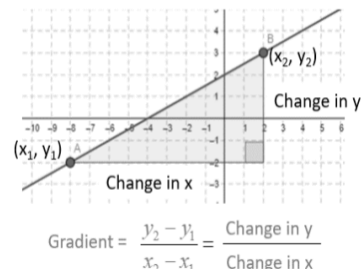
Tier 3 vocabulary	Definition
Axis	x (across) and y (up) axis. Labelled with numbers to plot coordinates.
Quadrant	The four parts of a set of axis. Starting with one in the top right and moving around anticlockwise.
Origin	The centre of a set of axis. (0,0)
Equation	Two things are equal and can be solved to find an unknown.
Linear equation	An equation that can be draw as a straight line.
Explicit	A function in which the dependent variable can be written in terms of the independent variable.
Quadratic	One or more terms in which the variable is raised to the power of two.
Gradient	Change in the value of a quantity with change in a given variable.

Tier 2 vocabulary

Tier 2 vocabulary	Definition
Coordinate	Two numbers written in brackets to describe a position on a set of axis. Can also be three numbers for 3D.
Plot	To draw a mark on a set of axis to show the location of a set of coordinates.
Substitute	To replace a letter with a number.
Graph	A set of axis with a line drawn showing an equation.
Table	A grid filled in to work out a set of answers.
Term	A single number or variable
Solve	Numerical value that satisfies the equation.
Simultaneous	Equations which are solved at the same time.

Section 2: Knowledge/skills

Finding the gradient of a straight line



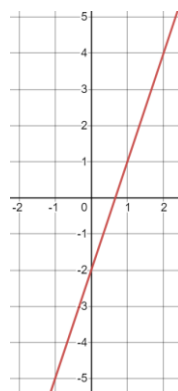
Plotting a straight line

$$y = 3x - 2$$

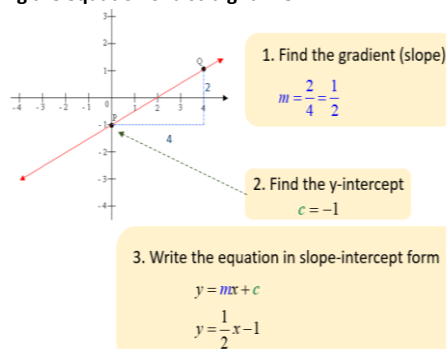
Substitute x values into the equations to find the y values:

x	$3x - 2$	y
-1	$3(-1) - 2$	-5
0	$3(0) - 2$	-2
1	$3(1) - 2$	1

Plot $(-1, -5)$, $(0, 2)$, $(1, 1)$



Finding the equation of a straight line



Solving simultaneous equations graphically

Draw both lines on the same set of axes
Find their point of intersection for x and y

Section 3: Question



What is the gradient (m)?

What is the y-intercept?

What is the equation of the line?

Give the equation of a parallel line.

Plot $y = -3x + 4$ on the same axes.

x	$-3x + 4$	y
-1		
0		
1		

Is the point $(2, 10)$ on the line? How do you know?

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Communicable Disease	Disease caused by pathogens which can be passed from person to person
Non-communicable Disease	Disease which cannot be passed from person to person. Is caused by a problem in the body.
Cardiovascular Disease	Disease affecting the heart and circulatory system, can high blood pressure, heart attack and strokes
Pathogen	A microorganism that can cause disease eg virus, bacteria and protist
Vector	An organism that carries disease from one person to another
Lysozyme	An enzyme which breaks down bacteria, part of the bodies chemical defense.
Antigens	Protein markers on the surface of any cell
Antibodies	Proteins released from lymphocytes which destroy or inactivate a pathogen

Tier 2 vocabulary

Tier 2 vocabulary	Definition
Health	A state of complete physical , social and mental well-being
Disease	An illness that prevents the body from working properly
Vaccine	Contains a weakened or inactive pathogen or bits of the antigen.
Immunisation	Artificial immunity triggered by a vaccine

Section 2: Types of Disease

Communicable Diseases

Disease	Pathogen	Symptoms
Cholera	Bacteria	
AIDS		Destroys White Blood cells
Malaria	Protist	
Chalara Dieback		Lesions on branches, dead leaves at top
Tuberculosis (TB)	Bacteria	
Stomach Ulcers		Stomach pain, weight loss, sickness
Ebola	Virus	

Non-Communicable Diseases

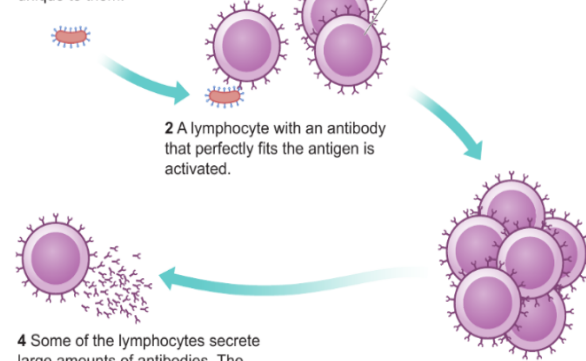
Caused by many different factors;

Genetic Disorder - Eg Sickle Cell Anaemia, Cystic Fibrosis
Malnutrition - Eg Scurvy (lack of vit C) or Anaemia (lack of Iron)
Lifestyle:
Alcohol - causes Liver Cirrhosis
Smoking - causes cardiovascular disease
Obesity - causes cardiovascular disease

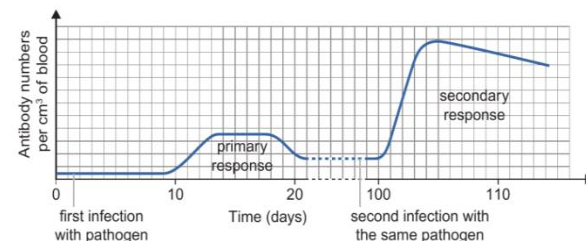
Body Mass Index
 $BMI = \frac{Mass}{Height^2}$

Section 3:

1 Pathogens have antigens on their surface that are unique to them.



B how the immune system attacks a pathogen



C The immune responses to the first and second infection by a pathogen are different.

Vaccination Task

A vaccine contains a weakened or inactive pathogen or bits of an antigen which will create a safe immune response.

Draw a flow diagram, using the information in the graph above, to explain what happens in the body when you are vaccinated against a pathogen and then at a later date you catch the real pathogen.

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

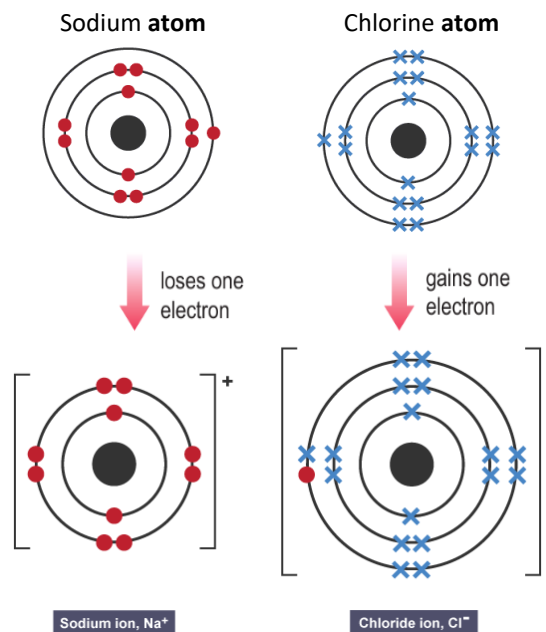
Section 2: Ionic bonding

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**.



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

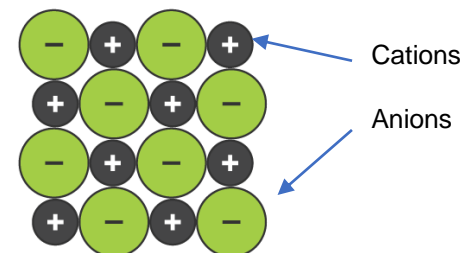
Non-metal ions are negative because they have gained electrons and contain more negative electrons than positive protons

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

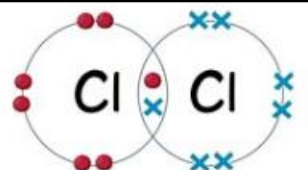
- Do **NOT** conduct electricity
- Because **ions cannot** move

Molten or dissolved

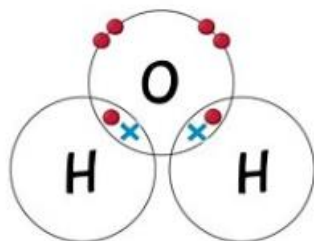
- **Do** conduct electricity
- Because **ions can** move

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Molecular	Substance containing groups of non-metal atoms held together by covalent bonds.
Covalent bond	Shared pair(s) of electrons.
Single bond	One shared pair of electrons.
Double bond	Two shared pairs of electrons.
Molecular formula	A formula listing the atoms in the molecule e.g. CH ₄
Structural formula	A formula which uses lines to represent the bonds and show how they are attached.
Valency	The number of electrons in the outer shell
Simple covalent	Substances made from a small number of atoms joined together (less than 100 atoms)



chlorine



Water

Section 2: Simple Covalent Substances

Melting point

- **Low** melting points
- only **weak intermolecular** forces are broken when they melt
- this only takes a **small amount of energy**

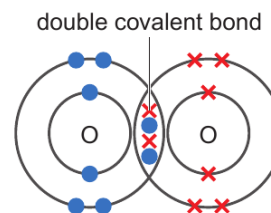
Electrical Conductivity

- Do **NOT** conduct electricity
- There are **no electrons** which can move

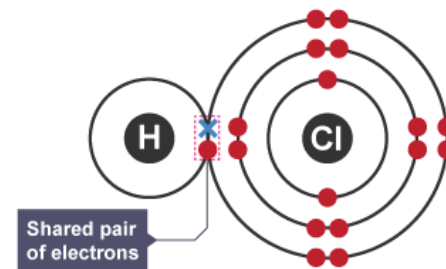
single covalent bond



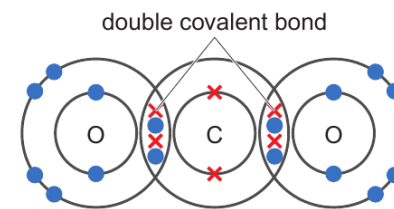
a hydrogen



c oxygen



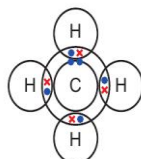
Hydrogen chloride, HCl



d carbon dioxide

CH₄

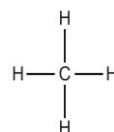
molecular formula



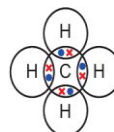
full dot and cross diagram



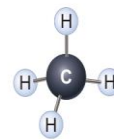
3D space filling



structural formula (stick bonds)



dot and cross (outer shell only)



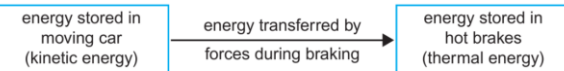
ball and stick

Different ways of representing molecules

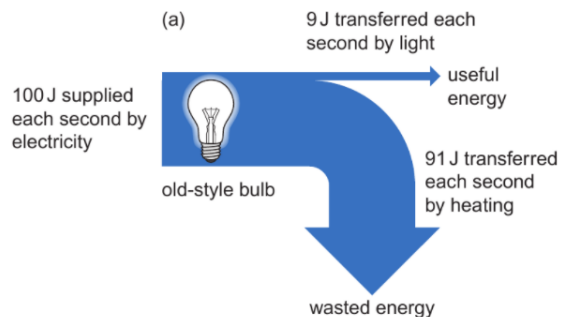
Diagram type	Advantages	Disadvantages
Molecular formula	Shows which atoms it contains	No information about the bonds or shape of molecule.
Structural formula	Shows how atoms are bonded	No information about the shape or size.
Dot and cross diagram	Shows the arrangement of the electrons	Does not show the shape or size.
Space filling diagram	Shows the size and shape	Does not show the electrons.

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Gravitational field strength	The amount gravity pulls on an objects mass N/kg (on earth this is 10N/kg)
Gravitational potential energy	The energy an object gains as it moves away from a source of gravity
Kinetic energy	The energy stored in a moving object
Energy Stores	Where energy is stationary in one place and in one form
Energy transfers	Where energy can be transferred from one form or location to another
Energy transfer diagram	Shows the stores and transfers of energy going on in a particular situation
Sankey diagram	Graphical representation of the percentage of useful and waste energy in a transfer
Efficiency	A measure of the amount of useful energy transferred in a situation or device



B A flow diagram showing the energy transfers when a car brakes.



The efficiency of a device can be calculated using this equation:

$$\text{efficiency} = \frac{\text{useful energy transferred by the device}}{\text{total energy supplied to the device}}$$

Section 2: New Knowledge/Skills

Energy Stores and Pathways

The Eight Stores

Store	Description
Chemical	In batteries, fuels and food
Kinetic	In moving objects
Gravitational	In objects lifted above the Earth's surface
Thermal	In all objects, it increase with temperature
Magnetic	Objects within a magnetic field
Electrostatic	Around positively and negatively charged objects
Nuclear	Stored in the nucleus of an atom
Elastic	In objects that are stretched or squashed

The Four Pathways

Pathway	Description
Mechanically	By forces such as friction
Electrically	When there is a current flow
By heating	Due to a temperature difference (conduction, convection)
Radiation	e.g. waves such as light and sound

In any example of something bouncing, falling, rising in the air, swinging etc. There is an interchange between kinetic and gravitational energy.

The gravitational energy top of drop

Transferred mechanically by forces

Into kinetic energy

If there is no drag the kinetic energy at the bottom will be equal to the gravitational energy at the top

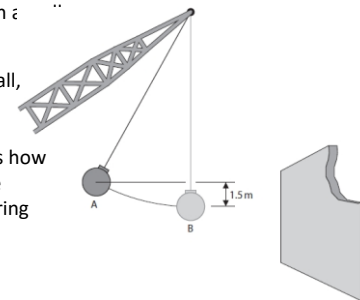


Section 3: practice questions

Figure 8 shows a demolition ball of mass 400 kg. The ball is used to demolish a wall.

Figure 8

After knocking down the wall, the ball will swing freely.



The graph in Figure 9 shows how the height of the ball above ground varies with time during three swings.

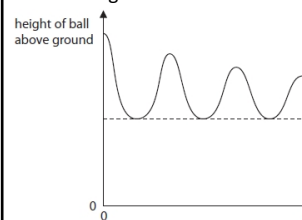


Figure 9

1. Explain how the energy within the system changes during this time.

The system consists of the swinging ball and its surroundings. (6)

Plan:

- List all the types of energy you can think of that might be linked to this (*don't worry if they are not correct at this point, just come up with ideas, remember there are 8 stores of energy*)
- List all the ways energy might be being transferred (remember there are 4 ways energy can be transferred)
- Label on the diagram what types of energy the ball has at different times
- Label on the graph these types of energy
- Is some energy wasted along the way? How?
- What order will you write the information in? Where would you start?

Now write your answer, using proper sentences, proper scientific words and in a sensible order

- Calculate the kinetic energy when it is at the bottom of the first swing
- Why is the actually kinetic energy likely to be less than this
- H:** Hence calculate the maximum velocity of the ball

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Thermal conductivity	A measure of how good a material is at allowing heat to transfer through it
Convection	Hot fluids rise as they have more energy and become less dense (lighter)
Convection Current	A flow of hot and cold fluids, rising and sinking in a cycle in a given space
Infra-red Radiation	Electromagnetic waves given off from hot objects, absorbed and emitted by darker objects
Renewable	Energy resources that will be available again after being used
Non-renewable	Energy resources that will run out and will not be there again
Climate change	The changes in the weather, global temperature and rainfall across the Earth
Carbon Neutral	A resource that removes as much CO ₂ from the atmosphere as it produces
Weather dependent	An energy resource that is not always available depending on the weather
Tier 2 vocabulary	Definition
Conduction	Where heat energy is transferred through the collisions of vibrating particles
Thermal Insulator	A material that does not allow heat energy to transfer through easily

Section 2: New Knowledge/Skills
Conduction Heat transferred by vibrating particles transferring the energy from one to another during collisions. <ul style="list-style-type: none"> <i>Best thermal conductors:</i> metals <i>Worst thermal conductors (insulators):</i> Vacuum, gasses, objects with pockets of gas like foam
Convection Hot fluid, expands, becomes less dense and therefore lighter and rises. Cold fluids contract, become more dense and sink This creates a convection current
Radiation (infra-red) Electromagnetic wave like light, emitted from hot objects <ul style="list-style-type: none"> <i>Best emitters and absorbers of radiation:</i> Matte Black <i>Worst emitters and absorbers of radiation:</i> Shiny silver/white
Draw and describe how you can keep hot drinks warm in a thermos flask.

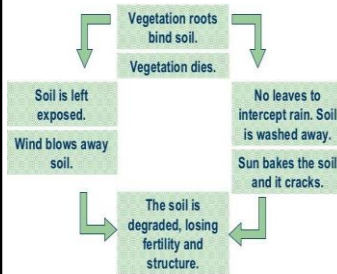
Section 3: Energy Resources					
Energy Resources					
Nuclear	Biofuels	Hydroelectric	Wind	Solar (photovoltaic cells)	Fossil Fuels (Coal, Oil and Gas)
Using the energy from nuclear reactions to heat water	Burning plant and animal waste to create heat same as fossil fuels	Using gravitational energy of water held behind a dam to turn turbine	Using wind turbines to turn a generator	Using the suns energy to convert straight into electricity	Remains of dead plants and animals, burned to get steam to turn turbine
Efficient, not weather dependent, no pollution	Carbon neutral, not weather dependent, easy to switch	Not weather dependent, no fuel cost, no pollution	No pollution, no fuel cost	No pollution, no fuel cost, can be installed on rooves	Efficient, not weather dependent, no new builds
Will eventually run out, danger from nuclear waste	Needs lots of land for crops	Floods a huge area, expensive to build	Weather dependent, expensive to install	Weather dependent, expensive to install	Will run out, produces CO ₂ which adds to global warming
Over the last few decades, we have introduced more and more renewable resources, our use of coal and oil has reduced, but our use of natural gas has increased.					

Tier 3 vocabulary	Definition
Biome	Large scale ecosystems eg. tropical rainforests, deserts.
Climate	Long term atmospheric conditions in an area. The expected weather.
Continent	One of the Earth's seven divisions of land. See the map opposite.
Desertification	The process of land turning into a desert, as the quality of soil becomes worse over time.
Development	How the wealth and quality of life of people varies from place to place and changes over time.
Diversity	A wide range of things eg. people's lifestyles and cultures, plants and animals.
Ecosystem	The living and non-living parts of an environment and how they are connected.
Fair trade	A system that makes sure farmers and other workers receive a better price for the product they are producing.
Multinational company	A business operating in more than one country.
Resource	A material that is of use to humans.
Tourism	The business connected with people's travel for pleasure.

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

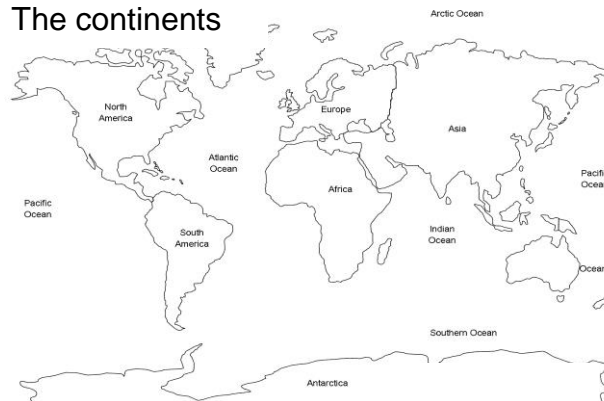
The causes of desertification



Measures of development

- Gross National Income (GNI)
- Life expectancy
- Education
- Human Development Index (HDI)
- Number of doctors per 1000 people

The continents



The countries of Africa



Section 3: Geographical Skills

When describing a graph, your writing should include the following things:

1. Give the general trend / pattern eg. up or down.
2. Add figures from the graph eg. the highest value is..., the lowest number is..., the range of values is....
3. Mention other obvious features eg. anomalies (data that does not fit the general pattern).

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'
Anti-Semitic	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
Terrorism	The use of violence to achieve political aims
Holy Land	Land on the eastern edge of the Mediterranean around Jerusalem

Tier 2 vocabulary	Definition
Prejudice	An unfair opinion or judgement or feelings towards someone
Palestine	Country belonging to Palestinian Arabs in the Holy Land
Israel	Jewish state in the Holy Land

Section 2: New Knowledge

The Persecution of the Jews

September 1939- Germany invades Poland and begin to create ghettos.

June 1941- Einsatzgruppen began the mass murder of Jews, Roma and Sinti using bullets.

1941- The mass murder of Jews and other groups in death camps.

1941- The Wannsee conference where leading Nazis discuss the final solution.

1945- The liberation of death camps.

Conflict in the Holy Land

1. After World War 1 the British controlled the Holy Land through a mandate. Jewish migration increased significantly after the Nazi Party gained power in Germany, and there were several Arab revolts against British rule and levels of migration.
2. After World War II levels of violence increased with militia formed from both Arab and Jewish communities. The United Nations (UN) decided to partition the Holy Land, and in April 1948 the new state of Israel was declared by the United Nations. Neither side was happy with the outcome.
3. Immediately after the State of Israel was declared, 5 Arab neighbours invaded. Israel won this war, captured a lot more land in order to reduce the length of her borders and make Israel easier to defend. In 1967 it appeared that Israel was about to be invaded again, and so launched a pre-emptive strike. This war lasted only 6 days, and Israel took much more Palestinian land. The UN told Israel to return this land, but she has not done so.
4. In 1973 Israel was invaded on Yom Kippur (the holiest day of the Jewish calendar). Israel was almost defeated in this war, but was helped by America. In order to stop this help OPEC countries increased the price of oil until America and Russia put pressure on all sides to end the conflict.
5. The most successful peace negotiations to date were held in Oslo in 1993. Some aspects of this agreement have held (such as a Palestinian authority) but others have not (Palestinian refugees remain in refugee camps and Israel still holds Palestinian land captured in 1948 and 1967).

Section 3: Enquiry Questions

What event or events would be considered turning points of WW2?

How did anti-Semitism turn into mass murder?

Why was there violence in the Holy Land?

Section 4: Source Analysis

When analysing sources consider the following:

Content- What is happening in the picture, who are the key people, what message is it giving?

Context- What else is happening at the time?

Purpose- Why was this photograph taken?

Provenance- Who took the photo? Who is it the audience?



Picture from 1943

Section 5: Interpretations

How and why historians and others have interpreted the same events and developments in different ways. For example:

Some historians think Hitler and the leading Nazis were responsible for the Holocaust. It was their idea and they ordered it to be carried out.

Other historians think the Holocaust only happened because of the actions of hundreds of thousands of people from across Europe. Some killed, other just stood and it happened.

Section 1: Key Vocabulary - look out for definitions in class and homework tasks.	
Tier 3 vocabulary	Definition
Emotional	
Physical	
Suffering	
Relative	
Absolute	
Dukkha	

Tier 2 vocabulary	Definition
Existential	
Theological	
Philosophical	
Psychological	

Section 2: New Knowledge
<p>In this unit we will:</p> <ol style="list-style-type: none"> Explore different causes and types of suffering. Consider how suffering differs around the world. Compare relative and absolute poverty. Explore Old Testament accounts of why we suffer. The Christian views regarding the link between sin and suffering. Consider Christian views on how to avoid suffering. Look at the New Testament and Jesus teaches about suffering. Explore philosophical questions such as "how can a good God allow evil"? Explore Buddhist explanations of the suffering as dukkha. Find out about the Buddhist solution to suffering. Link to previous learning (Is death the End?) and consider how beliefs about life after death affect their views on suffering. <p>Source of Authority. Genesis 3 - The Fall The story of Job - The Bible Proverbs 10:1 Proverbs 22:1 Matthew 25:31-46 4 Noble Truths</p> <p>David Hume "Is he willing to prevent evil, but not able? Then He is impotent. Is He able, but not willing? Then He is malevolent. Is He both able and willing? Whence then is evil?"</p> <p>John Stott "The fact of suffering undoubtedly constitutes the single greatest challenge to the Christian faith".</p> <p>Parable of the Arrow - a Buddhist story</p> <p>"This is my last advice to you. All component things in the world are changeable. They are not lasting. Work hard to gain your salvation" (Buddha's final words).</p> <p>"Whoever serves the sick and suffering serve me" (Buddha)</p> <p>"God whispers in our pleasures, and shouts in our suffering" (C.S Lewis)</p>

Section 3: Assessment criteria and skills.
<p>Key Question: Everything that you do this term will be to help you respond to the question "What is suffering? Are there any good solutions?"</p> <p>To achieve your best in this assessment you will need to:</p> <ul style="list-style-type: none"> Give well informed insights into two Christian views about why people suffer. These insights will then need to be supported with evidence for key Biblical texts. Contrast these Christian views with other religious and non religious views as to why we suffer. Argue the case that religions do or do not offer good solutions as to why we suffer. Consider whether or not religious answers to the question of suffering are useful/valid/invalid. <p>To reach a higher level of thought, you would also need to:</p> <ul style="list-style-type: none"> Evaluate critically the idea that suffering is a natural human state to which there is no solution. Offer theological, philosophical and/or psychological reasons for arguing that religions exist to help humans cope with suffering, fear and despair. <p>Skills Needed</p> <p>Knowledge (Red) - Have you shown knowledge of what suffering is, the types of suffering, the different religious/non religious responses to suffering and considered whether or not there are any solutions to suffering?</p> <p>Impact (Orange) - Have you considered how a person's beliefs about suffering may impact upon their behaviour?</p> <p>Specialist Term (Yellow) - Have you used specialist terms found on your Knowledge organiser or terms given to you by your teacher?</p> <p>Source of Authority (Green) - Have you included quotes to support your ideas?</p> <p>Judgement (Blue) - Why might people argue that the point you are making is strong/weak/valid/invalid?</p> <p>Opinion (Purple) - Have you included different Christian views? Have you included different religious views? Have you included non religious views? Have you included your own view?</p>

Section 1: Key Vocabulary/Questions					Section 2: Grammar																							
Tier 2 vocabulary		Definition			Negative expressions These negative expressions all form a sandwich around the verb in French: <table><tr><td>ne...pas</td><td colspan="2">not</td></tr><tr><td>ne...jamais</td><td colspan="2">never</td></tr><tr><td>ne...plus</td><td colspan="2">no longer, not any more</td></tr><tr><td>ne...rien</td><td colspan="2">nothing, not anything</td></tr></table>			ne...pas	not		ne...jamais	never		ne...plus	no longer, not any more		ne...rien	nothing, not anything										
ne...pas	not																											
ne...jamais	never																											
ne...plus	no longer, not any more																											
ne...rien	nothing, not anything																											
The superlative		used when something is the best, least, most etc.																										
Negation		the absence or opposite of something actual or positive.																										
The conditional tense		used to talk about things that would happen or that would be true under certain conditions																										
Possessive adjectives		used in front of nouns to indicate to whom or to what those nouns belong.			Je ne mange plus de bœuf I no longer eat beef																							
Questions		Translation			☆ After pas, jamais and plus, un/une and du/de la/des change to de/d' : Je mange du porc. I eat pork. Je ne mange jamais de porc I never eat pork																							
1.Qu'est-ce qu'on mange/tu manges ?		What do we eat/you eat?			The superlative The superlative is used to say 'the most' or the least' etc. In English, we use 'the most...' or add '-est' to the adjective. In French: <table><tr><td></td><td>adj. before noun</td><td>adj. after noun</td></tr><tr><td>Masc. nouns</td><td>le plus grand village</td><td>le village le plus important</td></tr><tr><td>Fem. nouns</td><td>la plus grande ville</td><td>la ville la plus importante</td></tr></table> The conditional tense The conditional tense is translated using the word 'would'. J'aimerais and je voudrais are two very useful conditional tense verbs. They both mean 'I would like ' and are followed by the infinitive. J'aimerais <i>changer</i> le monde. I would like <i>to change</i> the world. Formation: Use the same future stem (usually the infinitive) and the imperfect tense endings : <table><tr><td>Je jouerais</td><td>I would play</td></tr><tr><td>Tu jouerais</td><td>you would play</td></tr><tr><td>Il/elle/on jouerait</td><td>he/she/we would play</td></tr><tr><td>Nous jouerions</td><td>we would play</td></tr><tr><td>Vous joueriez</td><td>you would play</td></tr><tr><td>Ils/elles joueraient</td><td>they would play</td></tr></table>				adj. before noun	adj. after noun	Masc. nouns	le plus grand village	le village le plus important	Fem. nouns	la plus grande ville	la ville la plus importante	Je jouerais	I would play	Tu jouerais	you would play	Il/elle/on jouerait	he/she/we would play	Nous jouerions	we would play	Vous joueriez	you would play	Ils/elles joueraient	they would play
	adj. before noun	adj. after noun																										
Masc. nouns	le plus grand village	le village le plus important																										
Fem. nouns	la plus grande ville	la ville la plus importante																										
Je jouerais	I would play																											
Tu jouerais	you would play																											
Il/elle/on jouerait	he/she/we would play																											
Nous jouerions	we would play																											
Vous joueriez	you would play																											
Ils/elles joueraient	they would play																											
2. Est-ce que tu manges de la viande ?		Do you eat meat ?																										
3. Est-ce que tu es pour ou contre le végétarisme ?		Are you for or against vegetarianism ?																										
4. Qu'est-ce qu'il faut faire pour protéger les animaux ?		What must we do to protect animals ?																										
5. Qu'est-ce que tu fais pour aider l'environnement ?		What do you do to help the environment																										
6. Qu'est-ce que tu as fait récemment pour aider l'environnement ?		What have you done recently to help the environment?																										
7. Qu'est-ce que tu voudrais faire pour changer le monde ?		What would you like to do to change the world?																										
8. Pourquoi serait –il important d'aider ?		Why would it be important to help?																										
Possessive adjectives																												
	m	f	pl	before a vowel																								
my	mon	ma	mes	mon																								
your	ton	ta	tes	ton																								
her/his/one's	son	sa	ses	son																								
our	notre	notre	nos																									
your	votre	votre	vos																									
their	leur	leur	leurs																									

Section 3: WAGOLL

J'habite à Lyon en France avec ma famille. Au collège en France, les élèves mangent la nourriture saine et équilibrée par exemple on mange souvent de la viande, du riz, de la salade et du yaourt. On boit de l'eau. Je pense que c'est plus sain que le fast-food. Je mange de la viande mais mon ami ne mange plus de viande. Je trouve que le porc est savoureux cependant l'empreinte carbone des légumes est moins grande que l'empreinte carbone de la viande. Je suis pour le végétarisme et je voudrais commencer à manger moins de viande pour protéger l'environnement.

Pour protéger les animaux et la nature, il faut ramasser les déchets, manger moins de viande, utiliser moins de plastique et consommer moins d'énergie. À mon avis, il ne faut jamais acheter des souvenirs d'origine animale.

Quand j'étais plus jeune, j'utilisais les sacs en plastique tous les jours. Maintenant je recycle le plastique et j'utilise les sacs réutilisables. L'année dernière, on a organisé une campagne anti-plastique au collège. On a changé des idées et on n'utilise jamais de bouteilles en plastique.

À l'avenir, je voudrais utiliser moins d'eau à la maison. J'aimerais aussi réparer plus de choses et consommer moins. À mon avis, le plus grand problème pour les ados, c'est l'environnement.

À savoir:

How to agree/disagree

Je suis pour/contre...

À mon avis...

Je pense que...

Je trouve que...

Tu es d'accord?

Je suis d'accord.

Je ne suis pas d'accord.

tort!

Tu as raison!

Tu rigoles!

cependant

par contre

d'un côté...de l'autre côté.. on one hand,...on the other hand

I am for/against...

In my opinion

I think that

I find/think that

Do you agree?

I agree

I don't agree. Tu as

you're wrong!

You're right!

You must be joking!

however

on the other hand

on one hand,...on the other hand

? Research the following French charities. What do they do?

FRENCH Y9 Word list Summer 1.A

vb	il faut +infinitive	it's necessary/you must
vb	il ne faut pas +infinitive	it's not necessary/you mustn't
vb	il ne faut jamais+ infinitive	it is never necessary/you mustn't ever
inf	ramasser les déchets	to pick up rubbish
inf	recycler	to recycle/ recycling
inf	consommer	to consume/consuming
	moins de viande	less meat
	moins de plastique	less plastic
	moins d'énergie	less energy
	à pied/à vélo	by foot/ by bike

FRENCH Y9 Word list Summer 1.B

adv	extrêmement	extremely
vb	Je trouve que c'est...	I find that it's
	trop d'eau	too much water
	trop d'énergie	too much energy
inf	refuser le plastique	refuse/reject
	plus de produits bio	more organic products
	moins de viande	less
nf	une bouteille réutilisable	a reusable bottle
nm	un sac recyclable	a recyclable bag
nm	le verre	(the) glass

FRENCH Y9 Word list Summer 1.C

pos adj	votre/vos	Your (singular/plural)
pos adj	notre/nos	our (singular/plural)
pos adj	leur/leurs	their (singular/plural)
inf	protéger l'environnement	to protect the environment
	ne... plus	no longer
	ne... rien	nothing/not anything
	des produits laitiers	dairy products
	des produits d'origine animal	products of animal origin
	en cuir	(made of) leather
adj	végétarien(ne)	vegetarian

FRENCH Y9 Word list Summer 1.D

nm	le végétarisme	vegetarianism
nm	le véganisme	veganism
vb	Je suis pour...	I am for
vb	Je suis contre...	I am against
vb	Tu as raison	You are right
vb	Tu as tort	You are wrong
vb	Je suis d'accord	I agree
adv	par contre	however
	d'un côté...	on one hand
	d'un autre côté	on the other hand

FRENCH Y9 Word list Summer 1.E

	le plus grand	the biggest/tallest (masc.)
	la plus grande	the biggest/tallest (fem.)
adj	grave	serious
adj	sain(e)	healthy
adj	lent(e)	slow
	bon(ne) pour la santé	good for your health
adj	pratique	practical
adj	recyclé(e)	recycled
inf	éliminer	eliminate
inf	(pour) réduire	(in order) to reduce

FRENCH Y9 Word list Summer 1.F

inf	devenir	to become/becoming
vb	(il est) devenu	(it) became
vb	j'aimerais + infinitive	I would like to + infinitive
vb	Je voudrais + infinitive	I would like to+ infinitive
inf	manifester pour	to protest for
	bon pour la santé	good for your health
	le plastique à usage unique	single-use plastic
nm	réparer plus de choses	repair more things
inf	réutiliser	to re-use
inf	important	important

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: i**

éliminer	viande
bio	pratique

Phonics: -ui

suis	cuir
réduire	oui

Phonics: a

réutilisable	grave
ramasser	pratique

Phonics: -tion

pollution	éducation
-----------	-----------

Phonics: -ain

train	sain
main	maintenant

Section 1: Key Vocabulary/Questions

Tier 2 vocabulary	Definition
Comparative adjective	used to compare things and say something is bigger, better etc. than something else
Superlative adjective	used to compare things and say something is the biggest, best etc.
Adjective declension	changing the form of adjectives so that it agrees in gender and number with the noun that it is describing
Masculine, feminine, neuter	the terms used to refer to the gender of German nouns

Question Translation

1. Was ist das größte Umweltproblem?	What is the biggest environmental problem?
2. Was sollte man machen, um dieses Problem zu lösen?	What should we do in order to solve this problem?
3. Wie kann man die Umwelt schützen?	How can we protect the environment?
4. Was hast du neulich gemacht, um die Umwelt zu schützen?	What have you done recently to protect the environment?
6. Interessierst du dich für freiwillige Arbeit?	Are you interested in voluntary work?
7. Welche Arbeit willst du machen, um zu helfen?	What work do you want to do, in order to help?

Section 2: Grammar

Comparative and Superlative adjectives

The comparative

- just add *-er* to an adjective

klein -> *kleiner* (*small* -> *smaller*)

interessant -> *interessanter*

(*interesting* -> *more interesting*)

- Some shorter adjectives also add an umlaut to the vowel

alt -> *älter* *kalt* -> *kälter* *groß* -> *größer*

The superlative

- use *am* before the adjective and add *-sten* to the end of the adjective

- add *-esten* if the adjective ends in a vowel or a *t*

klein -> *kleiner* -> *am kleinsten*

alt -> *älter* -> *am ältesten*

- If you use a superlative adjective **before a noun**, add *-st* to the adjective and then the correct ending (masc./fem./nt.)

- add *-est* if the adjective ends in a vowel or a *t*

das große Problem

das größere Problem

das größte Problem

Section 3: WAGOLL

Ich wohne in Belper, in England. Ich interessiere mich sehr für den Umweltschutz, weil die Welt viele Umweltprobleme hat. Die Luftverschmutzung und die Wasserverschmutzung sind große Probleme, aber das größte Problem ist wahrscheinlich die globale Erwärmung. Meiner Meinung nach ist die globale Erwärmung wichtiger als die Abholzung. Um dieses Problem zu lösen, müssen wir alle helfen. Man sollte Energie sparen und Länder müssen erneuerbare Energie benutzen. Ich glaube, dass meine Schule umweltfeindlich ist. Neulich habe ich ein Projekt in der Schule gemacht, so dass wir Müll trennen und mehr recyceln. Zu Hause hat meine Familie auch Müll getrennt und weniger Strom benutzt.

Ich interessiere mich sehr für freiwillige Arbeit. Samstags arbeite ich für eine Hilfsorganisation, die Flüchtlingen hilft. Wir trinken Tee und ich lehre ein bisschen Englisch. In der Zukunft will ich im Ausland arbeiten, um mit Armut und Obdachlosigkeit in anderen Ländern zu helfen.

Gut zu wissen!



Did you know that the UN has 17 sustainable development goals?
<https://unric.org/de/17ziele/> Go to this website and translate the goals from German to English.

GERMAN Y9 Word list Summer 1.A		
	die Umwelt	environment
	die Gegend	area
	umweltfreundlich	environmentally friendly
	umweltfeindlich	environmentally unfriendly
	verwenden	to use
	benutzen	to use
	recyceln	to recycle
	Müll trennen	to separate rubbish
	verschwenden	to waste
	sparen	to save

GERMAN Y9 Word list Summer 1.B		
	der Strom	electricity
	der Verbrauch	use/usage
	das Licht	light
	ausschalten	to switch off
	die öffentlichen Verkehrsmittel	public transport (pl)
	zumachen	to close
	schließen	to close
	die Heizung	heating
	die Klimaanlage	air-conditioning
	baden	to bathe

GERMAN Y9 Word list Summer 1.C		
	die Armut	poverty
	die Arbeitslosigkeit	unemployment
	die Obdachlosigkeit	homelessness
	der Verkehr	traffic
	die Luftverschmutzung	pollution
	Flüchtlinge	refugees
	die Gesellschaft	society
	die Gewalt	violence
	der Schaden	damage
	überbevölkert	over-populated

GERMAN Y9 Word list Summer 1.D		
	die Abholzung	deforestation
	die Luftverschmutzung	air pollution
	die Wasserverschmutzung	water pollution
	verpesten	to poison, pollute
	die globale Erwärmung	global warming
	das Aussterben	extinction
	Tierarten	animal species
	die Lärmbelastung	noise pollution
	die Energiequelle	energy source
	verursachen	to cause

GERMAN Y9 Word list Summer 1.E		
	erneubar	renewable
	schützen	to protect
	vergiften	to poison
	zerstören	to destroy
	vernichten	to destroy
	bedrohen	to threaten
	das Kraftwerk	power station
	das Atomkraftwerk	nuclear power station
	der Biokraftstoff	biomass fuel
	saurer Regen	acid rain

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

This QR code links to all [the German Year 9 QUIZLET sets.](#)



Phonics: Z	
Abholzung	Verschmutzung
benutzen	zerstören
schützen	Heizung
Ziel	zumachen

Phonics: V	
verwenden	verschwenden
Verbrauch	Verkehrsmittel
Verschmutzung	überbevölkert
verpesten	verursachen

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Binary	A number system that only uses two digits: 1 and 0. The binary system is known as a 'base 2'.
Denary	A number system that uses ten digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and 0. Also known as 'base 10'.
Logic Gate	Computers use logic gates to carry out operations.
Boolean	Each logic gate represents a Boolean operation - AND, OR and NOT.
Not Gate	Takes a single input and gives a single output. The output value is always the opposite value to the input.
And Gate	Takes 2 inputs and gives 1 output. If both inputs are 1, the output is 1, otherwise the output is 0.
Or Gate	Takes 2 inputs and gives 1 output. If 1 or more outputs are 1, then the output is 1, otherwise the output is 0.
Truth Table	Each logic gate has its own truth table. They show all possible combinations of 1s and 0s and their corresponding outputs.
Logic circuits	Logic gates can be combined to make logic circuits - Their outputs are found using logic tables.
ASCII	The most commonly used character set for English speakers. It uses 7 bit binary codes meaning it can represent 128 characters.
unicode	Uses up to 32 bits to represent some characters so it covers all major languages.
Bitmap image	An image made up of a series of coloured dots called pixels. Their files are large as every pixel is saved.
Vector image	An image made up of a set of lines and shapes. They are small as only the information needed to draw the shapes is saved (position, colour, size)
1-bit image	Images made up of two colours 0 for one colour and 1 for the other colour.
2-bit image	Images made up of four colours each colour represented by 00, 01, 10 or 11.

Section 2: New Knowledge

Computers only process binary data using 0s and 1s but we can convert binary into decimal numbers. In denary the place values from right to left increase by the powers of 10 (1000, 100, 10, 1). In binary the place values from right to left increase by the powers of 2. (8, 4, 2, 1)

0 = 0000	4 = 0100	8 = 1000	12 = 1100
1 = 0001	5 = 0101	9 = 1001	13 = 1101
2 = 0010	6 = 0110	10 = 1010	14 = 1110
3 = 0011	7 = 0111	11 = 1011	15 = 1111

Convert Binary to Denary

Draw a table with binary place values in the top row and the binary number in the bottom row. Write down the powers of 2 that have 1 in their column. Add these values together to get the decimal number.

$$64 + 4 + 2 + 1 = 71$$

128	64	32	16	8	4	2	1
0	1	0	0	0	1	1	1

Convert Decimal to Binary

Draw a table with 8 columns and put the powers of 2 in the top row. 71 is the running total you subtract numbers from. Starting on the left, if the top row value is less than or equal to the running total then subtract it from the running total. Put a 1 in any column where you subtracted from the running total. Read the binary number off the bottom row of the table.

128	64	32	16	8	4	2	1
0	1	0	0	0	1	1	1

$128 > 71$
 $71 - 64 = 7$
 $32 > 7$
 $16 > 7$
 $8 > 7$
 $7 - 4 = 3$
 $3 - 2 = 1$
 $1 - 1 = 0$

Tier 2 vocabulary

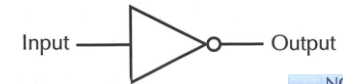
Resolution	Definition
Resolution	The number of pixels within a fixed area. The higher the resolution, the better quality the image.
Compression	Makes file sizes smaller
Lossy	Lossy compression removes data.
Lossless	Lossless compression removes data from the file but restores the data when recovered.

Section 3: Useful Subject Information

Computers use logic gates to carry out operations. Each logic gate represents a Boolean operation - AND, NOT and OR. A gate takes binary data and then outputs the result of the operation.

It can help to think of 1s as TRUE and 0s as FALSE. There are three main types of logic gate:

NOT gate



NOT truth table

Input	Output
0	1
1	0

AND gate



AND truth table

Input A	Input B	Output
0	0	0
0	1	0
1	0	0
1	1	1

OR Gate



OR truth table

Input A	Input B	Output
0	0	0
0	1	1
1	0	1
1	1	1

Logic Gates can be combined to create logic circuits.



Adding binary numbers:

$0 + 0 = 0$
 $1 + 0 = 1$
 $1 + 1 = 1$ carry none (or 10)
 $1 + 1 + 1 = 1$ carry one (or 11)

PE: Tennis

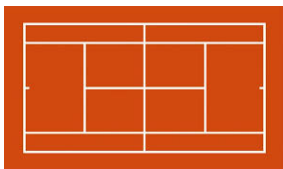
Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Volley	Playing the ball before it bounces when you are close to the net.
Half-volley	Playing the ball low down just after it has bounced.
Service	Starting the rally with a shot from behind the baseline.
Service box	The box near the net where the service needs to land.
Baseline	The line at the back of the court.
Tramlines	The lines down the side of the court used for singles and doubles.
Drive	Hitting the ball hard and low across the net.
Lob	Hitting the ball over your opponent if they are close to the net.
Drop-shot	Hitting the ball softly over the net when your opponent is at the back of the court.

Section 2: New Knowledge/Skills

In tennis you will improve your range of shots and start to use some basic tactics to try to outwit your opponent. You will start to use the proper scoring system and play games on a full size court.

On the court below, can you recognise the following lines?

baseline - **service box** - **service line** - **tramlines**
singles sideline - **doubles sideline** - **centre service line**



Scoring in Tennis:

Which of these numbers are used?

10 15 20 30 35 40 45 50

PE: Striking and Fielding

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Half-rounder	How many ways can you think of that will lead to half a rounder being scored?
No-ball	When the ball does not arrive at the batter between knee height and the top of the head, on the hitting side of the body.
Run-out	When the field touch the post or the stumps with the ball before the batter arrives.
Obstruction	In rounders, when a fielder gets in the way of the batter.
Forward defensive	The most important shot in cricket to help prevent the ball hitting the stumps.
Drive	The most important attacking shot in cricket - hitting the ball along the floor.
Grip	To throw or bowl the ball in rounders and cricket, use a two fingers grip.
Overarm throw	An important skill for fielders to return the ball to the wicketkeeper/base fielders.
Long barrier	Getting down on one knee to make a barrier to stop the ball

Section 2: New Knowledge/Skills

In striking and fielding activities, you will continue working on rounders, cricket and softball, particularly developing your understanding of the rules and of some of the important techniques.

What are the key points of technique shown in the pictures below?



PE: Track

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Sprint start	A crouched position giving a sprinter the best chance of a fast start.
Staggered start	For events, which go round curves on the track, different start positions are needed.
Lap time	Comparing an athlete's time for each lap they complete.
Split time	An athlete's time at a certain point in a race.
Changeover box	A 20m section marked out on the track inside which the baton must be exchanged.
Down sweep	The quickest way to carry out a baton pass by placing the baton down into the outgoing runner's hand.
Incoming/outgoing runner	The two runners involved in a relay changeover are the incoming and the outgoing runners.
Sprint technique	Paying attention to what each part of the body is doing to maximise speed.
Stride pattern	Taking a set number of strides between each hurdle.

Section 2: New Knowledge/Skills

This year you will continue to experience a range of track events, trying to improve your performance in each.



Can you describe some of the key points for the sprint start and the down-sweep baton hand-over?

PE: Field (Jumping)

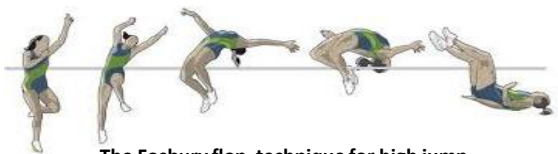
Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Straddle technique	An alternative technique to the scissors using the foot nearer to the bar to take-off.
Fosbury flop	The most advanced high jump technique involving a backwards dive over the bar.
Hang technique	A basic long jump technique where the back is arched and the hands are up during flight.
Acceleration	Speeding up to maximum during the run-up is essential in long jump and triple jump.
Leg shoot	Pushing the legs out in front when landing in long jump to maximise the distance jumped.
No-jump	The phrase used when the jumper breaks a rule and the jump doesn't count.

Section 2: New Knowledge/Skills

In jumping activities, you will explore techniques to increase your jumping performances. Examples include:



The 'hang' technique for long jump.



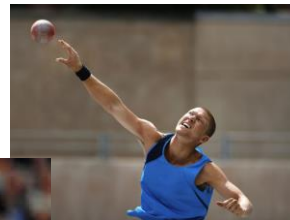
The Fosbury flop technique for high jump.

PE: Field (Throwing)

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Approach	A run-up or footwork routine to get extra power into the throwing action.
Side-step	A simple technique for the shot-put approach.
Glide	A more advanced approach for the shot-put using a backwards hop.
3 step approach	The basic javelin approach needs to be limited to L...R,L for a right hander and R...L,R for a left hander.
Angle of release	In throwing events, approximately 45 degrees is required to allow the implement to fly furthest.
Speed at release	The thrower must try to produce maximum speed of the arm to release the implement.
Trajectory	The flight path of the implement which will be determined by the angle of release.
No-throw	The phrase used when the thrower breaks the rules, most commonly by overstepping the line.

Section 2: New Knowledge/Skills

We will continue to develop our throwing technique in shot, discus and javelin, including adding an approach.



Which important points of technique can you recognise in these pictures?

PE: Running

New knowledge/Skills

You will continue to develop your **endurance** in running this year with further **target setting** to help you towards achieving a **personal best** in your timed runs.

We will look at how we can use **lap times** and **split times** to help break down a performance and help us to achieve a target.

We will consider some of the **mental** aspects of running which can be used to **motivate** ourselves and therefore improve performance, for example, **positive self-talk**.

PE: Health and Fitness

New knowledge/Skills

Through the various activities in Year 8 we will consider the **effects of exercise** on the body and the science behind them, including:

- Redness of the skin
- Changes to our breathing
- Increased heart rate
- Sweating

We will link these effects to the importance of the **warm-up** and we will introduce the idea of having a **cool down** after an intense exercise session.

PE: Leadership

New knowledge/Skills

To develop our leadership abilities in Year 9, you will be challenged to use your PE knowledge at times to lead a warm-up or a skill practice for a group of classmates.

We will discuss and try to develop some of the key **personal qualities** which can help you become a good leader such as: **communication, initiative, responsibility, knowledge, reliability, confidence, body language**.

You may be asked to take on various leadership **roles** such as **coach, captain, referee, scorekeeper**.

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Realism	The quality of representing a person or a thing in a way that is accurate and true to life.
Composition	The way in which different elements of an artwork are combined or arranged.
Focus	Clear visual definition.
Naturalistic	Closely imitating real life or nature.
Coarse	Rough or harsh in texture.
Intense	Extreme strength
Stippling	A painting technique using small dots of colour.
Symmetry	The quality of being made up of exactly similar parts facing each other.

Tier 2 vocabulary	Definition
Texture	The feel, appearance or consistency of a surface.
Highlight	Areas of an image that have been captured by strong lighting or lighter areas of colour.
Layers	A gradual build up of applications to require the desired effect.
Crop	A zoomed in section of an original image.
Strokes	How paint is applied to a surface, often to create a smooth effect..
Detail	The parts you notice when you look closely.
Blend	Mixing together so the colours/textures combine and disappear into one another.

Section 2: New Knowledge/Skills

Photorealism

A style of Art and Sculpture characterised by the highly detailed depiction of ordinary life with the impersonality of a photograph.

Wildlife Artists

Alan M Hunt
Carl Brenders
Martin Dowse
David Shepherd

Context

Many wildlife artists' main motivations are to conserve the world's wildlife for future generations. Alan M Hunt states it as his mission to impart some of the love, experience and concern for these animals and to protect the environment and the wildlife we share this planet with, through his Art.

'As a wildlife artist and conservationist, I have grave concerns for the environment and believe it needs as much support as I can possibly give, whether financially or as a spokesman. Rather than become a famous painter, I would like to be remembered as someone who tried to make people aware of the need to protect the environment, wildlife and the planet.'

Artist tips to help you paint animal fur

'Start by painting the eye, when the eye looks correct, the animal starts to come alive'.

'It is important to understand the way fur, hair and feathers grow to believably paint them.'

'See which direction the fur is growing, make sure your brushstrokes follow this direction.'

'Painting fur is a lot like layering tiles on a roof, you start layering them from the bottom up.'

'Remember to work from dark to light with fur, the lightest colour is last.'

Section 3: Other subject specific things

<http://justforthis.com/video/lastselfie.mp4>



WWF

The World Wide Fund for Nature is an international governmental organisation founded in 1961 that works in the field of wilderness preservation and the reduction of human impact on the environment.

#LastSelfie

Launched in April 9th 2014

The idea behind the campaign is simple - the animals are conveying a message to their viewers which says 'Don't let this be my last selfie.'

The timed message functionality on Snapchat was used to highlight that time is running out for the endangered species. After one week 400,000 tweets hit 1120 million twitter timelines meaning 50% of all active twitter users were exposed to it.

With headlines in more than 6 languages #LastSelfie raised global awareness and in just three days WWF reached their donation target for the entire month.

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Script	The format the lines are set out.
Stage Directions	The playwright has given us some suggestions as to what is happening on the stage. <i>Often these are in italic font.</i>
Improvisation	Actors create scenes with the characters that are “off script”.The actors create their own lines. This helps actors to understand the characters and the play.
Volume/Pitch/Tone/Pace/Emphasis	These are all elements we can use when speaking lines. Varying each of these can alter the meaning of lines and their impact.

Tier 2 vocabulary	Definition
Significant moments	These are specific sections of script we pick to capture important ideas or characteristics that should be emphasised in the play.
Thematic Strands	The playwright is using the play to explore and consider a selected number of ideas. These ideas will appear throughout the script. They become the themes that the performance presents for an audience to consider.
Sub-text	The lines that are spoken present the first layer of information we must understand. When performing we also have the sub text that we can understand through use of vocal expression and actions.

Section 2: New Knowledge
<p align="center">Information about the Script:</p> <p>Title The play is called “D.N.A”, this stands for Deoxyribonucleic Acid. This is the DNA Molecule that makes you unique, it identifies you. It makes you into you.</p> <p>Scriptwriter Dennis Kelly, he also wrote the script for “Matilda”.</p> <p>Themes The main themes of the play are bullying, morality and leadership.</p> <p>Characters Jan, Mark, Leah, Phil, Adam, John Tate, Lou, Danny, Brian, Cathy, Richard.</p> <p>These characters form a group, or a gang. They are all Secondary School age teenagers.</p> <p>Plotline Whilst bullying Adam the gang find themselves responsible for death of Adam. The gang goes about covering up this event under the guidance of their leader. The plot follows the characters as they deal with what they have done. This offers the audience an exploration of right and wrong.</p> <p>The play has a linear narrative. It follows the pattern of introduction, problem, crisis ,resolution. It also has a cyclical structure, starting in the same place it began.</p>

Section 3: SKILLS
<p>Developing Students Performance Skills</p> <p>Students will explore sections of the script and develop their acting skills. Focus will be on:</p> <p><i>Vocal expression, facial expression, gesture, physicality, proxemics, Interaction, transition, posture, levels, stance, atmosphere, mood.</i></p> <p>There will also be opportunities to consider the design elements of a performance:</p> <p><i>Stage Shapes and set layout</i> <i>Costume, make up and props</i> <i>Sound, from background music to sound effects.</i> <i>Lighting to create atmosphere and sense.</i></p>

Section 4: Creating an impact on your Audience
<p>Reading, Discussion, Workshops and Performances:</p> <p>Through studying the play and performing sections in a workshop setting, students will discuss and understand the issues the play raises. This will help them to develop skills around Directing a play to create a specific aim. They will also learn about the impact they want their performance to have on an audience.</p> <p>Words to describe the impact this play has on an audience:</p> <p>Empathy, pity, shock, outrage, anxious, bemused, trepidation, appalled, amused, foreboding.</p>

Section 1: Key Vocabulary	
Tier 3 vocabulary	Definition
Verse	Verses introduce the song's theme and have the same melody but different lyrics for each verse
Chorus	The chorus relays the message of the song and is repeated with the same melody and lyrics each time it is heard
Bridge/Middle 8th	A section (often 8 bars in length) that provides contrasting musical material
Outro/Coda	The final section of a popular song which brings it to an end
Lead Sheet	The chords, melody, lyrics and riffs to a song all in one place

Tier 2 vocabulary	Definition
Lyrics	The words of a song
Melody	The main tune of the song
Texture	The layers that make up a piece of music and how they interact.
Intro	The opening section of the song

Section 2: New Knowledge/Skills

Primary chords - Primary chords are chords of the first (I), fourth (IV) and fifth (V) degrees, irrespective of the tonality you're in.

Inversions - A chord inversion occurs when any note other than the root of a basic chord is played at the bottom of the chord.

- A chord with note **one** at the bottom is described as being in **root position**
- A chord with note **three** at the bottom is described as being in **1st inversion**
- A chord with note **five** at the bottom is described as being in **2nd inversion**

4 chord trick - This is a common chord pattern found in pop and rock music. It uses the chord progression **I, IV, V, and vi**.

Structure - The structure of a song is how it is built. For example: **intro, verse, chorus, bridge etc**

Conjunct Melodic Motion – Melodies which move mainly by step or use notes which are next to or close to one another

Disjunct Melodic Motion – Melodies which move mainly by leap or use notes which are not next to or close to one another

Melodic Range – The distance between the lowest and highest pitched notes in a melody

Conjunct



Disjunct

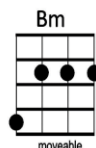
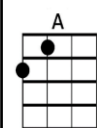
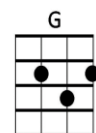
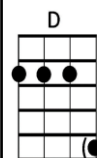


Section 3: Other subject specific things

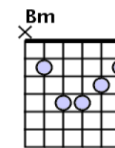
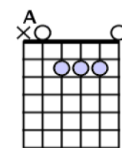
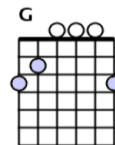
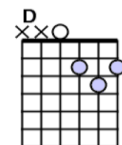
LEAD SHEET: Castle on the Hill – Ed Sheeran



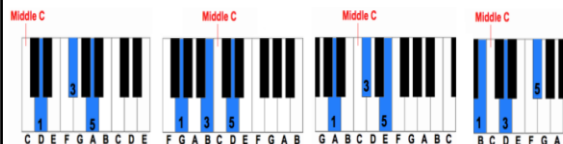
Ukulele Chords



Guitar Chords



Keyboard Chord Diagram



Links to prior learning – Guitar and ukulele skills and All about the Bass. Music reading skills and ensemble skills from y7 and 8

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 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
Prototype	A quick version of your design to test the initial idea.
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

Tier 2 vocabulary	Definition
Form	The shape, aesthetics. What something looks like.
Function	How well does the product perform the job it was designed to do?
Specification	A list of targets the design must meet
Evaluation	Making a judgment about a product or design

Section 2: Skills

Developing your own textile product

Designers work through a process each time they develop a new product. You will need to explore each of these stages in your sketchbook to help you arrive at the finished piece.

Context: The starting point for your project. This could be a text, an image or a problem that you are given to solve. You would explore the context by creating a mindmap. This would include all of your initial thoughts, ideas and questions related to the context.

Research: From your mindmap you will be able to highlight certain themes that need further investigation. This could be to do with finding out more about the materials you could use, how to make it or questionnaires to find out what people are looking for from a new product.

Brief: By this stage you should have a fairly clear idea of exactly what you want to make. A brief is a couple of sentences to clarify this. Most start with 'I am going to design and make a.....'

Specification: This is a list of targets that you would like your design to meet. There is an acronym to help you remember the themes that should be included: ACCESSFM

Design Ideas: Time to start designing and sketching. At this point we combine all the information we found during the research section, the targets we have written in the Specification along with creativity.

Prototype (modelling and testing): Initial designs need to be tested before the final version is made. This helps particularly with products that are meant to fit on the body (as a textile accessory would). It allows designers to start to work in 3D. These models are often made from paper and card to quickly find any problems.

Manufacture: Once all the problems have been ironed out at the prototype stage it's time to make the finished piece. This should be created with accuracy.

Testing & Evaluation: It is always useful to reflect on how successful your finished piece is. You can learn what went well and how you might like to improve it if you were to make it again.

Section 3: Knowledge

Looking for inspiration

Textile designers look in many places for inspiration. You will look at one of the following themes:



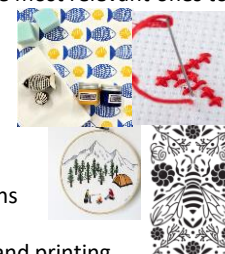
- Superheroes
- Literary Adventures
- Couture Fashion
- Sporting Advantage

When you have chosen your CONTEXT you will use it to develop your own project. You will have the responsibility to select WHAT you are going to make, WHY you have chosen to make it, HOW you will make it and WHAT you will make it from.

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?






Year 9 Rotation 2

D&T Product Design – Mood Lighting Clock

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
Ergonomics	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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 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 <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  PlaySam </div> <div style="text-align: center;">  Alessi </div> <div style="text-align: center;">  Memphis </div> <div style="text-align: center;">  De Stijl </div> </div>	
Life Cycle Assessment <p>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.</p> 	
Risk Assessment <ul style="list-style-type: none"> Understand the meaning of, 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 <p>Be able to explain the competent safe use of the following machines using annotation and sketches.</p> <ul style="list-style-type: none"> Pillar Drill Biscuit Jointer Strip Heater/Line Bender 	

Key Vocabulary	
Tier 3 vocabulary	Definition
Consent	give permission for something to happen.
Sexting	The non-consensual sharing of private sexual images or videos with the intent to cause distress is also illegal
Contraception	the deliberate use of artificial methods or other techniques to prevent pregnancy as a consequence of sexual intercourse
Relationship	the way in which two or more people or groups regard and <u>behave</u> towards each other.
Social media	websites and applications that enable users to create and share content or to participate in social networking.
Tier 2 vocabulary	Definition
Human rights	rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status.
Tolerate	allow the existence, occurrence, or practice of (something that one <u>dislikes</u> or <u>disagrees</u> with) without interference.
Respect	due regard for the feelings, wishes, or rights of others.
Law	the system of rules which a particular country or community <u>recognises</u> as <u>regulating</u> the actions of its members and which it may enforce by the <u>imposition</u> of penalties.

Knowledge
<p>What is consent?</p> <p>Consent is defined in law as <i>an agreement made by someone with the freedom and ability to decide something.</i> Under the law, it is the person seeking consent who is responsible for ensuring that these conditions are met</p> <p>To <i>give your consent</i> you should be sure that it is your decision and not one you have been pressured to make</p> <p>With specific reference to sex:</p> <p>British law says that both people need to give their consent before sex or any physical closeness</p> <p>The law also says that to consent to sex a person must be 16 or over and have the ability to make informed decisions for themselves (i.e. they have to be mature enough to make the decision and not be impaired by e.g. drugs or alcohol)</p> <p>Supporting victims of sexual violence</p> <p>SV2 Advice Line (01773 746115)</p> <p>If you are under 18, it is against the law to: take, have or distribute a sexual photo; this includes a selfie. have or pass on indecent images of someone under 18. encourage or incite someone to take or send 'sexts'</p>

Key points for you to consider
 <p>One year ago I left my home for school and never returned. I was shot by a Taliban bullet and was flown out of Pakistan unconscious. Some people say I will never return home but I believe firmly in my heart that I will. To be torn from the country that you love is not something to wish on anyone.</p> <p>How can social media affect relationships?</p> <ul style="list-style-type: none"> • Social media can create unrealistic expectations • It can lead to jealousy • Social media might make daily life seem less interesting • It can affect our mental health • It can lead to body image issues

Extra – Curricular Summer 2023

The summer will be a busy time for sports at Belper School, as always! Our main activities will once again be ATHLETICS, ROUNDERs, TENNIS and VOLLEYBALL. Other sports activities will be organised when the weather allows and when there are no exams in the sports hall.

TENNIS

The courts are available for use every lunchtime and after school up until 4.15pm. At lunchtimes there are rackets and balls available to borrow – ask at the PE office. Look out for some tennis training sessions and competitions later in the summer.

VOLLEYBALL

Outdoor Volleyball – When the weather is good, we will set up some outdoor volleyball at lunchtimes for year 9 upwards. Volleyball Tournament: Hopefully, this summer will see the return of the Year 9/10 Derbyshire Schools' Volleyball Tournament, hosted here at Belper in July.

ATHLETICS

Look out for competitions and trials. Details will be circulated as things are arranged. Our experienced athletes will be invited to compete at the Derbyshire Schools' Championships on Saturday 10th June. Athletics practices will be organised later in the summer and students who attend these events may be selected to compete at the Amber Valley Championships which takes place at Moorways Stadium on Tuesday 27th June. Sports day will run again this year for years 7, 8 and 9 in July with the support of year 10 sports leaders. Nearer the time, your tutor groups will need to put together athletics teams for your year group's event.

ROUNDERS

Rounders Tournaments: extra practices will be arranged in the run-up to the various Amber Valley Tournaments to prepare our teams for these events and there will be some inter-tutor group rounders events organised to give everyone a chance to play some competitive rounders.

NETBALL

Girls' Netball Club continues on a Thursday after-school for all year groups.

BASKETBALL

The outdoor court is available every lunchtime and after school for students to practice their skills or join in with a pick-up game. Balls can be borrowed from the PE office.

INTER-TUTOR SPORTS

Look out for competitions between class groups and tutor groups taking place at lunchtimes and after-school - details will be circulated in school through PE lessons and via tutors.

Y9	Mon	Tues	Weds	Thurs	Fri
Lunchtime	Spelling/Translation Bee With Sarah In Languages Book Club With Sarah Library		Tech Club With Sarah-Jayne In T6 Cartoon Club (Wk2) With Robert A3 Belper School Christian Union With Stephen H3 Belper Band With Anna Mu1	Cartoon Club (Wk1) With Robert A3	Lunch Club With Emma Library Chess Club With Carlos M1
After School	Homework Club All welcome In Learning Support	LGBTQ+ Pride Club With Karen, Emma, Sally T5 Belper School Choir With Phil In Mu1 Homework Club All welcome In Learning Support	Music Producers Club With Phil In Mu1 Textiles Club With Sarah In T1 Recycling and Litter-Picking With Marc School site Boys' Football With Matt PE	LARP With Mike In H9 Gardening With Marc ACCESS garden Music Club Band Rehearsal With Anna Mu1 Scalextric Club With Phill, John T2 Homework Club All welcome In Learning Support	

2 Black/Blue Pens
and 1 Coloured Pen



2 Pencils



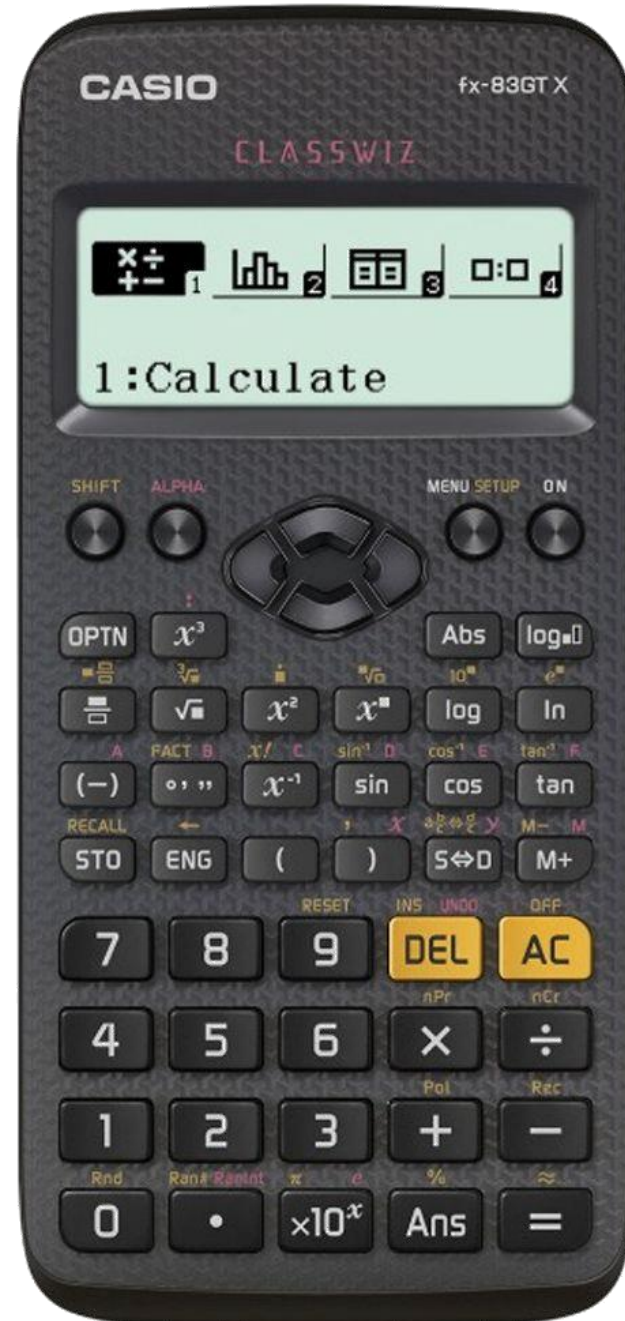
Eraser



Pencil Sharpener



Scientific Calculator



Planner

Ruler

