



**BRISTOL
METROPOLITAN
ACADEMY**

Monday 9th September	Week B
Monday 16th September	Week A
Monday 23rd September	Week B
Monday 30th September	Week A
Monday 7th October	Week B
Monday 14th October	Week A

Please note: Maths homework will be on an online platform for this term. It will be set and checked weekly separately from the timetable.

Knowledge Organisers 2024-25 Year 9 – Term 1

Complete your homework on the night stated e.g. if it is a Monday Week A you will complete ICT/DT

	Week A	Week B
Monday	ICT/DT	MFL
Tuesday	English	English
Wednesday	Science	Science
Thursday	History	Geography
Friday	RS	Music/Art

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This Knowledge Organiser is to help you see the key information for each subject for this term. You can use this to help you both with homework and with revision, supporting your learning at home. In the table below you will find the instructions for each subject to be completed on the correct day.

Subject	Tasks
Maths	Homework question tasks/sets will be set weekly on an online platform. You will have one week to complete this online, before it is checked for competition and the next set is published.
Science	For term 1 this will be directed by your classroom teacher. It could involve an online platform too.
English	Using the separate question booklet, divide your homework book page in half length ways, write the questions out on the left hand side. First, attempt to answer the questions from memory/your own knowledge. Then use your knowledge organiser booklets to check your answers and fill in the missing ones.
MFL	Find the correct date in the KO and the question booklet. With the list of 10 key words for that week, complete the look – say - cover – write – check method in your homework book. Complete this process for each word/phrase 4 times each.
Geog/Hist/RS /DT	Same process as outlined for English above. DT have 5 questions and not 10.
ICT	For term 1, continue to use the KO to do revision/key words etc in your homework books.
Music/Art	For music and art, you will have two practical tasks to complete each term for each subject. These will be found in the question booklets and will be checked by you classroom teacher.

At the back of this booklet, you will find: Sentence starters, a history chronology, DT sentence starters, a periodic table, maps of the world, subject websites, a RAG sheet and a timetable.

How to present your homework:

Subject written on the left-hand side of the page and underlined.
For example: Food

Topic written on the centre of the page and underlined.
For example: Sugars

One single straight line between both pieces of homework.

Subject: Food Tuesday 25th June 2019

Topic: Sugars

Keyword	Definition
Monosaccharides	
Disaccharides	
Intinsic sugars	
Polysaccharides	

Subject: English

Topic: Macbeth

- Who are the four most important characters in Macbeth?
Macbeth, Lady Macbeth, Banquo and Macduff.
- What are three character traits of Banquo?
Gullible, superstitious and ambitious.
- How would you describe Lady Macbeth?
She is manipulative, cold-blooded and cruel.
- How is Lady Macbeth two-faced?
She is warm and welcoming to Duncan, and then manipulates her husband to kill him.
- What is the name of Banquo's son?
Fleance

Date written fully on the right-hand side of the page and underlined. This should be the day you complete the homework.

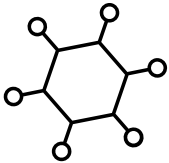
Home Learning Strategies to help you revise

Brain Dump



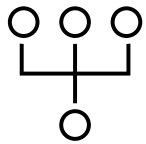
Write down everything you know about a certain topic on a page. Use your KO to add extra notes in a different colour.

Mind Map



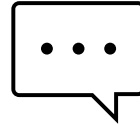
Condense a topic showing the important links and connectors between key parts. Use your KO to add in extra notes.

Diagram



Draw a clear diagram for a subject including labels and key features. Make sure you use correct vocabulary and spellings.

Vocabulary



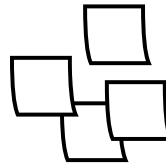
Learn the key words associated with a topic and commit the word and spelling to memory. Test yourself or ask someone else to test you.

Retrieval Quiz



Write key questions about a topic as well as the answers. Use the content of the KO to help you. Check to see if you can remember the answers without looking.

Compare



Complete a comparison table showing two different sides of a topic. Can you use it to create an argument for one viewpoint?

Year 9 — Past Project

Content: In this project you will learn

Knowledge – different artists who have represented

Understand – What inspired these artists to create work and how to write about the work

Skills – You will learn how to analysis artists work, improve drawing skills, tonal work, ceramics

Outcome – Tonal drawing and ceramic piece



GSCE ART Annotation

Shape, form, space	Tone	Pattern and Texture	Line	Colour
Closed	Bright	Repeated	Fluent	Bright Bold
Open	Dark	Uniform	Free Rough	Primary
Distorted	Faded	Geometric	Controlled	Secondary
Flat	Smooth	Random	Powerful	Tertiary
Organic	Harsh	Symmetrical	Strong	Radiant
Deep	Contrasting	Irregular	Geometric	Dull Vivid
Flat	Intense	Coarse Bold	Angular	Contrasting
Positive	Sombre	Uneven	Light	Deep
Negative	Grey	Bumpy	Delicate	Monochrome
Foreground	Strong	Rough	Flowing	Harmonious
Background	Powerful	Smooth	Simple	Complementary
Composition	Feint	Uneven	Thick Thin	Natural
Curvaceous	Light	Spiky	Horizontal	Earthy
Elongated	Medium	Broken	Interrupted	Subtle
Large	Dark	Overlapping	Rounded	Pale
Small	Dramatic	Broken	Overlapping	Cool Warm
	Small	Fine Flat	Broken	Saturated
		Grid	Faint	Luminous
				Strong

The Suffragettes' Movement

The women's suffrage movement was a decades-long fight to win the right to vote for women in the United States. It took activists and reformers nearly 100 years to win that right, and the campaign was not easy: Disagreements over strategy threatened to cripple the movement more than once.

The Civil Rights Movement

The civil rights movement in the United States was a decades-long struggle by African Americans and their like-minded allies to end institutionalized racial discrimination, disenfranchisement and racial segregation in the United States.

The Stonewall Riots

The Stonewall riots were a series of spontaneous, violent demonstrations by members of the gay community in response to a police raid that began in the early morning hours of June 28, 1969, at the Stonewall Inn in the Greenwich Village neighborhood of Manhattan, New York City.

KEYWORDS

Conflict

Inequality

Racism

Discrimination

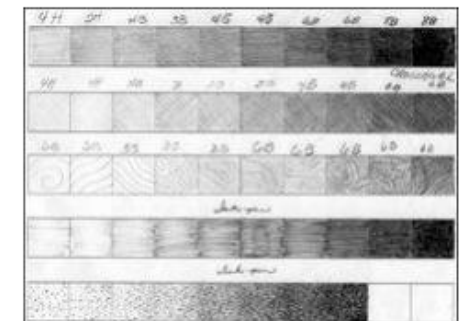
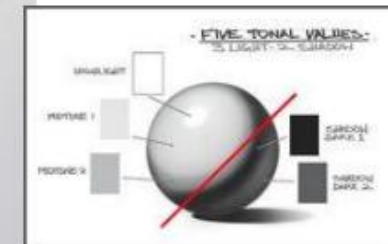
Slavery

Apartheid

Female emancipation

Social Class

Gay rights



Basic, simple, solid, loud, quiet, bright, realistic, stylised, observed, busy, vibrant, strange, interesting, balanced, lively, negative, recognisable, abstract, tactile, meaningful, symbolic, depressing, unique, emotive, hidden, textural, dynamic, disturbed, sophisticated, puzzling, optimistic, powerful, intentional, concealed, subtle.

Example

I have created this piece using watercolours, coloured pencil and oil pastel. I have learnt how to blend the watercolours to show different tones and use oil pastels to show the darkest tones and add texture. The piece shows strong shapes and vivid colours. I have added coloured pencils to show some areas in more detail and focus. The artist Georgia O'Keeffe has inspired my piece. In her work she uses bright, bold colours to show close up views of flowers with a range of dark to light tones. I aim to now further develop my piece by using other materials. I could do this by experimenting with block prints on watercolour backgrounds or possibly try painting onto fabric to then stitch into to show more detail.

REMEMBER to check your...

Spellings, Grammar and Punctuation

Sentence Starter Help

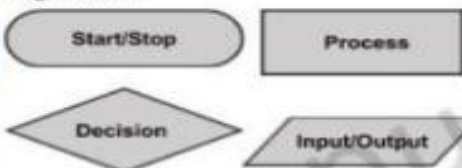
Try thinking of your own too

- In this piece I have...
- The materials I have used are...
- The technique I have used is...
- Through working in this way I have learnt how to...
- I have shown... in the style of...
- This piece could develop further by including...
- The artist... has influenced my designs because...
- To develop this piece further I could...
- I think using... worked really well because...
- I am particularly pleased with... and I now aim to...

Year 9 - Programming

Flowcharts

Using symbols to represent algorithms.



Computational Thinking

Algorithm

Step by step list of instructions to complete a task

Abstraction

Process of removing unnecessary details

Decomposition

Process of breaking down tasks into smaller sub tasks

Pattern Recognition

Finding the similarities or patterns among small, decomposed problems

Pseudocode

Representing algorithms using a common language.

1. Get name
2. IF name = "Mr Ahmed":
3. Display "You are cool"
4. ELSE:
5. Display "You are kind of cool"

Variables

Memory in code that changes

1. name = USERINPUT
2. OUTPUT name

Programming Constructs

Sequence - More than 1 line of code outside Selection and Iteration structures.

1. age = USERINPUT
2. age < 17 THEN
3. OUTPUT "You can not drive"

Selection - IF Statement (decisions)

1. age = USERINPUT
2. IF age < 17 THEN
3. OUTPUT "You can not drive"
4. ELSE
5. OUTPUT "You can drive"

Iteration - Repetition in instructions

1. OUTPUT "Want to hear a joke?"
2. joke = USERINPUT
3. WHILE joke != "Yes" THEN
4. OUTPUT "Want to hear a joke?"
5. joke = USERINPUT
6. OUTPUT "A fish swam into a wall"
7. OUTPUT "Damn"

Data Types

Character - An individual letter e.g. "A"

String - A group of characters e.g. apple12

Integer - A whole number e.g. 58

Real/Float - A decimal number e.g. 4.58

Boolean - True or False

Operators

Operator	Meaning
+	Addition
-	Subtraction
*	Multiplication
/	Divide
=	Equal

Operator	Meaning
≠	Not Equal
<	Less Than
≤	Less/Equal
>	More Than
≥	More/Equal

Errors

Logic Error - Occurs when there is a fault in the logic or structure of the problem.

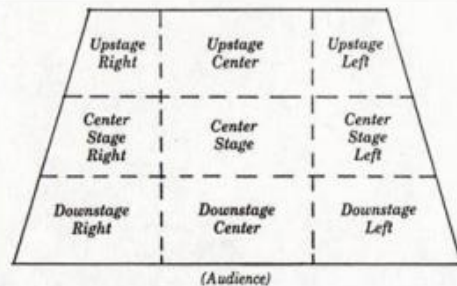
Syntax Error - Syntax is the spelling and grammar of a programming language. An error occurs when you type in the code incorrectly.

Debugging

The process of identifying errors (bugs) and fixing them

Stage positioning

Where actors stand while onstage.



Proscenium Arch

An arch framing the opening between the stage and the auditorium. This create a 'window' around the scenery and performers. IT gives everyone in the audience a good view because the performers need only focus on one direction rather than continually moving around the stage to give a good view from all sides. A proscenium theatre layout also simplifies the hiding and obscuring of objects from the audiences view (sets, performers not currently performing, and theatre technology). End on staging is a proscenium without the wings and picture frame.

Audience is predominantly on two sides of the stage, facing towards each other. Also known as alley or corridor stage. Sometimes on end of the stage space may also end in audience, making it similar to thrust or three-quarter round stage. Other times, the ends of the stage are much larger than the traverse stage itself allowing for more space for actors, sets and scenery.

Traverse



A **thrust stage** extends into the audience on three sides and is connected to the backstage area by its upstage end. A thrust has the benefit of greater intimacy between performers and the audience, while retaining the utility of a backstage area. Entrances onto a thrust are most readily made from backstage, although some theatres provide for performers to enter through the audience.



Thrust

Stage Configurations



Promenade

Promenade theatre is extremely versatile. With no formal stage, and the audience and actors occupying the same space, it allows for experimentation with both new and old plays and explores what the theatrical experience can entail for an audience. In moving the audience around throughout the performance, promenade theatre also pushes boundaries of setting in a way that can't be achieved in regular theatre.



In-the-Round

The audience is seated in a circle around the **stage** or on at least three of its sides. The stage is always in the centre with the audience arranged on all sides. Actors entering and exiting through the audience from different direction.

Playwright	This is the name given to the person who writes the play.
Performer	A performer is an actor or entertainer who plays a role or performance in front of an audience.
Understudy	An actor who studies another's role so that they can take over when needed.
Lighting designer	Responsible for designing the lighting states and, if required, special lighting effects for a performance. The final design will result in a lighting plot which is a list of the lighting states and their cues.
Sound designer	Responsible for designing the sound required for a performance. This may include underscoring, intro and outro music as well as specific effects. The final design will result in a sound plot which is a list of the sounds required and their cues.
Set designer	Responsible for the design of the set for a performance. They will work closely with the director and other designers so that there is unity between all the designs and the needs of the performance.
Costume designer	Designs the costumes for a performance. The costume department of a theatre is often called the wardrobe.
Puppet designer	Designs the puppets for a performance.
Technician	A person who works backstage either setting up technical equipment such as microphones or rigging lights before a production or operating technical equipment during a performance.
Director	In charge of the artistic elements of a production. A director will often have the initial creative idea ('concept') for a production, will work with the actors in rehearsal, and will collaborate with designers and the technical team to realise this idea in performance.
Stage manager	In charge of all aspects of backstage, including the backstage crew. They will oversee everything that happens backstage before, during and after a performance. During the rehearsal period, the Stage Manager and their team will make sure that all props are found or made, scene changes are rehearsed and smooth, and all other aspects of backstage are prepared. They are also in charge of the rehearsal schedule.
Theatre manager	Responsible for and manages the front-of-house team who deal with the audience during the production (for example, the box office manager, ushers and similar staff).

Theatre Roles



Genre/Style

Naturalistic/ Naturalism – Attempts to depict things realistically.

Realism - Attempts to depict things as they actually are

Physical Theatre - The body is at the heart of the storytelling

Musical Theatre – Singing, dancing and acting. For example: Musicals

DocuDrama – A piece of theatre based on a real-life event

Tragedy – Sad or shocking

Historical – Based on a real-life historical event. For example WW1

Theatre in Education – Theatre that goes into school to educate students about a social or personal issue.

Year 9 D&T – Pewter Project

What is pewter?

- Pewter is a malleable metal alloy consisting of tin, antimony, copper, bismuth, and sometimes silver. Modern pewter consists of are 94% tin.
- Pewter has a low melting point (around 170–230 °C) making it ideal for melting on a chip forge and brazing hearth and casting

Elements of Design

LINE

A line is a mark between two points. There are various types of lines, from straight to squiggly to curved and more.

SPACE

Space is the area around or between elements in a design. It can be used to separate or group elements

SHAPE

Height + width = shape. There are three basic shapes : Geometric (triangles, squares, circles etc), natural (leaves, animals, trees, people) and abstract (see image)



TEXTURE

Texture relates to the surface of an object; the look or feel. Concrete is rough; metal is smooth.



2D Design Basic Tools



SELECT – Use this tool to select different tools and highlight objects.



LINE – This tool creates straight lines. Click to start the line, extend out and click to finish.



CIRCLE – This tool creates circle shapes. Click to start the circle, extend to the size needed and click to finish.



PATH – This tool creates curved lines through continual clicks.



RECTANGLE – This tool can be used to create both rectangular and square shapes.



TEXT – Use this tool to insert text onto your designs. The font, size and direction of the text can be changed.



DELETE PART – Use this tool to delete separate lines and objects.



DELETE ANY – Use this tool to delete whole lines and objects.

Computer aided design (CAD)

Computer aided design now has the capability to design new products in 3D, visualise them in a variety of materials and send images around the world for collaboration and consultation. Once production is finalised, these designs are sent to computer aided manufacture (CAM) machines to be formed. Autodesk and Solidworks are common forms of CAD software used.

Advantages of CAD	Disadvantages of CAD
Ideas can be drawn and developed quickly	Expensive to set up
Designs can be viewed from all angles and with a range of materials	Needs a skilled workforce
Some testing and consumer feedback can be done before costly production takes place	Difficult to keep up with constantly changing and improving technology

Isometric Drawing Shows Objects at 30°

- Isometric drawing can be used to show a 3D picture of an object.
- If doesn't show perspective (things don't get smaller in the distance), but it's easy to get dimensions right.
- There are three main rules when drawing in isometric:

- Vertical edges are drawn as vertical lines.
- Horizontal edges are drawn at 30°.
- Parallel edges appear as parallel lines.

This drawing is been done on isometric dot paper. You could use plain paper and a 30°/60° set square instead.



Crating Can Be Used to Draw 3D Shapes

Crating is where you start by drawing a box — the 'crate' — and gradually add bits on and take bits off till you get the right shape. For example, you can remove sections from a cuboid to make any other 3D shape.



- When you're sketching a 3D object, it's easier if you imagine it as a basic shape.
- First draw the basic geometric shape faintly.
- Stick to a particular drawing technique — isometric drawing, for example.
- The object can then be drawn within the box.
- Details of the object can be added by drawing more geometric shapes on top.



What is an Alloy?

Definition: A metal alloy is a substance that combines more than one metal or mixes a metal with other non-metallic elements.

Example

Iron + Carbon = Steel
Copper + zinc = Brass

What other alloys can you think of?

Malleable

Definition: A material that can be hammered or pressed into shape without breaking or cracking.

Computer aided manufacture (CAM)

By using Computer aided manufacture, designs can be sent to CAM machines such as laser cutters, 3D printers and milling machines.

Advantages of CAM	Disadvantages of CAM
Fast and accurate production	Expensive to set up
Machines can run constantly on repetitive tasks	Needs a skilled workforce of engineers

<p><u>Context</u></p> <p>McCarthyism – accusations of disloyalty, subversion, or treason without proper regard for evidence.</p> <p>Italian Immigration – Immigrants usually faced persecution from other Americans, which is why they live together for protection.</p> <p>American Dream – Life should be better, richer and fuller for everyone.</p> <p>Greek Tragedy – Central character cannot avoid their tragic fate.</p>	<p><u>Symbolism</u></p> <p>Brooklyn Bridge - Alfieri's viewpoint from the bridge that links Italian and American cultures and allows Alfieri to narrate past events to the audience.</p> <p>Italy – Homeland, origin and cultural link to the people of that community.</p> <p>High heels - For Catherine, high heels are representative of womanhood, freedom of expression, flirtation.</p>
<p><u>Plot</u></p> <p>Eddie Carbone is an Italian longshoreman working on the New York docks. When his wife's cousins, Marco and Rodolfo, seek refuge as illegal immigrants from Sicily. Eddie agrees to shelter them. The trouble begins when his wife's niece is attracted to Rodolfo. Eddie's jealousy culminates in an unforgivable crime against his family and the Sicilian community.</p>	<p><u>Key quotes</u></p> <p>"I'm ashamed. Paper Doll they call him. Blondie now." – Eddie isn't happy with the way that Rodolpho presents himself. He worries that the other longshoreman will judge him and doubt his masculinity.</p> <p>"My wife – she feeds them from her own mouth." – Marco tells Eddie and Beatrice how poor their family is in Italy. It makes it clear why he and Rodolpho have come to America.</p> <p>"All the law is not in a book." – This links to the key themes of Justice and Honour. The Italian community live by their own rules that are outside the law. E.g. If you snitch, you are exiled from the community and may be beaten or killed.</p> <p>"Called me a rat in front of the whole neighborhood." – Eddie shows his anger at Marco's words. He doesn't want to be dishonoured in the Italian community.</p> <p>"Eddie, I never meant to do nothing bad to you." – Catherine shows how upset she is. She doesn't understand Eddie's behaviour and realises that her relationship with him has changed forever.</p> <p>"He allowed himself to be wholly known, and for that I think I will love him more than all my sensible clients." – Alfieri respects Eddie and his outpouring of emotions. Alfieri feels that Eddie is a product of the Italian community and could not have changed his fate.</p>
<p><u>Characters</u></p> <p>Alfieri: An Italian-American lawyer. He narrates the story, speaking directly to the audience and attempts to make the social and moral implications of the story clear.</p> <p>Eddie: An Italian immigrant and longshoreman (dockyard worker). He is the husband of Beatrice and Catherine's non-biological uncle. He is the tragic hero of the play.</p> <p>Beatrice: An Italian immigrant and Eddie's wife. She has raised Catherine since the death of her mother. She is a warm and caring character.</p> <p>Catherine: The orphaned niece of Beatrice and Eddie. Catherine has been sheltered by Beatrice and Eddie and wants to experience the world.</p> <p>Marco: Cousin of Beatrice and an illegal Italian immigrant. He is hard working and plans to send the money he earns back to his family in Italy.</p> <p>Rodolpho: Cousin of Beatrice and an illegal Italian immigrant. Rodolpho is seen as an effeminate (acting in a stereotypical feminine way) because he cooks, sews, sings and dances. He wants to be an American and gain wealth and fame. His relationship with Catherine causes problems with Eddie.</p>	<p><u>Key Words</u></p> <p>Tragic hero: A main character who has a tragic flaw which leads to their downfall or death.</p> <p>Tragic flaw: the character defect that causes the downfall of the tragic hero.</p> <p>Tragedy: a genre of play which deals with tragic events and ends in an unhappy ending. It usually involves the downfall of the main character.</p> <p>Foreshadowing: a warning of a future event.</p> <p>Prologue: an event or act that leads to another.</p> <p>Narrator: a person who retells or recounts the events of a novel or play.</p> <p><u>Themes</u></p> <p>Community –</p> <p>Law versus Honour: American law (represented by Alfieri) is not followed in the Italian community. Instead, they follow their own form of justice based on honour. E.g. If you snitch, you will be exiled from the community and beaten/killed.</p> <p>Masculinity: Gender stereotypes influence the characters, especially Eddie. He is determined to be masculine and is suspicious of Rodolpho's 'feminine' behaviour.</p> <p>Love: Confusion between familial love and romantic love causes issues within the play.</p> <p>Jealousy: Eddie's jealousy becomes his tragic flaw and leads to his downfall.</p>

What do we need **proteins** for?Fu
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- Build enzymes and hormones
- Build cell membranes
- Repair and maintain tissues
- Defend the body (antibodies)
- Secondary source of energy

What happens if we have too much or too little?

Ex
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ss

- Kidney and liver diseases
- Weight gain

De
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- Kwashiorkor
- Slowing growth rate
- Swelling

Protein alternatives

Vegetarians and vegans don't consume meat so instead they use protein alternative products which are manufactured in order to provide protein in a diet and protein rich foods.



Soy chunks



Tofu



Textured vegetable protein (TVP)



Tempeh



Beans, lentils, chickpeas

What do we need **carbohydrates** for?Fu
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- Primary source of energy
- Store energy for later
- Build DNA
- Prevent the body from using proteins as an energy source

What happens if we have too much or too little?

Ex
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- Tooth decay
- Type 2 diabetes
- Weight gain and obesity
- Hyperglycaemia

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- Weight loss
- Lack of energy, tiredness
- Severe weakness
- Hypoglycaemia

What do we need **fats** for?Fu
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- Source of energy
- Insulation
- Dissolve vitamins
- Build hormones
- Build cell membranes

What happens if we have too much or too little?

Ex
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- Obesity
- Hypertension
- Coronary heart disease
- Fatty liver disease
- Type 2 diabetes

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- Weight loss
- Vitamin deficiency
- Heart disease
- Feeling cold

There are two different types of fats

Proteins can denature when:



They are heated



They come into contact with acidic/alkaline ingredients



They are whisked, beaten or kneaded



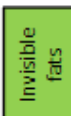
Proteins unravel becoming firm when heated

<https://www.ifst.org/lovefoodlovescience/resources/carbohydrates-gelatinisation>
<https://www.ifst.org/lovefoodlovescience/resources/fats-and-oils-aeration>
<https://www.ifst.org/lovefoodlovescience/resources/fats-and-oils-plasticity>

Visible fats



Fats you can see, such as on meat are often saturated.



Unsaturated fats you cannot see, such as in nuts and avocados. They are often good for the brain,



Butter



Eggs



Cream



Saturated



Unsaturated



Olive oil

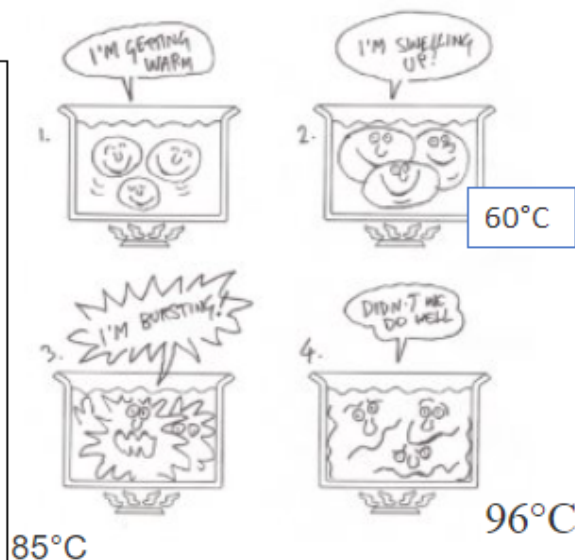
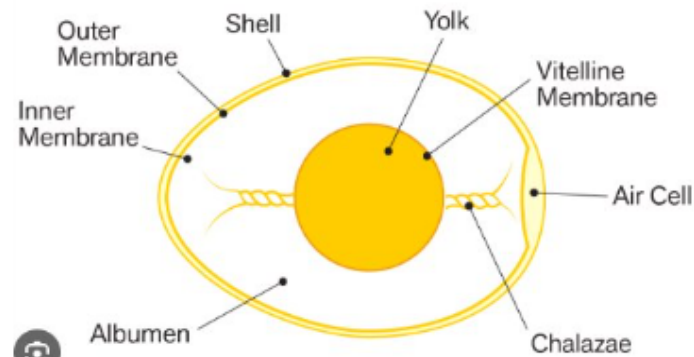


Avocado

The food science bit!

Thickening sauces with starches.

- **Gelatinisation** happens when a **starch** and liquid mixture are heated.
- The water enters the **starch** granules and they **swell** and change texture.
- As more water is taken in, the granules expand, and the mixture becomes **viscous** and **thick**.
- This results in a **gel** which thickens sauces by the process of **gelatinisation**.



Gelatinisation happens when **starch** and liquid such as water are heated together.



9.9 Technology and Media FRENCH

TECHNOLOGY VERBS

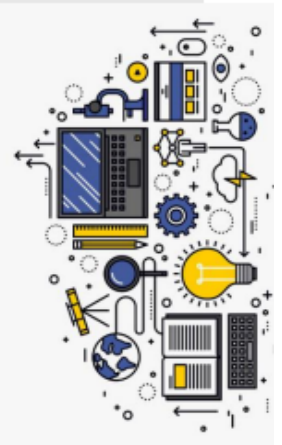
supprimer	to delete, erase
charger	to load
tchatter	to chat online
poster des photos	to post photos
communiquer	to communicate
répondre	to answer
créer	to create
donner	to give
télécharger	to download
envoyer	to send
fonctionner	to work, to function
enregistrer	to save
parler	to speak, to talk
surfer sur Internet	to surf the internet
pouvoir	to be able to
recevoir	to receive
prendre des photos	to take photos
regarder en streaming	to stream
partager	to share
utiliser	to use

TECHNOLOGY NOUNS

Un dossier	file
Un courrier indésirable	spam, junk mail
Un courrier électronique	email
Un disc dur	hard drive
Un jeu	game
Un texto/un SMS	text message
Un téléphone portable	mobile/smartphone
Un ordinateur	computer
Un ordinateur portable	laptop
Des jeux-vidéo	video games
Une chanson	song
Un écran	screen
Internet	internet
Un réseau social	social network
Une magazine (digitale)	(digital) magazine
Un salon de discussion	chat room
Une tablette	tablet
La technologie	technology

TECHNOLOGY ADJECTIVES

ennuyeux/se	boring
vieux/vieille	old
animé(e)	exciting
confus	confusing
court(e)	short
à la mode	fashionable
lent(e)	slow
divertissant(e)	entertaining
effrayant(e)	scary
estimulant(e)	stimulating
informatif/ve	informative
intéressant(e)	interesting
inutile	useless
long(ue)	long
dangereux/se	dangerous
pratique	practical
rapide	fast
ridicule	ridiculous
cassé(e)	broken
passionnant(e)	exciting
utile	useful



TV GENRES

les comédies	comedies
les dessins animés	cartoons
les jeux télévisés	game shows
les documentaires	documentaries
les infos	the news
les émissions de sport	sports programmes
les séries policières	police shows
les feuilletons	soap operas

Les émissions de musique	music programmes
La télé-réalité	reality TV
La série policière	police series
La météo	weather
La publicité	advert



FILM GENRES

Les films d'action	action films
Les films d'amour	romantic films
Les films de science fiction	sci-fi films
Les films dramatique	dramatic films
Les films à suspense	Suspense/thriller films
Les films de guerre	War films
Les films d'horreur	horror films

9.9 French Technology and Media Knowledge Organiser

3 time frames
Infinitives
Time phrases and connectives

Negative constructions
Opinions and justifications
Comparatives and superlatives

Comparatives – to express more or less than

... **c'est plus...adjective...que** - is more...adjective...than

... **c'est moins ...adjectiveque** - is less...adjective... than

... **c'est aussi...adjective....que** – is as...adjective...as

For example:

*Il est **plus grand que** son frère. (He is taller (more tall) than his brother.))*

*Cette maison est **moins grande que** notre maison. (This house is smaller (less big) than our house.))*

*Ce chien est **aussi grand que** mon chat. (This dog is as big as my cat).*

Make a French comparison from good to better or from bad to worse:

Like in English the words for bad and good are irregular . Good > better (bon > **mieux**) and bad>worse (mauvais > **pire**).

For example:

WhatsApp est **mieux que** Facebook. WhatsApp a is better than Facebook.)

Snapchat est **pire que** Twitter. (Snapchat is worse than a Twitter)

**Notice that the adjective always agrees with the first noun*

Superlatives – to express the biggest, the most interesting etc...

... **c'est le/la/les plus + adjective** – is the most + adjective

....**c'est le/la/les moins + adjective** - is the least + adjective

For example:

***La plus intelligente de la classe** (the most intelligent in the class)*

***Le moins grand de la famille** (the shortest (least tall) in the family)*

Adjectives describe nouns e.g. a **blue** phone.

In French, adjectives normally go after the words they are describing e.g. un portable bleu (a blue mobile phone) and they have to agree with the noun they are describing.

In French, adjectives must agree with the noun (or pronoun) they describe in gender and in number. This means that if the noun an adjective describes is feminine, the adjective must be feminine e.g. une télévision noire (a black television). If that same noun is also plural, the adjective will be feminine AND plural as well e.g. les télévisions noires (black televisions).

Opinion phrases

À mon avis	In my opinion
Je pense que	I think that
Je crois que	I believe that
Je dirais que	I would say that
Personnellement	Personally
Je considère que	I consider that
De mon point de vue	From my point of view
Je le/les trouve	I find it / them
Selon moi	In my opinion
Je trouve que	I find that

Connectives

et	and
mais	but
parce que/car	because
cependant/pourtant	however
en plus	furthermore
par exemple	for example
ensuite	then
finalement	finally
néanmoins	nevertheless

Time phrases

Aujourd'hui	Today
Normalement	Normally
Quelquefois	Sometimes
De temps en temps	From time to time
Le weekend	On the weekend
(Deux) fois par semaine	(Twice) a week
Souvent	Often
Toujours	Always
Hier	Yesterday
Avant-hier	The day before yesterday
La semaine dernière	Last week
Le weekend dernier	Last weekend
Le mois dernier	Last month
L'année dernière	Last year
Hier soir	Last night
Il y a (deux jours/ans)	(Two days/years) ago
Demain	Tomorrow
À l'avenir	In the future
Le weekend prochain	Next weekend
La semaine prochaine	Next week
L'année prochaine	Next year



What can we do about climate change?

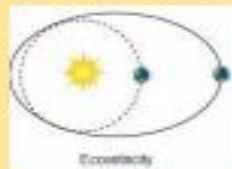
Key words	Definitions
Activism	The policy or action of using vigorous campaigning to bring about political or social change.
Adaptation	The process of change in order to deal with a situation. In this instance, changing behaviours to deal with changes in our climate, learning to live in a warmer world.
Climate Change	a long-term change in the earth's climate, especially a change due to an increase in the average atmospheric temperature
Development	the progress of a country and the linked improvement to quality of life
Enhanced greenhouse effect	Increased global warming due to human activity.
Fossil Fuels	non-renewable energy sources, eg coal, oil and natural gases.
Glacial Period	A period of global lower temperatures.
Inter-glacial	A period of increasing global temperatures.
Mitigation	The action of reducing something. In this instance, actions to reduce greenhouse emissions.
Sustainability	Meeting the needs of the present without compromising future generations to meet their own needs
Extreme Weather	a weather event is significantly different from the average or usual weather pattern. This may take place over one day or a period of time. A flash flood or heat wave are two examples of extreme weather in the UK

Man-made causes of climate change

- Rapid industrialisation
- Deforestation
- Agriculture
- Burning of fossil fuels to produce energy
- Overconsumption

Natural causes of Climate change

Orbital theory



The amount of heat & light (energy) the sun produces changes. Cycles have been detected which show **times when there are more or less energy from the sun.**

Sunspot theory



Volcanic eruptions **produce ash and sulphur dioxide gas**. If the eruption is big enough, the sulphur and gas is spread around the world by high level winds. This creates a **blanket of sulphur and ash** around the world.

Eruption theory



Big volcanic eruptions can change the earth's climate. Small eruptions have no effect- the eruption needs to be very large and explosive. **This blanket of ash and gas will stop solar energy (sunlight) reaching the earth.**

Mitigation strategies



Using windfarms to generate energy means less energy is generated from fossil fuels: less CO2 entering the atmosphere!

Adaptations



Houses built on stilts prevents housing from being flooded. This saves the owner money but can be expensive.



Encouraging bike usage and walking this reduces the amount of driving which reduces the burning of fossil fuels meaning less CO2 entering the atmosphere.



Tidal barrages are used to prevent flooding in major cities such as London. They prevent tidal waters from entering rivers at high tide.

Long term impacts of global warming

- Glacier's melting
- Sea levels rising
- More frequent extreme weather events (floods, forest fires)
- Loss of biodiversity leading to mass extinction
- Global food shortages

Short term impacts of global warming

- More localised flooding
- Displacement of people (people moving from one area to another)
- Migration of animal species
- Heat waves
- Warmer ocean temperatures

9.9 Technology and Media - German

Technology verb infinitives	
löschen	to delete, erase
hochladen	to upload
chatten	to chat online
Fotos teilen	to share photos
kommunizieren	to communicate
antworten/beantworten	to answer
schaffen	to create
geben	to give
herunterladen	to download
schicken	to send
funktionieren	to work, to function
speichern	to save (data on computer)
sprechen	to speak, to talk
das Internet surfen	to surf the internet
können	to be able to
Fotos nehmen	to take photos
bekommen	to get
simsen	to text
streamen	to stream
benutzen	to use
anrufen/ telefonieren	to call / phone
kaufen/ einkaufen	to buy / shop
lesen	to read
reden	to speak
sammeln	to collect
schreiben an	to write to
schützen vor	to protect against
aufladen	to charge
drohen	to threaten
stehlen	to steal

Technology nouns	
eine Datei	file
Junk-Mail	spam, junk mail
ein E-Mail	email
Computerfestplatte	hard drive
Spiele	games
die Nachrichten/SMS	text message
das Handy/das Smartphone	mobile/smartphone
der Computer	computer
der Laptop	laptop
die Computerspiele	video game
das Lied	song
der Bildschirm	screen
der Post	post
das App	app
der Blog	blog
das Internet	internet
soziale Medien	social media
das soziale Netzwerk	social network
eine Zeitschrift	magazine
Chatroom	chat room
die Kamera	camera
das Gerät	device / equipment
der Tablet- PC	tablet
Die Technologie	technology
WLAN	Wifi

Technology adjectives	
langweilig	boring
alt/altmodisch	old
spannend	exciting
schwer	difficult
kurz	short
modisch	fashionable
langsam	slow
unterhaltsam	entertaining
gruselig	scary
aufregend	stimulating
lehrreich	informative
interessant	interesting
nutzlos	useless
lang	Long
gefährlich / der Gefahr	Dangerous /danger
praktisch	practical
schnell	fast
dumm	stupid
modern	modern
witzig	funny / witty
kreativ	creative
sicher	safe / secure
kaputt	broken
beliebt	popular
traditionell	traditional
einfach	easy
nützlich	useful

9.9 German Technology and Media

Knowledge Organiser

3 time frames
Infinitives
Time phrases and connectives

Negative constructions
Opinions and justifications
Comparatives and superlatives

Comparisons

Add 'er' to the adjective. You can't add the word 'mehr' = more.

Er ist **kleiner** = he is smaller es ist **billiger** = it is cheaper

Exceptions are besser (better)/größer(bigger)/älter(older)

Superlative

You add an '-ste' to the adjective, sometimes '-este' to make it easier to say. Fred ist der **Kleinste** = Fred is the **smallest**. Ellie ist die **Lauteste**

Comparing Things

Joe ist älter **als** Fred = Joe is older **than** Fred

Joe ist **weniger** alt **als** Fred = Joe is **less** old **than** Fred

Joe ist **so** alt **wie** Fred = Joe is **as** old **as** Fred

Joe ist **genauso** alt **wie** Fred = Joe is **just as** old **as** Fred

Opinion phrases

Opinion phrases help make your work more interesting- have a look at the list on your vocabulary list. Try to use a range of opinions in your work e.g., ich mag (I like), ich denke, dass (I think that)

Verbs and the present tense in German

When you look up a verb in the dictionary, you find its original, unchanged form which is called the **infinitive** (machen, essen, trinken, spielen, haben, sein, etc.). The infinitive ends in **-en** or **just -n**

Forming the present tense in German

For regular verbs follow the pattern opposite

However, the irregular verbs don't follow the pattern exactly. Your teacher will help you with these. (haben/sein/lesen/fahren)

Opinion phrases

Meiner Meinung nach
Ich denke, dass
Ich glaube, dass
Ich würde sagen
Persönlich
Ich interessiere mich für
einerseits/andererseits

In my opinion
I think that
I believe that
I would say that
Personally
I'm interested in
On the one hand/on the other hand
I find ...great
I am against

Connectives

und
aber
denn/weil
obwohl
außerdem
zum Beispiel
dann
schließlich/endlich
dennoch

and
but
because
however
furthermore
for example
then
finally
nevertheless

Time phrases

heute
normalerweise
ab und zu
am Wochenende
zweimal pro Woche
oft
immer

gestern
vorgestern
Letztes Wochenende
Letzte Woche
Letzten Monat
Letztes Jahr
gestern Abend
vor 2 Tagen/2 Jahren

morgen
in der Zukunft
Nächstes Wochenende
Nächste Woche
Nächstes Jahr

Today
Normally
Sometimes
On the weekend
(Twice) a week
Often
Always

Yesterday
The day before yesterday
Last weekend
Last week
Last month
Last year
Last night
(Two days/years) ago

Tomorrow
In the future
Next weekend
Next week
Next year

Causes of WW1 background: Historians disagree about what caused the First World War. Due to the MAIN causes of WW1 the 'balance of power' between the nations of Europe became unstable. It was a global conflict involving the main European powers and their empires from August 1914 to November 1918.

Key Events

1	1879 – Dual Alliance between Germany and Austria-Hungary signed.
2	1882 – Triple Alliance formed when Italy joined the Dual Alliance.
3	1904 – Entente Cordiale signed between Britain and France.
4	1905 – Germany creates the Schlieffen Plan to avoid facing a war on two fronts.
5	1906 – Britain launches HMS Dreadnought, starting the Naval Arms Race .
6	1907 – Russia joins the alliance with Britain and France, becoming the Triple Entente .
7	28th June 1914 – Assassination of Archduke Franz Ferdinand .
8	28 July 1914 – Austria-Hungary declares war on Serbia WW1 began .
9	1st August 1914 – Germany declares war on Russia.
10	2nd August 1914 – France mobilises in support of Russia.
11	3rd August 1914 – Germany declares war on France.
12	4th August 1914 – Britain declares war on Germany.

Key People

13	Franz Ferdinand	Heir to the throne of Austro-Hungarian Empire. Assassinated by Gavrilo Princip.
14	Gavrilo Princip	A Bosnian Serb from a peasant family, who succeeded to kill Franz Ferdinand, the trigger event for World War One.
15	Kaiser Wilhelm II	The Kaiser was the official head (Emperor) of Germany before and during World War 1.

History – Year 9 Knowledge Organiser Term 1 Causes of WW1



MAIN Causes of WW1

M: Militarism: A country wanting to have a strong army and navy.
A: Alliances: A group of countries that promise to protect and support each other.
I: Imperialism: A act of growing an empire. This brought conflict with other countries keen to expand their empires.
N: Nationalism: The belief that your country is stronger and better than others.

Find out more:

<https://www.bbc.co.uk/bitesize/guides/z4n4xs/revision/1>

Key Historians

Max Hastings	A military historian who believes Germany was to blame for the start of WW1.
Gerhard Hirschfeld	A modern historian who believes that WW1 was due to the countries in alliances.
Richard Evans	A modern historian who believes that the Serbians are to blame for the start of WW1.

Key Terms

17	The Triple Alliance	The Triple Alliance was the treaty by which Germany, Austria-Hungary and Italy agreed to support each other militarily in the event of an attack against any of them.
18	The Triple Entente	The Triple Entente was a diplomatic and military agreement between France, Great Britain, and Russia, formed in part as a response to the formation of the Triple Alliance.
19	Black Hand Gang	Serbian Nationalist group aimed to unite all Serbian people in a Greater Serbia.
20	Naval arms race	The race between Germany and Great Britain between from 1906 to 1914 following Britain launched the first dreadnought a ship that meant all others were redundant before its awesome fire power.
21	Schlieffen plan	The German idea to avoid a war on two fronts. It would quickly defeat France. It assumed the Russian's would be slow to mobilise. The plan did not work.

Key Skills

Source A: The man in the bath is Kaiser Wilhelm, the leader of Germany.



22	Interpretation	a viewpoint or opinion. <i>What viewpoint is being given in the source about the cause of WW1?</i>
23	Long term cause	Factors or causes which happen a long time before an event takes place.
24	Short term cause	Factors or causes which happen just before an event takes place. Usually a catalyst.

Y9 Maths Term 1**Key ideas**

- Recall key number facts including factors, multiples and prime numbers
- Be able to find product of prime factors and use this to find HCF and LCM
- Apply the product rule for counting to different scenarios

Factors: are numbers that divide exactly into another number

Multiples: appear in the multiplication tables of a given number

Prime numbers: Number with exactly two factors e.g. 2, 3, 5, 7, 11,

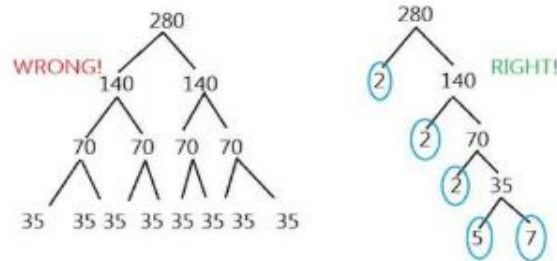
$$2 \times 3 = 6$$

Factor Factor

2 and 3 are factors of 6

Product of Prime Factors: Find the prime factors of a number which multiply to make the original number

Whilst there is often more than one way to do a factor tree, we need to find factor pairs for each branch. These will multiply to make the number above.



Index form: Once we have found the product of prime factors we write the solution in index form (using powers)

For example, using the factor tree above

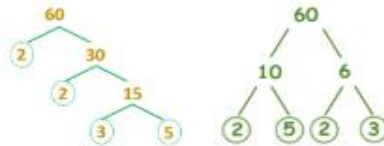
$$280 = 2 \times 2 \times 2 \times 5 \times 7$$

$$= 2^3 \times 5 \times 7$$

We write them in size order when written in index form

There is often more than one way to draw the tree diagram but you will still end up with the same product of prime factors.

Here we have $60 = 2^2 \times 3 \times 5$ in both cases

**Finding HCF and LCM**

Highest Common Factor (HCF): The greatest number that is a factor of two (or more) other numbers

Lowest Common Multiple (LCM): The smallest positive number that is a multiple of two or more numbers

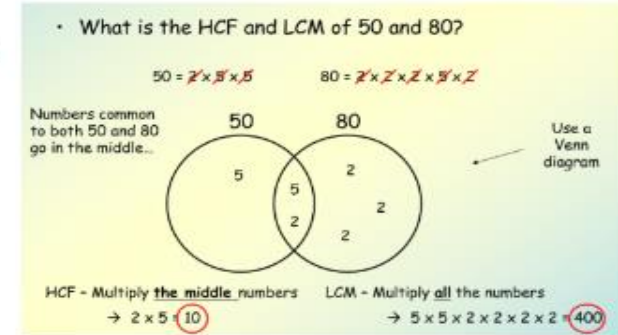
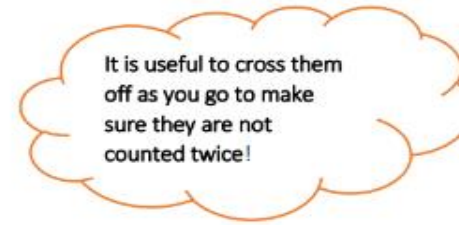
Once we have a factor tree we can use this to find the HCF and LCM of two (or more) numbers.

We do this by using a Venn diagram

First we need to find the product of prime factors for each number.

Now we can place them in a Venn diagram.

Common numbers go in the middle of the Venn diagram

**Product Rule for Counting**

Product: The answer when two or more values are multiplied together.

To find the total number of outcomes for two or more events, multiply the number of outcomes for each event together. This is called the **product rule for counting** because it involves multiplying to find a **product**.

A restaurant serves 5 starters, 3 mains and 4 desserts. How many different two course meals can I have?

Option 1: Starter & Main $\begin{matrix} 5 \\ \times 3 \end{matrix} = 15$

Option 2: Main & Dessert $\begin{matrix} 3 \\ \times 4 \end{matrix} = 12$

In total there are $15 + 12 = 27$ options

Katie has 52 different playing cards.

She gives one card to Grace, one card to Bill and one card to Jenny.

In how many different ways can Katie do this?

$$52 \times 51 \times 50 = 132,600$$

Useful Links:

<https://vle.mathswatch.co.uk/vle/>

<https://www.bbc.com/bitesize>

<https://mathsmadeeasy.co.uk/ks3-revision/>



Film and Game Music

Year 9 – Topic 1

Keywords

Leitmotif – A short piece of music that represents a character

Underscore – Quiet music that plays underneath dialogue

Dialogue – The characters voices

Foley – All non-music sounds

Composer – The person who writes the music

Film score – The music that accompanies a film

Mickey-Mousing – Use sound and rhythm to imitate the action on screen

Genres

Horror Sci-fi Comedy
Romance Action Adventure
Thriller Kids Fantasy
Comic-book Film Noir

Garageband Shortcuts

Cmd + Space = Search

Cmd + T = Cut

Cmd + C = Copy

Cmd + Z = Undo

Cmd + V = Paste

+ (On screen) = Add new instrument



Double Click (on a part) = Edit Music



Key Stage 3 Knowledge Organiser – Core PE Unit 3: Analysis Of Performance

Anatomical Movements		
1	Flexion	Decreasing the angle at the joint.
2	Extension	Increasing the angle at the joint.
3	Adduction	Limb moves towards the mid-line of the body .
4	Abduction	Limb moves away from the mid-line of the body .
5	Rotation	A circular movement around a fixed joint .
6	Circumduction	When the limb moves in a circle .
7	Dorsi Flexion	Bending the foot up towards the shin.
8	Plantar Flexion	Bending the foot downward towards the ground.



Methods of Performance Analysis													
	Method of analysis	Explanation	Example										
9	Verbal feedback	Spoken feedback used to improve performance levels.											
10	Tally chart	Visual information on the number of items or happenings.	<table border="1" data-bbox="2074 674 2392 872"><thead><tr><th>Sport</th><th>Votes from kids</th></tr></thead><tbody><tr><td>Football</td><td> </td></tr><tr><td>Soccer</td><td> </td></tr><tr><td>Basketball</td><td> </td></tr><tr><td>Tennis</td><td> </td></tr></tbody></table>	Sport	Votes from kids	Football		Soccer		Basketball		Tennis	
Sport	Votes from kids												
Football													
Soccer													
Basketball													
Tennis													
11	Peer observation	When someone else in the class watches you perform and feeds back to you.											



Year 9 Religious Studies: Situational ethics

Key terms	
Morality	The distinction between right and wrong or good and bad behaviour.
Absolute morality	The belief that what is right will always be right regardless of situation, culture, religious tradition, time or age.
Relative morality	The belief that that different courses of action might be needed/justified in different situations.
Abortion	A procedure to end a pregnancy so that it does not result in the birth of a child.
Sanctity of life	The belief that life is precious or sacred (special). For many religious believers, only human life holds this special status.
Utilitarianism	The theory that states that you should do the action that creates the most happiness for the most amount of people.
Situation Ethics	The theory that states right and wrong always depend on the situation, there are no absolute rules, only to do what is the most loving thing.
Autonomy	The freedom to act on your own values and interests.



Views on abortion

Some of the arguments against abortion

- Every human being, including an embryo or foetus, has the right to live and to reach their potential.
- There are alternatives to abortion, eg adoption.

Some of the arguments for abortion

- A woman has the right to choose whether or not she wants to have the baby. It is her body.
- The embryo or foetus does not have the same rights as the mother.

MY BODY
MY CHOICE

Religious views:

- Roman Catholics believe that life begins at conception and therefore abortion is morally wrong.
- Islamic scholars agree that the termination of a pregnancy for foetal anomalies is allowed before ensoulment
- Most Sikhs accept that life begins at conception and abortion is generally forbidden.
- Majority of religions may allow abortions in certain situations, such as to protect the mother's health.



Views on euthanasia

Some of the arguments against euthanasia

- euthanasia would weaken society's respect for the value and importance of human life.
- it would lead to worse care for the terminally ill

Some of the arguments for euthanasia

- Human beings should have the right to be able to decide when and how they die
- It is expensive to keep people alive when there is no cure for their illness.

CAMPAIGN FOR
DIGNITY
IN DYING.

Religious views:

- Roman Catholic Church teaches that no person has the right to deliberately end the life of another person, or his or her own life.
- Some Christians, however, accept that if a person is terminally ill and in extreme pain or distress, euthanasia may be an act of compassion.
- The Sikh Gurus rejected suicide (and by extension, euthanasia) as an interference in God's plan.
- Islam is against euthanasia. They believe that all human life is sacred because it is given by Allah

Year 9 Religious Studies: Situational ethics

Key terms	
Anti-abortion	opposing abortion and euthanasia.
Pro-choice	advocating the legal right of a woman to choose whether or not she will have an abortion.
Dignity	quality of existing with respect.
Euthanasia	the painless killing of a patient suffering from an incurable and painful disease or in an irreversible coma.
Passive euthanasia	Intentionally letting a patient die by withholding artificial life support such as a ventilator or feeding tube.
Active euthanasia	killing a patient by active means, for example, injecting a patient with a lethal dose of a drug.
Capital punishment	the legally authorized killing of someone as punishment for a crime.
Conscience	The individual feeling of right and wrong a person has



Views on capital punishment

Capital punishment in the UK:

The Human Rights Act formally abolished the death penalty in the UK. This means that a public official, including the police or courts, cannot execute someone or sentence them to death as punishment for something they have done. This applies in all circumstances, including during peacetime and times of conflict.

Some of the arguments against capital punishment

- Jesus amended the Old Testament teaching on retribution in Matthew 5:38-39 when he said: You have heard that it was said, 'If anyone slaps you on the right cheek, turn to them the other cheek also.'
- Sikhs believe that the punishment that God has set for us collectively and individually is enough and we should not mess with God's plan

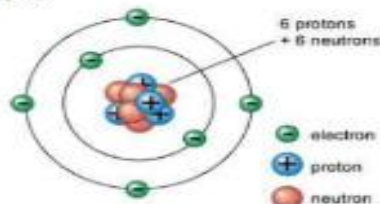
Some of the arguments for capital punishment

- The Bible sets down the death penalty for some crimes, so it must be acceptable to God. This is often seen as retribution.
- Muslims believe that capital punishment is a most severe sentence but one that may be commanded by a court for crimes of suitable severity.



Who owns my body? Am I special? Are we simply the sum of the chemicals and minerals that make up our bodies or do we have greater worth than that? Whose life is it anyway?

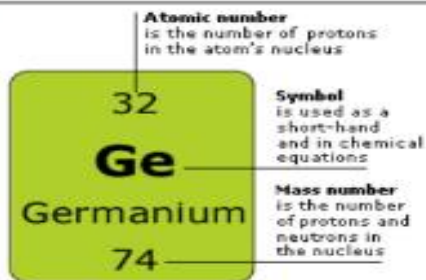
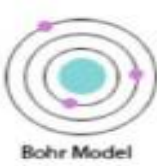
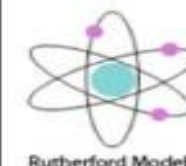
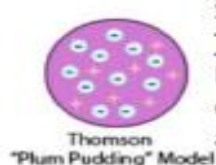


Atom Structure**Diagram****Subatomic Particles**

Subatomic particle	Location	Mass	Charge
Proton	Nucleus	1	+1
Neutron	Nucleus	1	No charge
Electron	Shells	0 (negligible)	-1

Atom Symbols

Bigger number is the mass number.
To find neutrons subtract the smaller number

**History of Atom**Dalton

Solid sphere

ThomsonProtons/
electrons randomly
arrangedRutherford/BohrPositive nucleus
with electrons
around**Modern Periodic Table**

- Arranged by increasing atomic mass (proton number) in rows called periods
- Metals on the left, non-metals on the right

Key

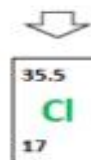
- reactive metals
- transition metals
- post-transition metals
- non-metals
- noble gases
- separates metals from non-metals

Isotopes

- Elements with the same number of protons but different numbers of neutrons
- This explains why relative atomic mass (M_r) isn't always a whole number



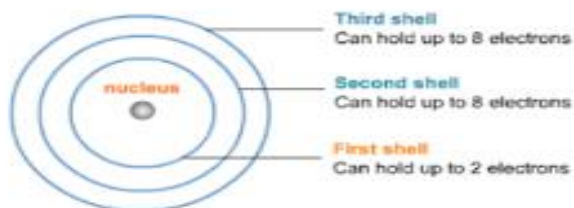
H - e.g. M_r of Cl is calculated using
The abundance of each of the
Atomic masses of the isotope
 $(35 \times 75/100) + (37 \times 25/100) = 35.5$

**History of Periodic table**

- Dimitri Mendeleev was the first to publish an organised table of elements
- He arranged by relative atomic mass
- But he also left gaps so that elements with similar properties were in the same group
- Using the gaps he was able to predict elements that had not been discovered yet

Electronic Configuration

- Using the rules to draw the first 20 elements
- Rule 1

**- Rule 2/3**

	Group								
	1	2	3	4	5	6	7	0	Number of occupied energy levels
Period 1								2 He	1
Period 2	3 Li 2.1	4 Be 2.2	5 B 2.3	6 C 2.4	7 N 2.5	8 O 2.6	9 F 2.7	10 Ne 2.8	2
Period 3	11 Na 2.8.1	12 Mg 2.8.2	13 Al 2.8.3	14 Si 2.8.4	15 P 2.8.5	16 S 2.8.6	17 Cl 2.8.7	18 Ar 2.8.8	3
Period 4	19 K 2.8.8.1	20 Ca 2.8.8.2							4
	1	2	3	4	5	6	7	8	

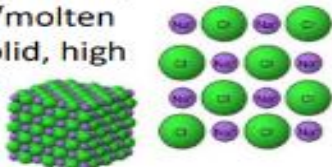
Number of electrons in highest occupied energy level (except for helium)

Ions

- Atoms are more stable with full outer electron shells
- Metals lose electrons resulting in a positive ion. E.g. sodium in group 1 \rightarrow Na^+ ion and calcium in group 2 \rightarrow Ca^{2+} ion
- Non-metals gain electrons resulting in a negative ion, e.g. oxygen in group 6 \rightarrow O^{2-} ion and chlorine in group 7 \rightarrow Cl^- ion

Ionic Compounds

- Positive and negative ions arrange in a regular lattice
- This explains properties including ability to dissolve, conduct electricity when dissolved/molten but not solid, high melting & boiling points

**Fullerenes, Allotropes**C60

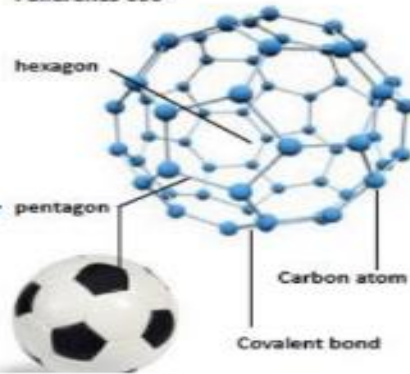
Strong, weak intermolecular forces (like graphite)
Can be used as lubricants

Graphene

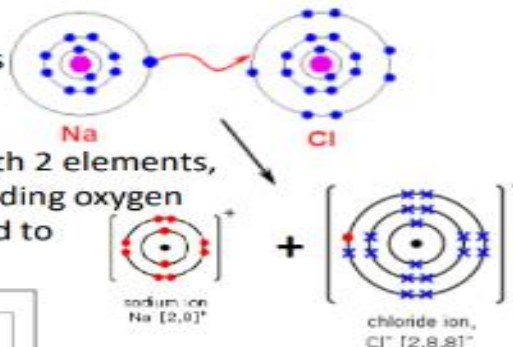
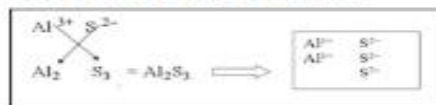
Strong, light, good electrical conductor
Can be rolled into tubes



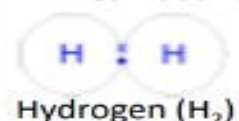
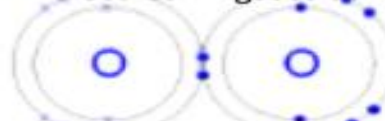
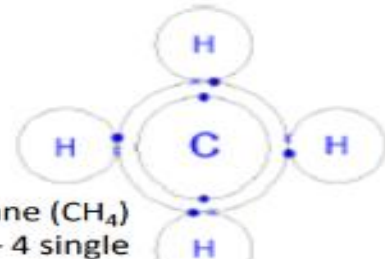
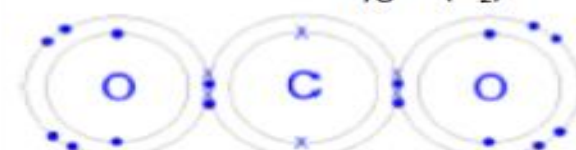
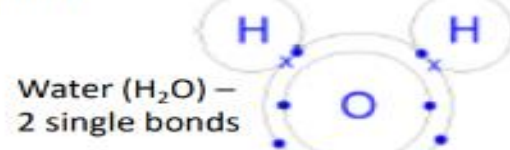
Fullerenes C60

**Ionic Bonding**

- Positive and negative ions are attracted and form a compound
- Compound name -ide with 2 elements, -ate with 3 elements including oxygen
- Use the crossover method to determine the formula

**Covalent Bonding**

- Electrons are shared to complete the outer shell
- Simple molecular, strong bonds between atoms
- Weak between molecules \rightarrow gases at room temp

Hydrogen (H_2)
– 1 single bondOxygen (O_2) – 1 double bondMethane (CH_4)
– 4 single bondsCarbon dioxide (CO_2) – 2 double bondsWater (H_2O) – 2 single bonds**Metallic Bonding**

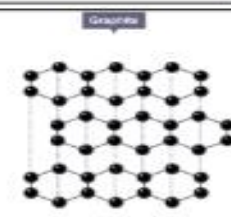
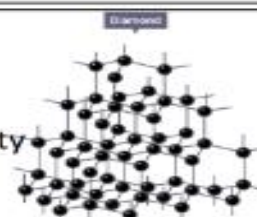
- Metal atoms lose electrons to become positive ions surrounded by a sea of free electrons
- Allows metals to conduct electricity/heat and be malleable

**Bonding Models**

Ball and stick models are limited: they don't show electrons and appear to have large gaps between atoms. Dot and cross diagrams are limited: they are 2D and don't show bond angles.

Giant Covalent Structures, Allotropes

- Bonding between many non-metal atoms
- Diamond, each C atom forms 4 bonds
- Rigid, strong and doesn't conduct electricity
- Used for cutting tools
- Graphite, each C forms 3 bonds leaving a free electron and weak bonds between layers
- Soft, good electrical conductor
- Used as a lubricant

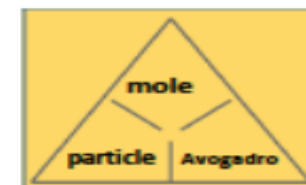
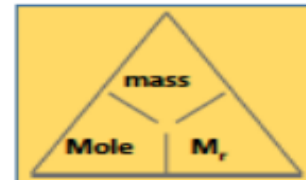


Conservation of mass

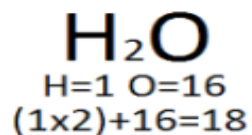
- In a closed system the total mass of the reaction before and after doesn't change
- This is because no atoms are destroyed or created, they are just rearranged
- If mass goes up it's because one of the reactants has joined from the air
- If mass goes down it's because a gas has been released

**H - Moles**

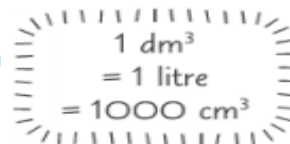
- A mole is an amount of particles equal to Avogadro's constant (6.02×10^{23})
- One mole of any substance will have a mass in grams equal to the relative particle mass (A_r or M_r) for the substance
- The number of particles of substance in a given mass of that substance can be found by using the 1st equation to find the number of moles and the 2nd equation to find the number of particles

**Relative Masses (M_r)**

- To find M_r add the relative atomic mass (A_r) of the elements making up a compound

**Calculating Concentration**

- The more solute dissolved in in a given volume, the more crowded the particles are = more concentrated
- Volume must be in g/dm^3
- 1 gram dissolved in 1 dm^3 = 1 g/dm^3 concentration

**Calculating Reacting Masses**

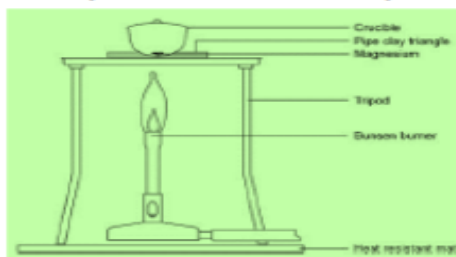
- In reactions there will be a limiting reactant which is used up, other reactants are in excess
1. Write out the balanced equation
 2. Work out M_r of the reactant and product you're interested in
 3. Divide both by the M_r of the limiting reactant
 4. Multiply both by the given mass of the limiting reactant
- To find the mass of limiting reactant needed to make a certain mass of product
1. Write out the balanced equation
 2. Work out the M_r of the reactant and product you're interested in
 3. Divide both by the M_r of the product
 4. Multiply both by the given mass of the product

Empirical Formulae

- Tells you the smallest ratio of atoms in a compound
- To find it divide the molecular formula by the highest common multiple

Compound	Molecular Formula	Empirical Formula
Butane	C_4H_{10}	C_2H_5
Octane	C_8H_{18}	C_4H_9

- Use empirical formula along with M_r to find molecular formula, divide M_r of the compound by the M_r of the empirical formula, then multiply everything in the empirical formula by 2

Experimental Technique

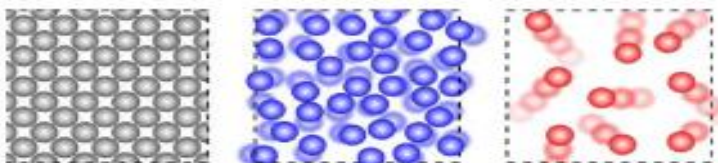
If 9.6g of Mg reacts with 6.4g of O:
 $9.6 / 24$ (A_r Magnesium) = 0.4
 $6.4 / 16$ (A_r Oxygen) = 0.4
 Ratio 0.4 : 0.4 or 1:1 (MgO)

H - Balancing Equations with Reacting Masses

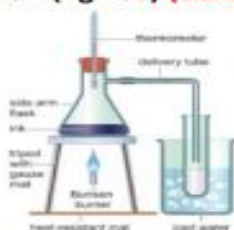
1. Divide mass of each substance by $M_r \rightarrow$ moles
2. Divide all moles by the smallest number of moles
3. Multiply by an amount to make them all whole numbers
4. Write a balanced equation using these numbers

States of Matter (Pg 97)

- Arrangement of particles in the three GCSE states of matter



State	Arrangement of particles	Movement of particles	Attractive forces (None/Few/Many)
Gas	Random Far apart	Fast in all directions	None
Liquid	Random Close together	Move around each other	Few
Solid	Regular Close together	Vibrate around fixed positions	Many

Changes of state (Pg 98)**Distillation (Pg 100) (Core Prac)****Predicting states (Pg 98)**

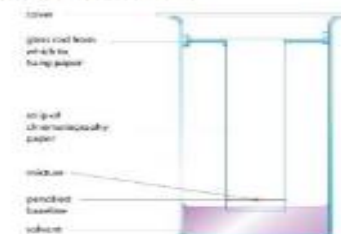
- When given data regarding the melting and boiling point of a substance, you need to be able to predict which state these substances are in given a temperature.
- What state is substance D in at 1000°C?

Substance	Melting point / °C	Boiling point / °C
A	-218.4	-183.0
B	1535	2750
C	1410	2355
D	801	1413

- D is a solid below its' melting point of 801°C and a gas above its' boiling point of 1413°C.
- Therefore, at 1000°C, substance D is a liquid.

Chromatography (Pg 102)**(Core Prac)**

- Uses the different **solubilities** of **solutes** in the same **solvent** to separate them

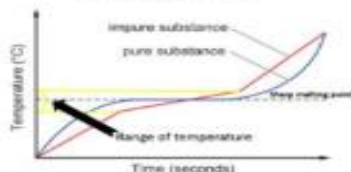


- R_f measured from baseline

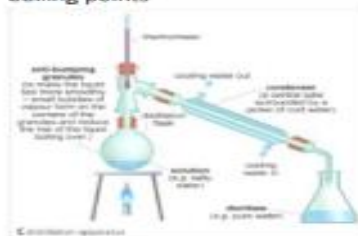
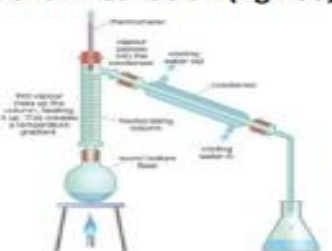
$$R_f = \frac{\text{distance moved by chemical}}{\text{distance moved by solvent}}$$

Purity (Pg 99)

- Purity** is the word used to describe a substance where its composition...
 - Cannot be changed
 - Is the same in all parts of the substance.
 - Has a sharp melting point.
- Mixtures** contain elements and/or compounds that are NOT chemically bonded together.
 - Use a physical process to separate mixtures
 - Mixtures do not have a fixed composition.
 - Melts over a range of temperatures.

**Distillation (Pg 100)**

- To separate two liquids with different boiling points

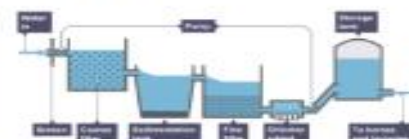
**Fractional Distillation (Pg 100)****Filtration & crystallisation (Pg 101)**

To separate a solid and a liquid

- Filtration** to separate an **insoluble** solid from a liquid
- Crystallisation** to separate a solid **dissolved** in a liquid.

**Water purification (Pg 104)**

- Ground water, waste water and surface water all need **purification**.
- Filtration** to remove solid matter
- Sedimentation** to remove finer particles
- Chlorination** to kill bacteria



- Sea water is purified by distillation.
- Water for chemical tests must be purified or dissolved ions etc. will interfere with the tests.



9.9 Technology and Media SPANISH

TECHNOLOGY VERBS

borrar	to delete, erase
cargar	to load
chatear	to chat online
colgar fotos	to post photos
comunicarse	to communicate
contestar	to answer
crear	to create
dar	to give
descargar	to download
enviar	to send
funcionar	to work, to function
guardar	to save
hablar	to speak, to talk
mandar	to send
navegar la red	to surf the internet
poder	to be able to
recibir	to receive
sacar fotos	to take photos
transmitir	to stream
usar	to use
utilizar	to use

TV GENRES

las comedias	comedies
los concursos	game shows
los dibujos animados	cartoons
los documentales	documentaries
las noticias	the news
los programas de deporte	sports programmes
las series policíacas	crime series
las telenovelas	soap operas

TECHNOLOGY NOUNS

 el archivo	file
 el correo basura	spam, junk mail
 el correo electrónico	email
 el disco duro	hard drive
 el juego	game
 el mensaje de texto	text message
 el móvil	mobile/smartphone
 el ordenador	computer
 el ordenador portátil	laptop
 el videojuego	video game
 la canción	song
 la pantalla	screen
 la red	internet
 la red social	social network
 la revista (digital)	(digital) magazine
 la sala de chat	chat room
 la tableta	tablet
 la tecnología	technology

FILM GENRES

las películas de acción	action films
las películas de amor	romantic films
las películas de ciencia ficción	sci-fi films
las películas de drama	dramatic films
las películas de suspense	suspense films
las películas de terror	horror films



TECHNOLOGY ADJECTIVES

aburrido/a	boring
antiguo/a	old
animado/a	exciting
confuso/a	confusing
corto/a	short
de moda	fashionable
despacio/a	slow
entretenido/a	entertaining
escalofriante	scary
estimulante	stimulating
informativo/a	informative
interesante	interesting
inútil	useless
largo/a	long
lento/a	slow
peligroso/a	dangerous
práctico/a	practical
rápido/a	fast
ridículo/a	ridiculous
roto/a	broken
útil	useful



THE PERFECT TENSE

HABER

he (I have)
has (you have)
ha (he/she have)
hemos (we have)
habéis (you have)
han (they have)

INFINITIVE

~~COMUNICAR~~
~~TENER~~
~~ELEGIR~~

→ **-ADO** Hemos comunicado
→ **-IDO** He tenido
Han elegido

9.9 Spanish Technology and Media Knowledge Organiser

3 time frames
Infinitives
Time phrases and connectives

Negative constructions
Opinions and justifications
Comparatives and superlatives

Comparatives – to express more or less than

... es más...adjective...que - is more...adjective...than

... es menos ...adjectiveque - is less...adjective... than

... es tan...adjective....como – is as...adjective...as

For example:

Es más grande que su hermano. (He is taller (more tall) than his brother.)

Esta casa es menos grande que nuestra casa. (This house is smaller (less big) than our house.)

Este perro es tan grande como mi gato. (This dog is as big as my cat).

Make a Spanish comparison from good to better or from bad to worse:

Like in English the words for bad and good are irregular. Good > better (bueno > mejor) and bad > worse (malo > peor).

For example:

Esta pizza es mejor que la otra. (This pizza is better than that other one.)

La gripe es peor que un resfriado. (Flu is worse than a cold)

**Notice that the adjective always agrees with the first noun*

Superlatives – to express the biggest, the most interesting etc...

... est el/la/los/las más + adjective – is the most + adjective

....est el/la/los/las menos + adjective - is the least + adjective

For example:

La más inteligente de la clase (the most intelligent in the class)

El menos grande de la familia (the shortest (least tall) in the family)

Adjectives describe nouns e.g. a blue phone.

In Spanish, adjectives normally go after the words they are describing e.g. un móvil azul (a blue mobile phone) and they have to agree with the noun they are describing.

In Spanish, adjectives must agree with the noun (or pronoun) they describe in gender and in number. This means that if the noun an adjective describes is feminine, the adjective must be feminine e.g. una televisión negra (a black television). If that same noun is also plural, the adjective will be feminine AND plural as well e.g. las televisiones negras (black televisions).

Opinion phrases

En mi opinión	In my opinion
Pienso que	I think that
Creo que	I believe that
Diría que	I would say that
Personalmente	Personally
A mi juicio	In my opinion
Considero que	I consider that
Desde mi punto de vista	From my point of view
Lo / Las encuentro	I find it / them






Connectives

y	and
pero	but
porque	because
sin embargo	however
además	furthermore
por ejemplo	for example
luego	then
finalmente	finally
no obstante	nevertheless

Time phrases

Hoy	Today
Normalmente	Normally
De vez en cuando	From time to time
A veces	Sometimes
El fin de semana	On the weekend
(Dos) veces por semana	(Twice) a week
A menudo	Often
Siempre	Always
Ayer	Yesterday
Anteayer	The day before yesterday
La semana pasada	Last week
El fin de semana pasado	Last weekend
El mes/año pasado	Last month/year
Anoche	Last night
Hace (dos días/años)	(Two days/years) ago
Mañana	Tomorrow
En el futuro	In the future
El fin de semana próximo	Next weekend
La semana próxima	Next week
El año próximo	Next year

Year 9 Textiles Knowledge Organiser

Equipment	Use
Bobbin 	A bobbin is a cylinder, to which cotton thread is wrapped around. It is found in the bottom part of a sewing machine.
Overlocker machine 	An overlocker does not replace a sewing machine. Its primary function is to clean finish a raw edge, giving the project a professional appearance.
Quick unpick 	It is used to quickly remove stitches and seams.
Tailor's chalk 	Used to mark on to fabric. It is easily washed off.
Measuring Tape 	It is a flexible ruler that can be used for body measurements, tailoring and dressmaking. It is flexible to measure fabric and curves of the body.

The 6 R's when it comes to sustainability



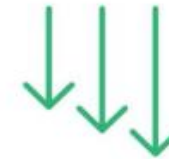
RETHINK



REFUSE



REPAIR



REDUCE



REUSE

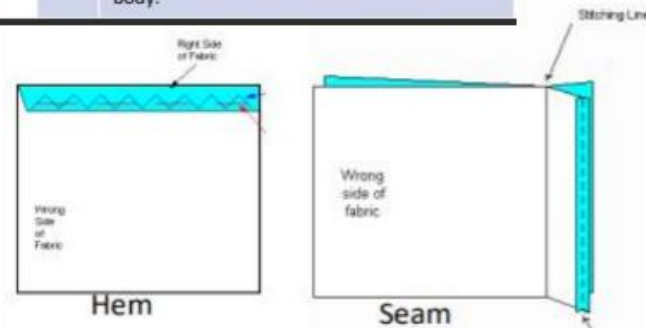


RECYCLE



Batik

Batik is a type of resist printing process in which wax is applied to the fabric in specific areas. When the wax hardens, the fabric is submerged in dye. The wax prevents the dye from reaching the fibers. The fabric is then boiled to remove the wax. This fabric-dyeing method makes cotton look cracked. Batik is characterised by a unique, nearly pattern-less appearance.

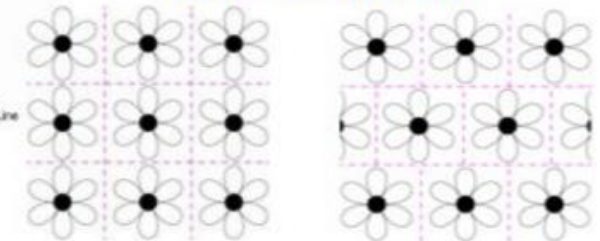


What is the difference between a hem and a seam?

A hem is a neat non fraying edge made by folding fabric over and stitching it down. A seam is a line along which pieces of cloth are joined by sewing.



The motif has been repeated to make two different patterns



plain repeat pattern

brick repeat pattern/
offset repeat pattern

Textiles Hierarchy of Key words

Tier 3 'Academic' keywords.	analyse embellishment Woven/ bonded/ knitted Free machine embroidery	Plain seam sustainable function develop
Tier 2 Valuable keywords used in most lessons every lesson.	Complementary colours contrast compare context effect colour pattern thread	environment fastening embroidery equipment appliqué improve shape Texture tone Fabric sew
Tier 1 Basic keywords used in almost every lesson.	design machine line theme	

Use these in your writing and speaking

Use connectives to link each paragraph!	Explain an idea: <ul style="list-style-type: none"> Although Except Unless However Therefore 	Sequencing: <ul style="list-style-type: none"> Firstly Secondly Next Finally Since
Adding to: <ul style="list-style-type: none"> Furthermore Also As well as Moreover 	Cause and effect: <ul style="list-style-type: none"> Thus So Therefore Consequently 	Contrasting: <ul style="list-style-type: none"> Whereas Instead of Alternatively Otherwise Then again
To empathise: <ul style="list-style-type: none"> Above all Ultimately Especially Significantly 	To compare: <ul style="list-style-type: none"> Likewise Equally In the same way Similarly 	Give examples: <ul style="list-style-type: none"> Such as For example In the case of As revealed by For instance

DESCRIBE



I believe that...
I think that...
The main idea is...

EXPLAIN



This means that...
Therefore...
This maybe because...

JUSTIFY



This is positive because...
This is negative because...
It is useful/not useful because...

ANALYSE



One strength is...
One weakness is...
One argument is...

EVALUATE



One advantage is...
One disadvantage is...
The best option is...

COMPARE AND CONTRAST



One similarity is...
One difference is...
On the other hand...

Sentence starter phrases

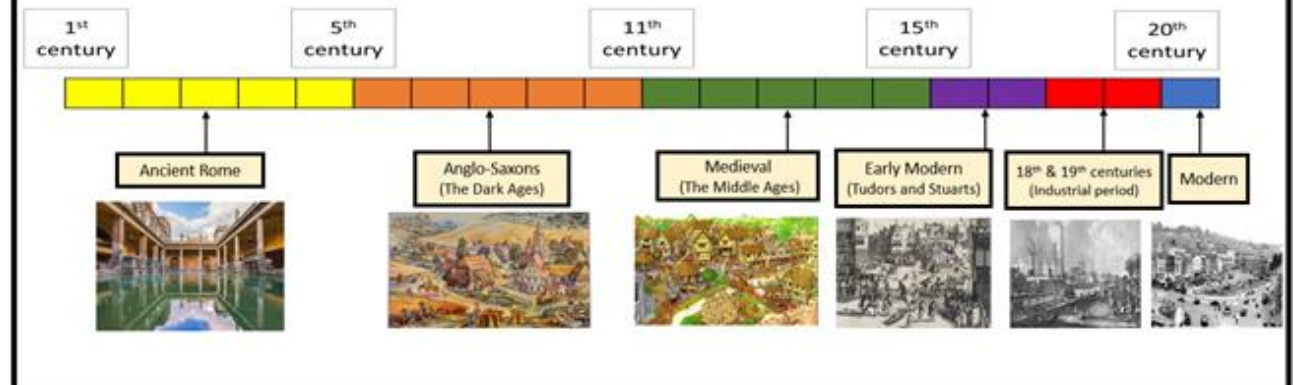
Most people would agree...
Only a fool would think...
We all know...
A sensible idea would be...
The fact is that...
Surely you would agree that...
Without a doubt...
I am certain that...
Some people might argue...
However...
Also...

History Chronology Skills

- Historians rely on **chronology** (time order) to understand and divide up large periods of History.
- The timeline below shows the language used to describe the different periods of **British History**.
- Each block represents one **century** (100 years).

Century Formula = Add one '1' to the number of hundreds.

E.G: AD 150 = 1 + 1 = 2nd Century AD
E.G: AD 1650 = 16 + 1 = 17th Century AD
E.G: 500 BC = 5 + 1 = 6th Century BC
E.G: 3000 BC = 30 + 1 = 31st Century BC
When your date is 2 digits or less, it MUST be the first century AD/BC.
E.g. AD 34 = 1st Century AD. 3BC = 1st Century BC.





Design and Technology Keywords

Food and Nutrition	Design and Technology	Textiles
Caramelisation	Carbon footprint	Plain seam
Aeration Amino acids	Planned Obsolescence	analyse sustainable
Plasticity Shortening	Iterative Design Tolerance	embellishment
Denaturation	Technology Push	Woven/ bonded/ knitted
Coagulation	Anthropometrics	Free machine function
Gelatinisation	Consumer Social Footprint	embroidery develop
Emulsification	Ergonomics Forming Processes	
Pasteurisation		
Unsaturated Protein	Aesthetics Target Market	Complementary colours
Radiation Saturated	Properties Deciduous	contrast environment
Carbohydrates	Automation Coniferous	fastening
Conduction	Functionality	compare embroidery
Deficiency	Primary Source Sustainability	iron equipment
Digest Convection	Continuous Improvement	context appliqué
Cross-contamination		effect improve
Micro-organisms		
Flavour Claw grip	Cost Customer	colour design shape
Texture Aroma	Materials Annotation	machine
Nutrients	Product	pattern line Texture
Energy	Safety Environment	theme tone
Appearance Bridge hold	Design Prototype	thread Fabric sew
Mix Smell	User	



Sentence Starters - DT

I have designed...because
My project was about...
I found... during my research
My design is suitable for...
I have learnt how to...
The most enjoyable part of my project was....
The area I found the most challenging was...
Equipment I have used include...
I would improve my work by...
I am pleased with my finished product because...

Sentence Starters- Food and Nutrition

In order to work hygienically/safely I made sure I
I worked safely when in the kitchen by...
If I could improve any skill, I would improve...because...
Overall, I am happy/unhappy with my progress/dish because....
The texture of my dish is... this is because...

Sentence starters- Textiles

I have designed....
The context of my design is...
My research is useful because...
By researching, I am able to.....
By researching I have found out....
I researched into....
My design is suitable for.....
My design is based upon...
I have planned to..
The order I will work in is...
The most enjoyable part of m project was...
The area I found most challenging was...
I am most pleased with...
I am pleased with my finished project because...
Equipment I used was...

The periodic table of the elements

1	2											3	4	5	6	7	0	
<div>Key</div> <div>relative atomic mass atomic symbol name atomic (proton) number</div>																	<div>1 H hydrogen 1</div>	<div>4 He helium 2</div>
<div>7 Li lithium 3</div>	<div>9 Be beryllium 4</div>											<div>11 B boron 5</div>	<div>12 C carbon 6</div>	<div>14 N nitrogen 7</div>	<div>16 O oxygen 8</div>	<div>19 F fluorine 9</div>	<div>20 Ne neon 10</div>	
<div>23 Na sodium 11</div>	<div>24 Mg magnesium 12</div>											<div>27 Al aluminium 13</div>	<div>28 Si silicon 14</div>	<div>31 P phosphorus 15</div>	<div>32 S sulfur 16</div>	<div>35.5 Cl chlorine 17</div>	<div>40 Ar argon 18</div>	
<div>39 K potassium 19</div>	<div>40 Ca calcium 20</div>	<div>45 Sc scandium 21</div>	<div>48 Ti titanium 22</div>	<div>51 V vanadium 23</div>	<div>52 Cr chromium 24</div>	<div>55 Mn manganese 25</div>	<div>56 Fe iron 26</div>	<div>59 Co cobalt 27</div>	<div>59 Ni nickel 28</div>	<div>63.5 Cu copper 29</div>	<div>65 Zn zinc 30</div>	<div>70 Ga gallium 31</div>	<div>73 Ge germanium 32</div>	<div>75 As arsenic 33</div>	<div>79 Se selenium 34</div>	<div>80 Br bromine 35</div>	<div>84 Kr krypton 36</div>	
<div>85 Rb rubidium 37</div>	<div>88 Sr strontium 38</div>	<div>89 Y yttrium 39</div>	<div>91 Zr zirconium 40</div>	<div>93 Nb niobium 41</div>	<div>96 Mo molybdenum 42</div>	<div>[98] Tc technetium 43</div>	<div>101 Ru ruthenium 44</div>	<div>103 Rh rhodium 45</div>	<div>106 Pd palladium 46</div>	<div>108 Ag silver 47</div>	<div>112 Cd cadmium 48</div>	<div>115 In indium 49</div>	<div>119 Sn tin 50</div>	<div>122 Sb antimony 51</div>	<div>128 Te tellurium 52</div>	<div>127 I iodine 53</div>	<div>131 Xe xenon 54</div>	
<div>133 Cs caesium 55</div>	<div>137 Ba barium 56</div>	<div>139 La* lanthanum 57</div>	<div>178 Hf hafnium 72</div>	<div>181 Ta tantalum 73</div>	<div>184 W tungsten 74</div>	<div>186 Re rhenium 75</div>	<div>190 Os osmium 76</div>	<div>192 Ir iridium 77</div>	<div>195 Pt platinum 78</div>	<div>197 Au gold 79</div>	<div>201 Hg mercury 80</div>	<div>204 Tl thallium 81</div>	<div>207 Pb lead 82</div>	<div>209 Bi bismuth 83</div>	<div>[209] Po polonium 84</div>	<div>[210] At astatine 85</div>	<div>[222] Rn radon 86</div>	

* The elements with atomic numbers from 58 to 71 are omitted from this part of the periodic table.

The relative atomic masses of copper and chlorine have not been rounded to the nearest whole number.





Subject websites

These websites will help you with homework, reading around the subject and revision

English

<https://www.sparknotes.com/> - *Macbeth, A Christmas Carol, An Inspector Calls*

<https://app.senecalearning.com/> - *Macbeth, A Christmas Carol, An Inspector Calls, Power and Conflict Poetry*

<https://www.bbc.com/bitesize> - *Macbeth, A Christmas Carol, An Inspector Calls*

Maths

<https://corbettmaths.com/>

<https://vle.mathswatch.co.uk/vle/>

<https://www.mathspad.co.uk/>

Science:

<https://www.bbc.com/bitesize>

<https://www.senecalearning.com/>

<https://www.memrise.com/>

Geography

Time for Geography - videos (mainly focused on physical processes)

Bitesize

Cool Geography

History

Seneca Learning

BBC bitesize - use Edexcel resources for GCSE.

Art Websites

<https://www.tate.org.uk/>

<https://www.bbc.co.uk/bitesize/subjects/z6f3cdm>

<https://www.incredibleart.org/>

Computer Science and IT.

www.mrahmedcomputing.co.uk

Drama

<https://youtu.be/VeTpob9LBM8>

<https://youtu.be/wlSEU13mRBE>

<https://www.bbc.co.uk/bitesize/guides/zsf8wmn/revision/1>

DT:

<http://www.mr-dt.com/>

<http://technologystudent.com/>

<https://www.senecalearning.com/>

PE

<https://www.bbc.com/bitesize/examspecs/ztrcg82>

<https://sites.google.com/view/ocrgcseperevision/home>

RS

KS3 <https://www.bbc.co.uk/bitesize/subjects/zh3rkqt>

Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
Tutor time					
Lesson 1					
Lesson 2					
Break					
Lesson 3					
Lesson 4					
Lunch					
Lesson 5					
Lesson 6					