Knowledge Organiser

Year 9

Spring term B

Name:
Tutor:

What is a Knowledge Organiser?

Knowledge Organisers are a central place where staff have placed key content, skills and knowledge to help you progress. These skills are essential for your success and will need to be memorised and applied in your lessons. There are some techniques for how you can use Knowledge Organisers below:

Flashcards

These are a very good and simple self testing tool, they can be physical or electronic.

To make your own, take some card and cut into rectangles, roughly 10cm x 6cm.

Write the keyword on one side and the definition on the other. Go through your cards looking at one side and seeing if you can remember the keyword/definition on the other side.

This video offers a really good guide for using them effectively:
https://www.youtube.com/watch?v=eVajQPuRmk8

Questions/Answers, Answers/Questions

Question: In what year was George V's coronation?

Answer: 1910

Ask a parent, carer or study partner to write you questions (or answers) and then you write the answer (or possible question that would correspond to the answer).

You can also write your own questions. If you do this leave it at least a day until you answer them, to see what you can remember after a while.

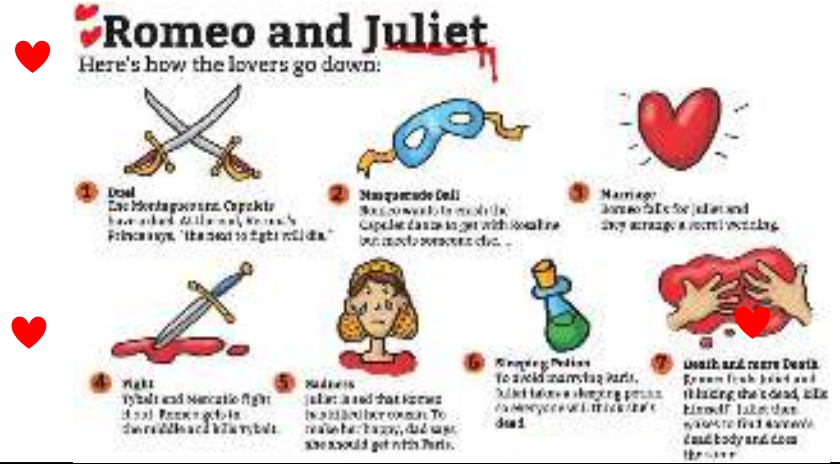
Always check and correct!

A. **Key terms**

Tragedy - a play dealing with tragic events and having an unhappy ending, especially one concerning the downfall of the main character.
Protagonist - the leading character or one of the major characters in a play, film, novel, etc.
Antagonist - a person who actively opposes or is hostile to someone or something; an adversary.
Prologue - a separate introductory section of a literary, dramatic work. Usually outlines the key events in the story.
Monologue - a long speech by one actor in a play or film.
Soliloquy - an act of speaking one's thoughts aloud when by oneself or regardless of any hearers, especially by a character in a play.
Sonnet form - a poem of fourteen lines using any of a number of formal rhyme schemes, in English typically having ten syllables per line.
Dramatic irony - originally used in Greek tragedy, by which the full significance of a character's words or actions is clear to the audience or reader although unknown to the character.
Foreshadowing - a warning or indication of (a future event).
Juxtaposition - the fact of two things being seen or placed close together with contrasting effect.
Oxymoron - a figure of speech in which apparently contradictory terms appear in conjunction.
Iambic pentameter - a line of verse with five metrical feet, each consisting of one short (or unstressed) syllable followed by one long (or stressed) syllable, for example *Two households, both alike in dignity*.
Prose - written or spoken language in its ordinary form, without metrical structure.
Religious imagery - images that have connotations with heaven and religion (usually used by Romeo to describe Juliet).
Metaphor - a figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable.
Simile - figure of speech involving the comparison of one thing with another thing of a different kind, used to make a description more vivid (e.g. *as brave as a lion*).
Pun - a joke exploiting the different possible meanings of a word or the fact that there are words which sound alike but have different meanings.
Bawdy humour - humour that is inappropriate or offensive.
Patriarchy - the father or eldest male is head of the family. The men hold the power and women have no power.

B. **Key knowledge – the themes in the play**

Violence and hate
Secrecy
Youth vs age
Order vs chaos
Conflict
Marriage
Death
Family
Individual vs society/religion
Appearance vs reality
Courtly love
Youth



F. **Expert modelling**

Starting with this moment in the play (Act 3, Scene1), write about how Shakespeare presents conflict.

Through the use of dramatic irony, Shakespeare allows his audience to understand why Romeo "love[s]" Tybalt, whom Romeo now regards as family following his clandestine marriage to Juliet. However, an Elizabethan audience would be aware of the dishonour of refusing a challenge and would not be surprised at the hot-headed Mercutio's desire to join the "fray" due to what he sees as Romeo's "vile submission". The sudden death of Mercutio's lively character would come as a shock and his final pun when he refers to himself as a "grave man" would actually reinforce that shock rather than add humour; it illustrates the brutal reality of Romeo's world, which is in stark contrast to the romantic world of the preceding marriage scene. The audience would now expect "grave" consequences and indeed there are: Mercutio's death becomes the pivotal point in the play as a series of tragic events ensues, leading to the tragic climax. Mercutio's repeated curse on "both [their] houses" would also remind the audience that it is the families' "ancient grudge" that has ultimately led to his death. Such a dramatic scene could be staged in such a way as to convey its importance with perhaps the actors frozen in horror as Mercutio looks to the audience while delivering his final lines.

Subject: English

Year group: 9

Topic: Romeo and Juliet

C. **Key knowledge – significant characters**

Romeo: A young Montague. Not interested in violence, only love. He's passionate and sensitive yet also impulsive.

Juliet: A young Capulet. Naïve and sheltered at the beginning, develops into a strong character. Grounded.

Friar Lawrence: Friend to both Romeo and Juliet. Civic-minded. Also expert with potions & herbs.

Nurse: Like a mother to Juliet / confidante. Often says inappropriate things.

Capulet: Juliet's father. Prudent and caring but can fly into rage if respect is lacking.

Mercutio: Romeo's close friend. Witty, bawdy, cynical and a hot-headed character.

Benvolio: Romeo's cousin. Tries to keep the peace and keep Romeo's mind off of Rosaline.

Prince: Leader of Verona, concerned with keeping order between the warring families.

Tybalt: Juliet's cousin. Obsessed by family honour; quick to draw his sword. Hates Montagues.

Scan me for more help and information!

Subject: Maths
Year group: 9
Topic: Ratio and Proportion

A. Keywords:

Common denominator – a common multiple of the denominators of several fractions.

Fraction – a numerical quantity that is not a whole number (e.g. 1/2, 0.5).

Highest common factor – highest number that can be divided exactly into each of two or more numbers.

Simplify – make (something) simpler or easier to do or understand.

Share – a part or portion of a larger amount which is divided.

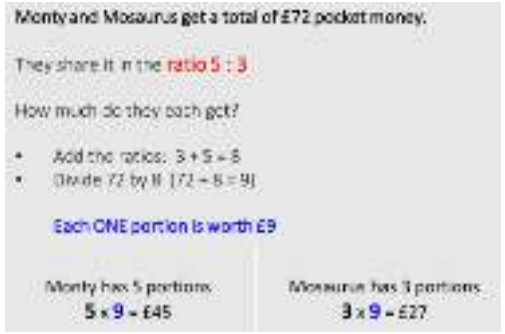
Proportion – a part, share, or number considered in comparative relation to a whole.

Ratio – a relationship between two quantities.

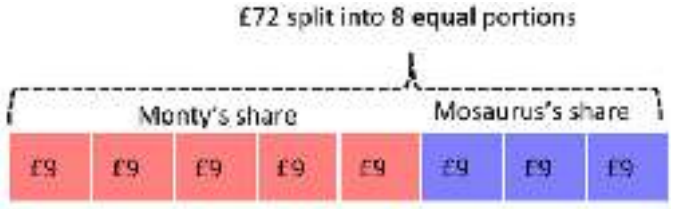
Portion – a part of a whole.

Quantity – the amount or number.

B. Sharing an amount by a ratio:



E. Box modelling:



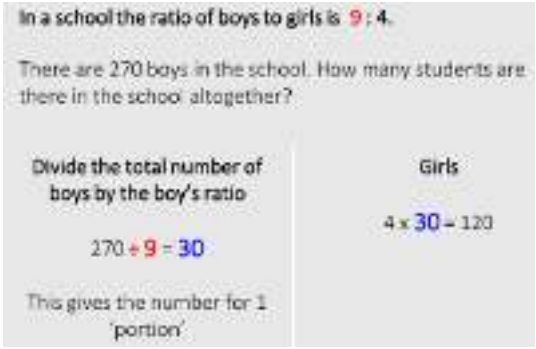
F. Expert modelling: Sharing an amount by a ratio.

Sharon and Bob share some money in a ratio 2 : 5
Bob gets £45 more than Sharon. **How much does each person get?**

1. Find the difference between the ratios 5 – 2 = 3
2. Divide: £45 ÷ 3 = 15
3. Multiply: 2 x 15 = 30 Sharon's share
4. Multiply: 5 x 15 = 75 Bob's share
   Check your answer: 75 – 30 - 45 ✓

A common misconception is to assume you always start by dividing the amount by the total ratio. As we can see, this is not always the case!

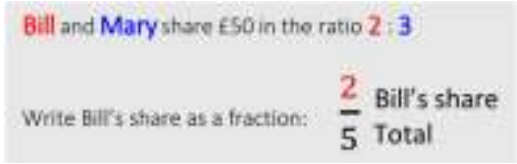
B. Using ratios:



D. Simplifying ratios and ratios as fractions:

Divide all numbers in the ratio by the highest common factor. E.g. 6:12 = 1:2

To write a ratio as a fraction:



G. Wider thinking/further reading:

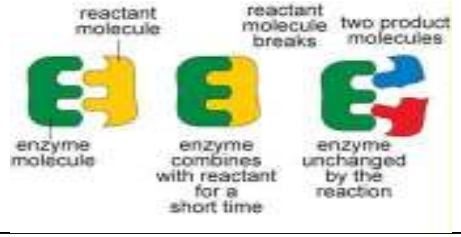
HegartyMaths clips: 328-338

A - Key terms

Protein
Large molecules made from amino acids used in the body for muscles, antibodies, hormones and enzymes
Carbohydrate
Family of large and small molecules that give energy
Lipid
Fat molecule
Amino Acid
Small molecules that proteins are made of
Glucose
Small sugar molecule
Starch
Large carbohydrate made from glucose molecules bonded together
Enzyme
A protein that can speed up chemical reactions
Carbohydrase
Enzyme that breaks up large carbohydrates into sugars like glucose
Protease
Enzyme that breaks up proteins into amino acids
Lipase
Enzyme that breaks up fats into fatty acids and glycerol
Active Site
Area of the enzyme that binds with a molecule
Substrate
Molecule that is able to bind with the enzyme
Denatured
When an enzyme loses its shape and can no longer function

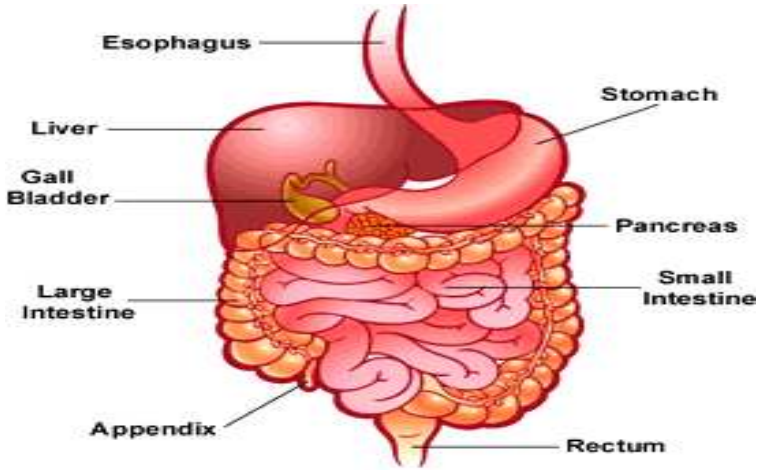
B - Enzyme actions

Enzymes are crucial to the survival of all living organisms. They are specifically suited to one substrate (to fit one chemical) in order to either build or break down chemicals



C - Digestive system

The digestive system has key functions throughout that allows for foods to be broken down in different ways.



E - Food tests

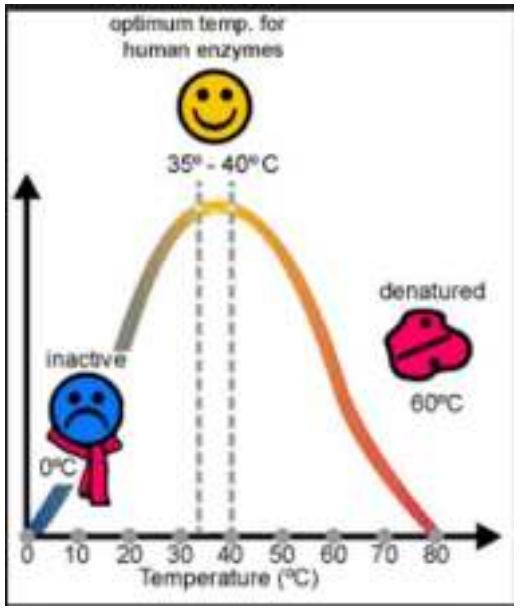
Iodine test for starch (black if present, orange/ brown if not)

Biuret solution: starts blue turns orange / red if sugar is present.

Subject: Science
Year group: 9
Topic: Digestive System B3

D - Knowledge

Enzymes will denature if taken out of their optimum condition (best working zone.) For humans this tends to be above 40 degrees



F - Required practical

All of the food tests need to be known and understood for this part of the required practical.

Starch, sugar and fat test

A - Key terms

Group
A vertical column on the table containing
Elements with similar properties
Period
A row on the periodic table
John Dalton
Arranged elements in order of their atomic weight.
John Newlands
Arranged elements in groups of 8 (law of octaves)
Dmitri Mendeleev
Created first version of the modern periodic table.
Alkali metal
A very reactive metal from group 1. Reacts with water to produce hydrogen and metal hydroxide.
Noble gases
Group 0 on the periodic table. Completely UNREACTIVE.
Halogen
Group 7 on the periodic table. Non-metals including chlorine and iodine. React readily with group 1.
Transition Element
Metals that fit between groups 2 and 3 in the periodic table. Contain many 'common' metals with usual properties.
Displacement reaction
A chemical reaction that where a more reactive halogen (or metal) will displace a less reactive one from it's salt.
Metal
A substance that loses electrons to form a full outer shell and forms positive ions
Non - metal
A substance that gains electrons to form a negative ion/shares electrons to form a full outer shell.
Inert
Unreactive
Halide
A substance containing a halogen ion (not an atom!)

B - Group 1 metals

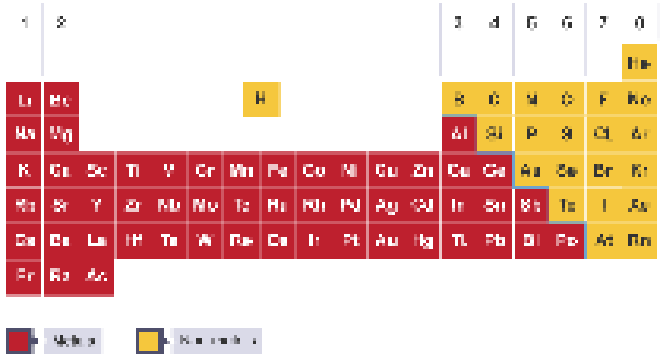
Get MORE reactive as you go DOWN the group. You can tell this from their reactions with WATER:

Lithium + Water → Lithium Hydroxide + Hydrogen

$2Li + 2H_2O \rightarrow 2LiOH + H_2$

C - The Periodic Table

Elements are arranged in rows called PERIODS and columns called GROUPS. Elements in the SAME group share similar properties. TRENDS can be found in properties (e.g. melting points) along periods and down groups.



E - Halogens

Get LESS reactive as you go DOWN the group (opposite to Group 1!)

Colour darkens down the group too.

Can undergo **displacement reactions**.

Subject: Science
Year group: 9
Topic: Periodic Table C2

D - Explaining trends

The atomic radius of atoms gets larger as you go down the group. For Group 1 this makes it easier to remove the electron from the outer shell as it is FURTHER from the attractive force of the nucleus.

For Halogens the trend is opposite because if the atomic radius is smaller it can ATTRACT an electron more easily as it can get closer to nucleus.

F - Noble gases

Already have a full outer shell of electrons… so will not do ANY chemical reactions. They are INERT.

G - Extra help

QR code

QR Kerboodle

Subject: Science
Year group: 9
Topic: Energy transfer through heating P2

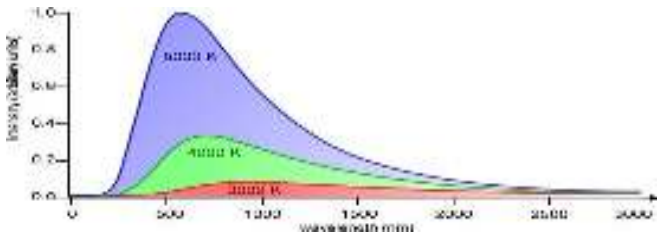
A - Key terms

Energy	The stuff that allows you to do work, measured in Joules (J)
Conduction	Movement of heat (vibration), by one vibrating atom hitting another and passing the vibration on.
Convection	Movement of heat by hot gas or liquid expanding and becoming less dense, and gravity pulling down less strongly than the surrounding cold material.
Radiation	Movement of heat by invisible Infra Red electromagnetic waves.
Insulation	Preventing heat from moving from a higher temperature to a lower temperature area by blocking conduction / convection / radiation.
Spectrum	The range of possible electromagnetic waves, which includes Infra Red
Specific Heat Capacity	The ability of a material to hold heat, measured in $JKg^{-1}{}^{0}C^{-1}$.
Heat	A type of energy characterised by vibration, either of atoms / molecules or electromagnetic waves.
Temperature	The average kinetic (movement) energy of the particles in a material, measured in ^{0}C.
Wavelength	The distance from peak to peak or trough to trough of an electromagnetic wave.
Black body	A perfect emitter of radiation that emits and receives all wavelengths.

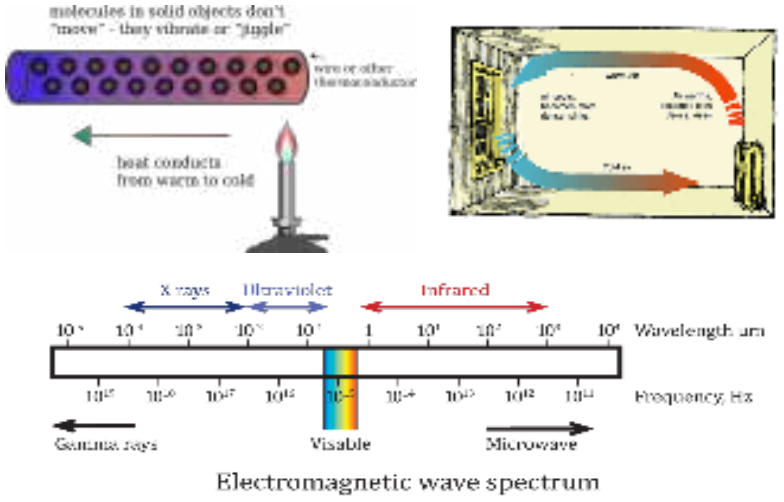
G- Extra help BBC Bitesize QR Kerboodle

B - Black body radiation

A hot object will emit a range of wavelengths. The hotter it is, the more high energy short waves will be emitted. However fewer lower energy waves will be emitted.



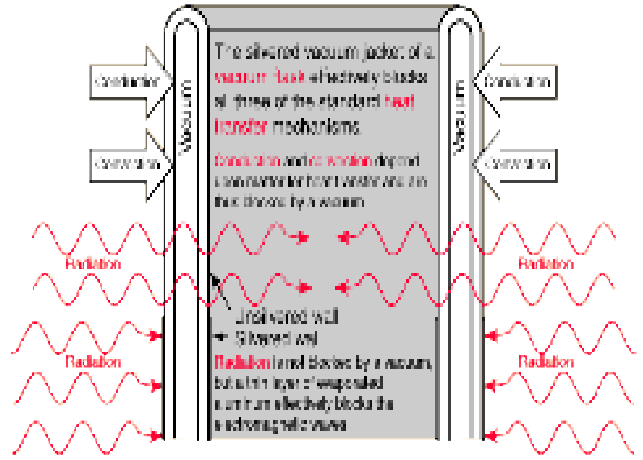
C - Conduction, convection and radiation



Electromagnetic wave spectrum

D - Insulation

Insulation depends on blocking heat movement by conduction, convection and radiation. This is either by using shiny surfaces to reflect Infra Red, or preventing vibration of atoms being moved.



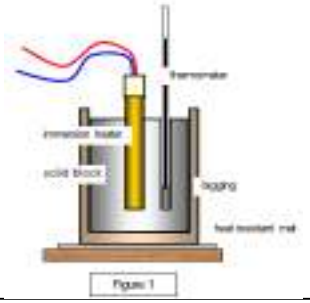
E - Specific heat capacity

Different materials hold on to different amounts of heat (wood can hold lots of heat, metal very little).

Change in Energy in a material = SHC x Mass x Temp rise

ΔE		$= C$	$x\ m$	$x\ \Delta\Theta$
(J)		($JKg^{-1}{}^{0}C^{-1}$)	(Kg)	(^{o}C)

F - Calculating SHC



A. Key terms

- Gross National Product (GNP)
- Human Development Index (HDI)
- Birth Rates
- Death rates
- Infant mortality
- People per doctor
- Literacy rate
- Life expectancy
- Quality of life
- Standard of living
- Emergency or short-term aid
- Conditional or tied aid
- Charitable aid
- Long-term or development aid
- Multilateral aid
- Top down
- Bottom up
- NGO

B. Key knowledge – Causes of poverty.

Climatic hazards such as hurricanes and drought are more likely to strike some countries than others. For fragile countries a drought could have a devastating impact on development.

A lack of natural resources – countries with few natural resources start off at a very low economic base and find it hard to create products that can sell on world markets.

Subsidies (payments from governments to the producer) of goods produced in richer countries push the prices of rich world goods cheaper. This makes it harder for poorer countries to compete.

The trade system encourages a "race to the bottom", where buyers from richer countries go from place to place around the world driving down prices because supply of goods often outstrips demand.

Education is particularly important, as many countries cannot afford to send all children to school even at a basic level.

Corrupt governments who make money and wealth at the expense of the people that they are supposed to represent.

Subject: Geography
Year group: 9
Topic: Global Development

C. Key knowledge: Reasons for growth

1- Physical factors: Raw materials: Great wealth of natural resources: coal etc. Location: Geographical position beneficial for its development: markets in South Korea, Taiwan and India/ on major trade routes. 2- Human factors: Globalisation Companies in developed countries have goods produced in developing countries at a fraction of the price of the manufacturing process in the HICs. China has a large workforce which can be employed cheaply. Easy transport around the world. Changes in government policy: Laws which used to stop people 3- Education: Increase of literacy levels over the past 20 years: 90%. China has both large numbers of unskilled workers and a growing number of highly skilled workers.

D. Key knowledge: Impacts of growth (SEE)

Social Very little spending on social structure. E.g. spending on health lower than in the 1980s. However, positive input in education: decrease of illiteracy (see bullet point 3 above) Few laws to protect the workers, particularly the migrant workers (200 million). Economic (positive) unprecedented growth: With a population of 1.3 billion, China recently became the second largest economy and is increasingly playing an important and influential role in the global economy. GDP growth averaging about 10 percent a year has lifted more than 500 million people out of poverty.

Environmental 16 of the world's 20 most polluted cities are in China. 75 per cent of China's energy is still produced from coal.

E

F. WAGOLL Describe trade inequality in a developing country.

Trade is the exchange of goods and services between countries. More than half the world's trade takes place between just eight countries known as the G8. Developing countries have little purchasing power buying low value goods, making it difficult for them to pay off their debts or escape from poverty. The price of primary products fluctuates on the world market. Workers and producers in developing countries lose out when the price drops, but they benefit when it rises.

G. Further Reading

https://www.bbc.co.uk/education/guides/zq8gj6f/revision

https://s-cool.co.uk/gcse/geography/development

A: Keywords

Kinder, Kirche, Kueche
Law for the Encouragement of Marriage
Aryan
Law for the Protection of German Blood and Honour
Honour Cross
Lebensborn
The Invisible Unemployed
Rearmament
Reich Labour Service (RAD)
The German Labour Front (DAF)
Strength through Joy (KDF)
Conditioning
Hitler Youth
German Girls' League
Eugenics
Race studies

B: Key knowledge

One of the main reasons for increased support for the Nazis was the high level of unemployment, which had reached six million in 1932. Hitler promised Germans the Nazis would be able to solve all of Germany's problems,

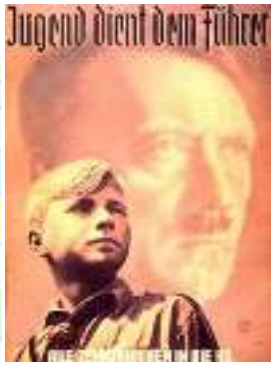
The Invisible Unemployed - The Nazis used some questionable methods to keep down their unemployment figures. The official figures did not include the following groups:

- Jews who had been dismissed from their jobs.
- Unmarried men under 25 who were pushed into the National Labour schemes.
- Women who were dismissed from their jobs or who gave up work to get married.
- Opponents of the Nazi regime who had been arrested and sent to concentration camps. The figures also listed part-time workers as being fully employed. Jobs has been 'created' by removing certain groups from their positions in the workplace and filling them with unemployed Germans.

Year 9 History
Germany in Transition:
Life in Nazi Germany

E: Key knowledge

1935 timetable for a girls' school in Nazi Germany.



C: Key knowledge

The Nazis had very old fashioned views of women's place in society. They emphasised the differences between men and women and believed that nature had created each for different purposes. They believed that men should be the breadwinners and earn a living to support their families. Men were also to be responsible for decision making and providing protection, e.g. during times of war. They believed women's role in life should be to bear many children and ensure the domestic comfort of their families, e.g. cooking and cleaning. Women were expected to be dependent on men both financially and emotionally, and to obey their husbands. Women should not be involved in politics.

D: Key knowledge

Hitler took great trouble to make sure that young people were loyal to him and to the Nazi Party. Hitler placed such importance on the young because they were the future of the country. He wanted to make children believe that the Aryan race (master race) were superior (better). He wanted young men to value ideas of discipline and sacrifice. All young Germans were taught to see him as a father figure who should be given unquestioned loyalty from his people.

F: Key knowledge

What was the purpose of Source C? (8 marks)

The source shows a German family. The mother is looking down at her baby in happiness; her young daughter's attention is also on the baby. Behind the mother, is the father who is looking protectively over is family. He has his hands on the shoulders of both his sons, both are in a uniform and looking serious and protective. This would have been created by the Nazi Party as a propaganda tactic, to show their ideal version of a German family. Goebbels' job was Minister of Propaganda, so he ensured that all Nazi propaganda was purposeful and would spread the ideologies of the Nazi Party. This would have been produced to encourage mothers to be devoted to the family under the 'Kinder, Kirche, Kueche' slogan, the sons to join the Hitler Youth and the daughter to be interested in babies, whilst the men were encouraged to be the protective 'bread' winners. The Nazi's created many policies during this time such as the Law for the Encouragement of Marriage, the Hitler youth movement and changes to the education of young children. This poster would have been created to persuade German people to follow the policies as clearly life is idyllic if you do so.

G: Wider thinking/further reading

- http://www.historylearningsite.co.uk/nazi-germany/
- I Will Bear Witness, Volume 1: A Diary of the Nazi Years, 1933-1941 By Victor Klemperer.

Subject: French
Year group: 9
Topic: Media

A. Key Terms

Mon chanteur/chanteuse préféré (e), c'est	My favourite singer is
J'aime ses paroles	I like the lyrics
J'aime les melodies	I like the tunes
Ça me donne envie de	It makes me want to
Ça me rend…	It makes me
Je n'aime pas du tout la musique de…	I don't like… music at all
Je fais des achats	I do online shopping
Je fais des recherches	I do research
Je lis des blogs	I read blogs
Je fais mes devoirs	I do my homework
Je vais sur mes sites préférés	I go on my fave sites
J'envoie des emails	I send emails
Je joue à des jeux en ligne	I play games online
Je suis passionné(e) de	I am passionate about
Il y a deux mois, j'ai crée	2 months ago I created
Une page Facebook	A facebook page
Une chaîne YouTube	A YouTube channel
Une station de radio	A radio station
Ça (ne) marche (pas) bien	It (doesn't) work well
J'ai beaucoup d'abonnés	I have many followers
mentions j'aime	Likes
Mon émission préféré(e) c'est	My favourite programme is
Un feuilleton	A soap
Une series	A series
Une émission de sport	A sports programme
Un dessin animé	A cartoon
Un documentaire	A documentary
Un jeu télévisé	A game show
Un film d'horreur	A horror film
Un film des guerres	A war film
Un film d'action	An action film
Un film d'amour	A love film
Les actualités	News
La météo	weather

B. Key knowledge

Avant, quand j'étais jeune	Before, when I was younger
Je lisais	I used to read
J'aimais	I used to like
Maintenant je lis sur mon ordi	Now I read on my computer
À mon avis, l'Internet a tué la lecture	In my opinion the internet has killed reading
Aujourd'hui les jeunes	Today young people
lisent des tweets/des blog	Read tweets/texts/blogs
des textos	
passent tout les temps sur les portables	Spend all the time on their phones
je trouve ça	I find that
genial/dommage/bien	great/a shame/good


C. Key knowledge

Je le/la regarde tous les soirs	I watch it Every evening
Je le/la trouve formidable/super/genial	I find it Super/great/amazing
Je ne le rate/manque jamais	I never miss it
Je ne le/la regarde jamais	I never watch it
J'adore les animateurs	I love the presenters
Les acteurs sont excellents	The actors are excellent
ne sont pas crédibles	Are not credible
Le scenario n'a aucun rapport avec la réalité	The script has no relationship with reality
Avant je regardais	before I used to watch
nous regardions	we used to watch
Maintenant j'ai tendance à regarder	now I tend to watch to watch

D. Key knowledge

Je suis fan de…depuis…	I have been a fan of..since
Il est le plus…	He is the most
Elle est la plus…	She is the most
Chez lui/elle il y a très peu…	With him/her there is little
De pretention	Pretentiousness
De vanité	Vanity
D'arrogance	Arrogance
Il/elle est modeste/humble	He/she is modest/humble
J'ai vu le film	I saw the film
Il y a un moment depuis	Some time ago
Apparement quand il/elle etait jeune	Apparently when he/she Was little
X compte parmi les acteurs	X ranks among
Les plus Connus et les plus appréciés	The most famous and respected
Je vais voir son prochain film très bientôt	I am going to watch his next film very soon

F. Expert modelling

Je suis fan de séries américaines depuis longtemps. Une série que je ne rate jamais, c'est The Big Bang Theory. Je la trouve très marrante, mais malheureusement, mon père ne la supporte pas!

Hier soir, ma famille et moi avons regardé une série policière qui parlait d'un meurtre en Écosse. Pour moi, l'histoire n'était pas du tout crédible.

Personnellement, j'aime bien regarder la télévision parce que ça m'aide à décompresser. Cependant, je ne regarde pas la télé tous les jours. Il est important d'avoir d'autres passe-temps, à mon avis.

Demain soir, je vais aller au centre de loisirs avec un ami. Nous allons faire de la musculation. Ça va être sympa. Je vais être moins paresseux qu'hier!

G. Wider thinking / further reading

Read Le Monde/ Go on GCSE Bitesize listening and reading tasks. AQA website

Subject: Art
Year group: 9
Topic: Personal Investigation

A. Key terms

Line	Line is the path left by a moving point. A line can be horizontal, diagonal or curved and can also change length.
Shape	A shape is an area enclosed by a line. It could be just an outline or it could be shaded in.
Form	Form is a **three dimensional shape**, such as a cube, sphere or cone. Sculpture and 3D design are about creating forms.
Tone	This refers to the lightness or darkness of something. This could be a shade or how dark or light a colour appears. The parts of the object on which the light is strongest are called **highlights** and the darker areas are called **shadows**.
Texture	This is to do with the **surface quality** of something, the way something feels or looks like it feels. **Actual texture** really exists, so you can feel it or touch it; **Visual texture** is created using marks to represent actual texture.
Media	The materials and methods used to produce a piece of art or design.
Composition	How the elements of the work are put together.
Annotation	Key information alongside your work. A record of your experiences, thoughts and emotions connected to an image.
Refinement	Developing and modifying to improve and adapt your work. Not just repeating using a different media.

B. Steps to success

Artist Links (AO1): You need to be able to produce your own research and look at work by both past and contemporary artists, craftworkers and designers to inspire you. You should try different materials and techniques to copy all or part of the artists work showing you have analysed their style visually. If their work is bright and colourful your work and media should reflect their style.

Experimenting & exploring different techniques (AO2): You need to explore your ideas using any media, or combination of media that you like, reviewing, modifying and refining your work as it progresses. Demonstrate how creative and versatile you are showing a growing range and depth of skill with different techniques.

Observational recording (AO3): You can use any media to record what you see. The key is to focus on control, accuracy and neatness with whatever you are using. Think carefully about the composition and show that you can use both primary and secondary sources aiming for quality not quantity.

Final outcome (AO4): You need to present a personal response that shows strong links to the artists you have looked at draws together AO1,2 and 3 in an original way. The work should be unique to you showing what you have learned and the skills you have gained.

C. The big picture

A unit of work is a 'package' of work produced in response to a single starting point. To be successful you need to show evidence of:

- Planning
- Keeping written and visual records
- Research
- Produce experiments and exploration studies
- Safe working practice with techniques
- Review, modify, develop and improve your work
- Finalising your ideas
- Presenting a final outcome or outcomes.

D. Stretch and Challenge

- Can you describe the difference in style between the artists you have looked at?
- If a piece of art was described as abstract what does it mean?
- Don't just describe in your annotation. Tell me what I can't see – your thoughts, opinion and intentions.

E. Existing similar examples

F. Expert modelling example

AO1: Artist Links

AO2: Experimenting

AO3: Observation and development

AO4: Final outcome

G. Wider thinking

www.bbc.co.uk/schools/gcsebitesize/art
www.artcyclopedia.com

Subject: Catering
Year group: 9
Topic: Food Science

A. Key terms

Roux (Gelatinisation)

Roux is flour and fat cooked together and used to thicken sauces. Roux is typically made from equal parts of flour and fat by weight. The process of flour and fat thickening sauce is known as gelatinisation.

Coagulation

Coagulation refers to the process that occurs when heat is applied to liquid, which then thickens into a firmer mass. Explore the science of the egg when cooked as this is a good example of coagulation.

Fermentation

Fermentation occurs when yeast and bacteria inside the dough convert carbohydrates to carbon dioxide causing gas bubbles to form, which has a leavening effect on dough.

Shortcrust pastry

Shortcrust pastry is a type of pastry often used for the base of a tart, quiche or pie. Shortcrust pastry can be used to make both sweet and savory pies such as apple pie, quiche, lemon meringue or chicken pie.

B. Kitchen equipment

Temperature probe

A cooking thermometer that is used to measure the internal temperature of meat, especially roasts and steaks, and other cooked foods.

Hand blender

A kitchen blade grinder used to blend ingredients or purée food in the container in which they are being prepared.

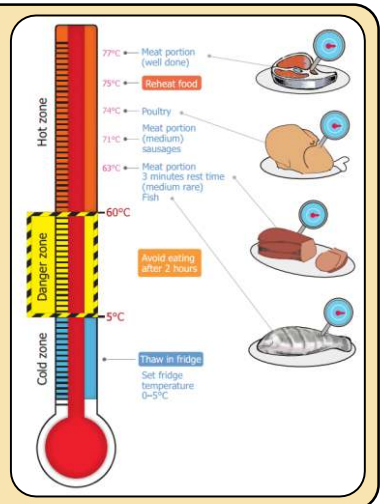
Bun/Cake tin

A muffin tin is a mould in which muffins or cupcakes are baked. They are very effective in making products consistent in size and weight.

C. Kitchen safety

Don't rely upon sight, smell or taste alone to determine if your food is safe to eat. Make sure foods are cooked to a safe minimum internal cooking temperature

Ensuring foods reach this safe minimum internal temperature with a food thermometer is the only reliable way to ensure safety and to determine the doneness of cooked meats and poultry.



D. Special diets

Vegetarian - a person who does not eat meat or fish, and sometimes other animal products, especially for moral, religious, or health reasons.

Vegan - *Veganism* is both the practice of abstaining from the use of animal products, particularly in diet

Coeliac - Coeliac disease is a permanent, autoimmune disorder that causes a reaction to gluten which is found in wheat, barley, rye and oats.

Lactose Intolerant - Lactose intolerance is a common digestive problem where the body is unable to digest lactose, a type of sugar mainly found in milk and dairy products.

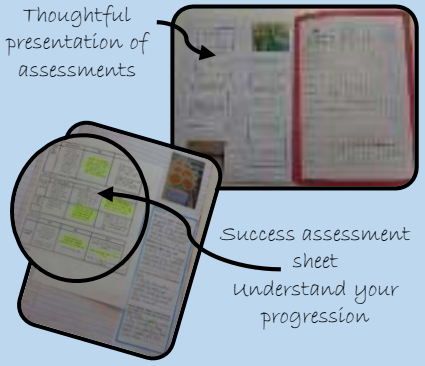
Nut Allergy - one of the most common food allergens which is linked to anaphylaxis, a potentially life-threatening reaction that impairs breathing and can send the body into shock.

E. Existing products and presentation

F. Expert modelling – Evaluations

Assessments should highlights areas of development. This could include skills, timing or health and safety.

Try to always explain why you found things difficult or how you could improve in future practical's.



G. Wider thinking -

www.foodafactoflife.org.uk

www.vegsoc.org/definition

Subject: DT
Year group: 9
Topic: Manufacturing (Block Bots)

A. Key terms

Marking Out	Measure in mm using a pencil and a steel rule for accuracy.
Try Square	A try-square will allow you draw ay 90 degrees against a straight piece of material.
Drilling holes	Different drills and drill bits allow you to drill holes into different types of materials.
Dowel	A solid cylindrical rod, usually made from wood, plastic, or metal.
Orthographic	Front, plan and side view of a three dimensional object.
Isometric	A drawing representing a 3D shape using 30 degree angles.
Sustainability	A natural resource material that can be reproduced.
Sanding belt	Sand paper rotates continually to remove excess.
Steel rule	A metal ruler that measures directly from the end point.

Yellow Box Improvements drawn in Isometric

B. Material choices

Pine is a softwood which is a pale yellow colour. It is light weight, straight grained and fairly easy to work with.

MDF is a manufactured board made from particles of wood, resin and wax. Due to the non-directional grain, MDF provides a good all-round gluing surface. Cheap sheet material in many thicknesses.

Plywood is made from veneers of timber with each grain layer being at right angles to each other and bonded together by resin and pressure. This makes a very strong manufactured board.

E. Existing similar products

C. CAD/CAM

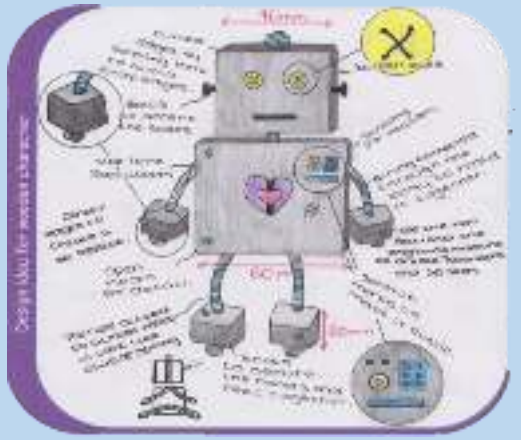
CAD = Computer Aided Design

2D Design Tools is a computer software programme used for drawing accurately. Fine red lines are used for cutting through materials and thick black lines are used to engrave into the material.

CAM = Computer Aided Manufacture

The laser machine, vinyl cutter and the 3D printer are all examples of CAM. A CAD drawing is needed to instruct the CAM and cannot work without it.

F. Expert modelling – Student example sheet



D. Hand tools

Hand drill is a tool fitted with a cutting tool attachment or driving tool attachment, usually a drill bit or driver bit, used for boring holes in various materials or fastening various materials together.

Coping saw is used to cut rounded and intricate shapes with accuracy. The coping saw blade has the teeth pointing towards the handle, therefore, cuts on the pull stroke.

Tenon Saw has a metal blade that is used to cut wood, it does not cut metal. It is used for straight cuts that do not go deep into the wood.

File is a tool used to remove fine amounts of material. Made of a steel bar of rectangular, square, triangular, or round cross-section, with a wooden or plastic handle.

G. Wider thinking – Revision

www.technologystudent.com

a.) Key terms

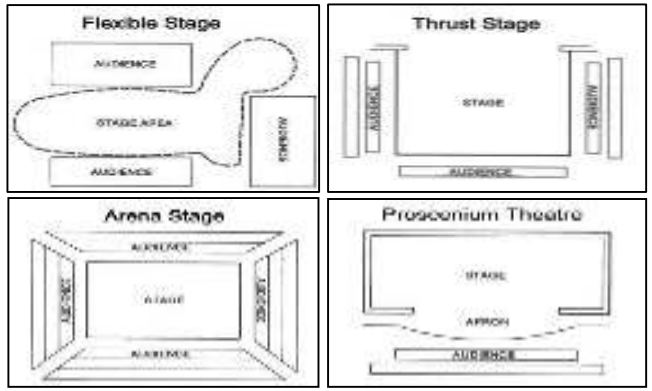
Devising	Creating a piece of Drama collaboratively in groups from your imagination.
Stimulus	A starting point to get your imagination working.
Rehearsal	The process of developing your Drama work.
Justification	Showing something to be right or reasonable and considered.
Symbolism	The use of symbols to communicate ideas. E.g. crucifix to show Christianity.
Theme	The underlying issue under discussion.

The elements of characterisation

b.) The techniques of Stanislavski when devising

Magic If – Actors simply ask themselves 'what would I do if…' to help give their characters depth.
Motivation – Understanding a deep understanding of what motivates a character to make certain decisions. This explains characters words and actions.
Emotional Memory – Actors reflect to a time they have felt an emotion, and then apply this to a scene. Personal memories help create a truthfulness to the emotion.

e.) Common types of staging



f.) Example of written work evaluating devising process

"…Another decision that was made via this rehearsal was to have it as an ensemble piece as we felt there was a big opportunity to include physical theatre with the remaining cast. This proved to be an effective idea, lifting our concept into something that was exciting fun and interesting to watch. I feel that the moments that we created were highly effective, and perfectly complimented the action going on in the foreground. One of the more memorable moments came when we were exploring the scene between Michael and Vincent, the contrast that they have as characters was clearly explored through the clever use of physicality."

This student response work would be an effective response.

Russian director, Konstantin Stanislavski is widely regarded as the founder of naturalistic theatre. He founded the Moscow State theatre in 1898.

Subject: Drama
Year group: 9
Topic: Devising

c.) The techniques of Brecht when devising

Breaking the fourth wall – where the invisible wall between actor and audience is broken. Actors will speak directly to the audience during a performance.
Narration – used to reinforce the fact that audiences are watching a story.
Placards – Used to give the audience additional information. They may also introduce characters.

German director who made his work very political. He coined the term Epic Theatre.

d.) The techniques of Kneehigh when devising

Use of Puppetry– traditional folklore explored through the use of puppetry.
Wordless games – reinventing games without words, so that the connection is made between the physical action of characters.
Compliments Game - Work in pairs. A shows their partner a simple movement. B must compliment their partner "That's very good. Is there more?" The answer is always "Yes". Continue to develop the exercise and then swap over.

A contemporary British theatre company who are based in Cornwall. Their work focuses carefully on Myths and Legends. Their style is storytelling theatre.

g.) Extend your thinking:

- Devising: A Handbook for Drama and Theatre Students. Gill lamden. 2000
- The Kneehigh Cookbook
- https://www.youtube.com/watch?v=gxtSzTDz6tk
- *Frantic Assembly masterclass*
- *https://www.youtube.com/watch?v=gUqZPfGIX6U*

Subject: Music
Year group: 9
Topic: Dance and Pop Music

a.) Key terms

Block Chords	Where all three notes are played at the same time.
Riff	A melodic idea which is repeated throughout a piece of music.
Bass Line	Root notes of a chord which are played at a low pitch.
Structure	The shape and form that the music is in.
Texture	Thick or thin layers.
Hook Line	A short riff that is used in popular music to make the song appealing
Minor	Sad sounding
Major	Happy sounding

Remember- you need to know the elements of music: Pitch, duration, dynamics, tempo, timbre, texture, structure.

b.) Dance- pop is a pop and dance genre which originated in the early 1980s. It is generally up-tempo music with the intention of being danceable but also suitable for hit radio. It is generally characterised by strong beasts with easy uncomplicated song structures, it has a strong emphasis on melody with catchy ideas.

Popular music uses repetitive hook lines which draw in the listener. Traditional chords and bass lines are used to thicken the texture.

e.)

f.) A good example of a composition structure

Musical Feature / Structure	Block Chords	Hook line 1	Hook line 2	Drum Beat	Bass Line	Ch Riff	Hook line 3	Hook line 4	Hook line 5
Intro	■								
Verse 1 first half	■	■							
Verse 1 second half	■	■	■	■	■				
Chorus				■	■	■	■	■	■
Verse 2	■	■	■	■	■	■			
Break	■							■	
Chorus	■		■	■	■	■	■	■	
Outro	■	■							

c.) Famous Artists - Who use Dance- Pop today

- Madonna
- Rihanna
- Michael Jackson
- Lady Gaga
- Beyonce
- Usher
- Bruno Mars
- Justin Timberlake
- Shakira
- Tiesto
- Flo Rida
- Ne-Yo
- Pharell Williams
- Skrillex
- Basement Jaxx
- Drake

d.) Top Tips: Your timing is very important. Double click on your inputted music to reveal the score. Make sure your bars add up to 4 beats. Revise your note values.

Note	Name	No of beats	Note	Name	No of beats
𝅝	Semibreve	4	♩	Crotchet	1
𝅗𝅥.	Dotted Minim	3	♪	Dotted Quaver	3/4
𝅗𝅥	Minim	2	♪	Quaver	1/2
♩.	Dotted Crotchet	3/2	𝅘𝅥𝅯	Semiquaver	1/4

Challenge

g.) To research various major and minor chords which can be used in your composition.

Key terms
Methods of training:

Circuit training involves performing a series of exercises in a special order called a circuit. Each activity takes place at a 'station'. It can be designed to improve speed, agility, coordination, balance and muscular endurance.

Continuous training involves working for a sustained period of time without rest. It improves cardio-vascular fitness.

Cross training involves using another sport or activity to improve your fitness. It happens when an athlete trains in a different environment. For example a volleyball player uses the power training for that sport to help with fitness for long jump.

Fartlek training or 'speed play' training involves varying your speed and the type of terrain over which you run, walk, cycle or ski. It improves aerobic and anaerobic fitness.

Interval training involves alternating between periods of hard exercise and rest. It improves speed and muscular endurance.

Weight training uses weights to provide resistance to the muscles. It improves muscular strength (high weight, low reps), muscular endurance (low weight, high reps, and many sets) and power (medium weight and reps performed quickly).

Altitude training is aerobic training high above sea level, where oxygen levels are lower. It is used to increase aerobic fitness quickly.

Methods of training key knowledge

Training can be **aerobic or anaerobic.**

In **aerobic** exercise, which is steady and not too fast, the heart is able to supply enough oxygen to the muscles. Aerobic training improves cardiovascular fitness.

Anaerobic exercise is performed in short, fast bursts where the heart cannot supply enough oxygen to the muscles. Anaerobic training improves the ability of the muscles to work without enough oxygen when lactic acid is produced.

We challenge you!

You are required to improve your performance in your chosen sport in the lead up to the next competition through a chosen **Method of Training.**

Challenge - **State** your individual needs for improvement in your sport and **discuss** your chosen Method of training and how this will help you to improve.

Subject: PE
Year group: 9
Topic: Training methods

To train effectively you need to know:

Your current level of fitness (can be found out by completing fitness tests).

The amount of **aerobic training** you need for your sport.

The amount of **anaerobic training** you need for your sport.

TARGET ZONE % MHR	DURATION	FITNESS GOAL
VERY HARD 90-100%	LESS THAN 5 MIN	Performance and speed – suitable for athletic training
HARD 80-90%	2 – 10 MIN	Increase maximum performance capacity – suitable for everyone during short exercises
MODERATE 70-80%	10 – 40 MIN	Improves aerobic fitness during moderately long exercises
LIGHT 60-70%	40 – 80 MIN	Basic endurance and fat burning - suitable for everyone during short to moderately long exercises
VERY LIGHT 50-60%	20 – 40 MIN	Simple exercise for weight management and recovery