BRISTOL METROPOLITAN ACADEMY

Knowledge Organisers 2024-25 Year 9 – Term 4

Monday 24th February	Week A
Monday 3rd March	Week B
Monday 10th March	Week A
Monday 17th March	Week B
Monday 24th March	Week A
Monday 31st March	Week B

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

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

Contents

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/Computing	Same process as outlined for English above. DT and ICT/Computing have 5 questions and not 10.
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.

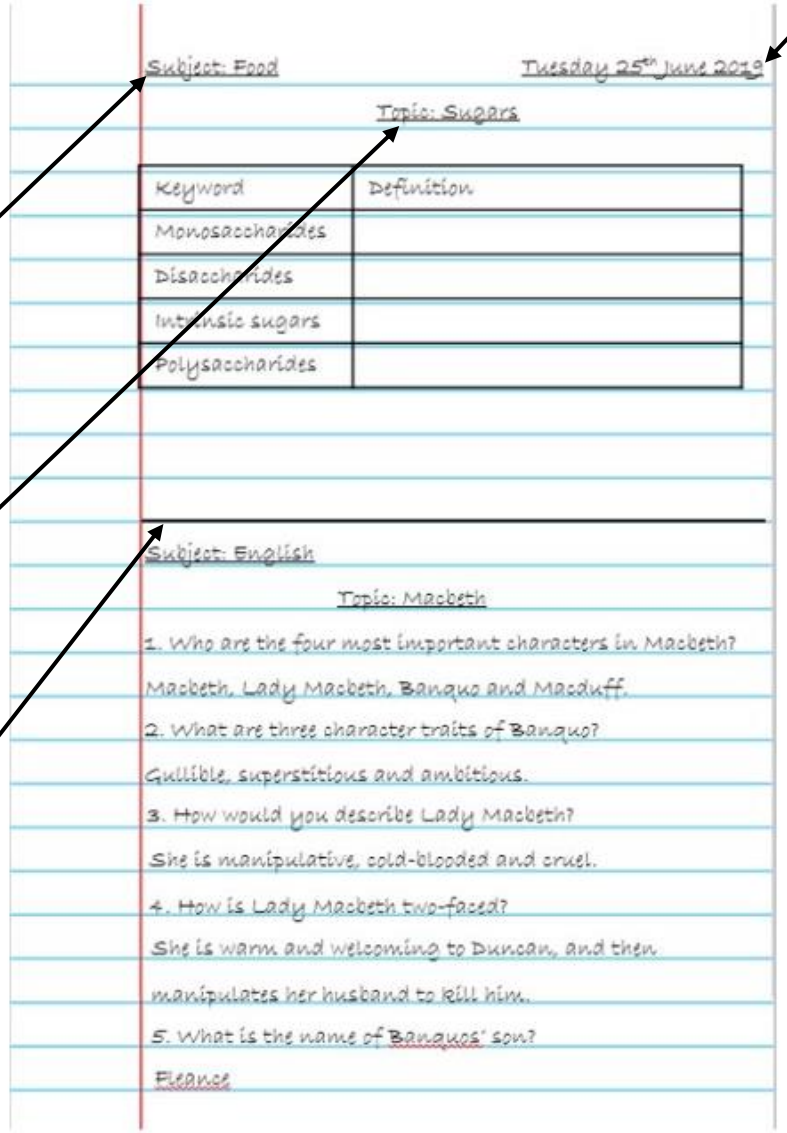
How to present your homework:

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

Subject: English

Topic: Macbeth

1. Who are the four most important characters in Macbeth?

Macbeth, Lady Macbeth, Banquo and Macduff.

2. What are three character traits of Banquo?

Gullible, superstitious and ambitious.

3. How would you describe Lady Macbeth?

She is manipulative, cold-blooded and cruel.

4. How is Lady Macbeth two-faced?

She is warm and welcoming to Duncan, and then manipulates her husband to kill him.

5. What is the name of Banquos' son?

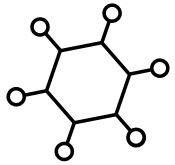
Fleance

Home Learning Strategies to help you revise

Brain Dump

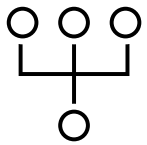
Write down everything you know about o certain topic on a page. Use your KO to add extra notes in a different colour.

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.

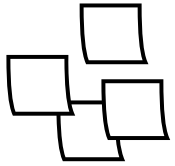
Vocabulary

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 Memento Mori

Content: In this project you will

Knowledge—of different artists who create portraits

Understand—What inspired artists to create their work and how to write about the work

Skills—drawing, collage, painting, printing, showing the influence of other artists in your own work and presentation

Outcomes— Self portraits, celebrity portrait, mixed media portraits, prints, drawings, collage.

Damien Hirst

Analysis

All artist research pages should be annotated

Artwork-

- **Artist name**
- Describe the work-what does it look like?
- Use the formal elements i.e. colour, line etc.
- What techniques/materials were used?
- What is your opinion of the work?
- How is it relevant to your own idea?

Sentence starters

I like/dislike the way the artist has used...because

I think the colour scheme used is effective because...

I think the artist has been inspired by...because

Evaluation of Your Artwork-

- What inspired you to create the piece?
- What techniques did you use and why?
- What does it mean to you?
- How is it relevant to your idea?

Tim Fowler- In 2018 Tim Fowler put together a week long performance exhibition at the LCB Depot Gallery space. He started out with 100 blank canvases in a 25 x 4 grid. Over the next few days he worked day and night to paint 100.skull paintings.

ARTISTS

Gemma Compton- Gemma Compton is a Bristol-based artist and fashion designer.

Gemma Compton's vanitas paintings are contemporary works that explore the fragility and strength of life.

Keywords

Memento Mori—(Latin for "remember that you [have to] die") is an artistic or *symbolic reminder of the inevitability of death. Some artists use* ***symbols*** *such as hourglasses and wilting flowers and skulls that signify the impermanence of human life.*

Vanitas— Vanitas is a type of still life painting that conveys the fleeting nature of life and the vanity of worldly desires

Illustration— a drawing or picture in a book, magazine, for decoration or to explain something .

Assessment

D	**Deepening** Exceptional, Sophisticated, Perceptive, Imaginative, Masterful.
O+	**On Track (secure)**— Highly Confident, Refined, Thorough, Assured, In-Depth.
O	**On Track (insecure**— Competent, Sustained, Informed, Refined, Thoughtful, Detailed.
Y	**Yet to be on track**— Attempted, Basic, Some, Uneven.
A	**At an earlier stage**— Partial, Limited, inconsistent.

Computing: Year 9 Knowledge Organiser

Number Bases

Denary
Base 10 Numbers:
23, 46, 2, 9

Binary
Base 2 Numbers:
01010101

Hexadecimal
Base 16 Numbers:
2B, FF, 5E, 88

128	64	32	16	8	4	2	1		
0	0	0	0	1	0	1	0	=	10
0	0	1	1	1	1	1	0	=	62
1	0	0	0	1	1	1	1	=	143

8	4	2	1	8	4	2	1		
1	0	0	0	1	1	1	1	=	143
Denary		8		*Denary*		15			
Hex:		8		*Hex:*		F		=	8F

Binary Arithmetic

Rules of Addition
0 + 0 = 0
0 + 1 = 1
1 + 0 = 1
1 + 1 = 0 Carry 1
1 + 1 + 1 = 1 Carry 1

				1	1	1		
	0	0	0	0	1	1	1	0
+	1	0	1	0	0	0	1	0
	1	0	1	1	0	0	0	0

Data Types

String
Any amount of letters or numbers
Example: "Computing is ace x 1000"

Boolean
Only two choices
Example: True or False

Integer
A whole number
Example: 4, 0, -7

Real/Float
A decimal number
Example: 3.14

Character Sets

ASCII
7 bit ASCII used to represent 128 characters in binary. Only enough for English language.

Extended ASCII
8 bit ASCII used to represent 256 characters in binary. Still only enough for English language.

Unicode
Created to extend binary values for other languages using 16 bit numbers. This allows for 65,536 characters to be encoded.

```
A = 65, Z = 90, a = 97, z = 122,
[SPACE] = 32
```

Character Set: A group of characters a computer can use.

Storage Units

+4	↓	**Bit**		
+2	↓	**Nibble**	↑	x4
+1000	↓	**Byte**	↑	x2
+1000	↓	**Kilobyte**	↑	x1000
+1000	↓	**Megabyte**	↑	x1000
+1000	↓	**Gigabyte**	↑	x1000
+1000	↓	**Terabyte**	↑	x1000
		Petabyte	↑	x1000

Data Compression

Why:
Used to reduce data file sizes.
Compression methods can be used with text, sound, images and videos.
Lossy - Loses quality
Lossless - DOES NOT lose quality

Representing Images

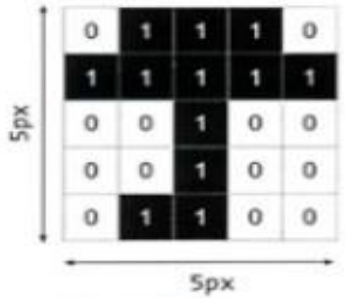
Pixel - Small dot on of colour on an image
Resolution - Amount of pixels on an image
Colour/Bit Depth - Amount of bits in each pixel (amounts of colours available)

Factors that affect the quality and file size:
Increasing resolution and colour depth means the quality will improve. It also means the file size will increase.

Working out file size:
File size (bits) = Resolution x Bit Depth

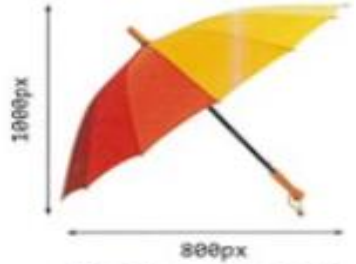
```
.jpeg - Image File
.png  - Image File
.tiff - Image File
.pdf  - Image File
.mp3  - Sound File
.acc  - Sound File
.mp4  - Video File
.mov  - Video File
.doc  - Text  File
.txt  - Text  File
```

1 bit image



File Size: 25 bits

24 bit image



File Size: 192000 bits

Variables

A memory location where values are stored.
These values can change as a program is run

Examples:
name="Bristol"
age=14
pet="Cat"

***Year 9 Drama Knowledge Organiser.* Make sure when you rehearse and perform your devised piece, you include the following skills and techniques:**

Physical Skills

Body language
Interaction
Posture
Gait
Gesture
Spatial awareness
Proxemics
Control
Mannerisms
Facial expressions
Eye focus / contact
Energy
Stage presence
Characterisation

Vocal Skills

Volume
Diction
Emphasis
Accent
Intonation
Inflection
Emotional tone
Pitch
Pace
Pause

Blocking: the precise movement and positioning of actors on a stage

You can include:
Levels, mime, slow motion, direct address, flash back, flash forward, improvisation, silence, pause

Teamwork
It is important to work together as a team and commit clearly to that group:
- turn up on time
- be positive
- accept ideas
- respect other opinions

At the very beginning of the devising, things will not be perfect. Remember the bigger picture and be positive, knowing that details can be fine-tuned later on. Groups that are always evolving and experimenting with their ideas can experience more success with their work.

The final stages of the process
Run through the piece for an audience that understand its importance.
- get rid of things that don't work
- run the piece with any technical aspects(projection and sound)
- test sound levels and **sightlines**

Then ask for honest feedback and act on it.
- Does it make sense if it needs to?
- Have the initial aims and objectives been met?
- Is the desired message being received clearly?
- Is the pace appropriate?
- Is it running smoothly?
- Has everyone learned what happens, when and where?

Be prepared to make mistakes and be resilient enough to carry on, but most importantly, enjoy performing.

Year 9 D&T – Pewter Project

What is pewter?

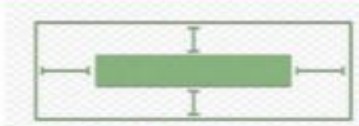
- **Pewter is a malleable metal alloy consisting of tin, antimony, copper, bismuth, and sometimes silver. Modern pewter consists of are 94% tin.**
- **Pewter has a low melting point (around 170–230 °C) making it ideal for melting on a chip forge and brazing hearth and casting**

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.

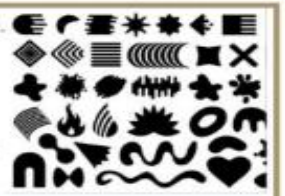
SPACE



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.

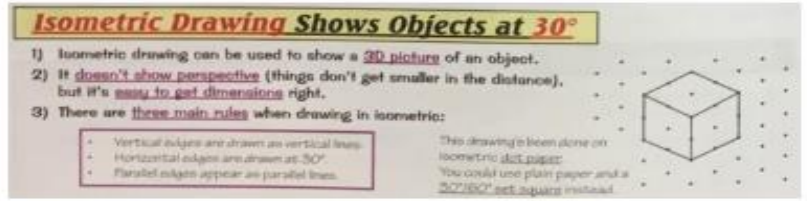
DELETE PART – Use this tool to delete separate lines and objects.

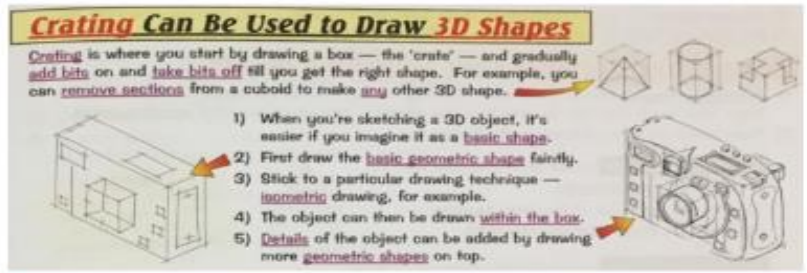
DELETE ANY – Use this tool to delete whole lines and objects.

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





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

Unit 2: Science Fiction

H.G. Wells (1866-1946)

'The Shakespeare of Science Fiction.'
Time Machine was his 1st Novel
He was a scientific journalist/sociologist/ developed interest in political reform later. He wanted the world to become 1 state.
Draper. Teacher. Lecturer.

The War of The Worlds
can be seen as a **criticism of the British Empire**, particularly with regards to the Tasmanians who were wiped out by European colonialists.

Sci-Fi
Science fiction speculates about alternative ways of life made possible by technological change, and hence has sometimes been called "speculative fiction."

What factors led to the formation of the sci-fi genre?

Mary Shelley – the mother of science fiction – wrote arguably one of the first Sci Fi novels, 'Frankenstein', in 1818. One of the narrators, Dr Frankenstein, is a scientist who brings a monster to life by using electricity, recently invented.

The **rise of the sci-fi genre** evolved in the C19th due to new technological innovations caused by the **Industrial Revolution** and an **increased awareness of science** – most notably electricity, inoculation and blood transfusions.
Sci-Fi elements

- Time travel.
- Teleportation.
- Mind control, telepathy, and telekinesis.
- Aliens, extraterrestrial lifeforms, and mutants.
- Space travel and exploration.
- Interplanetary warfare.
- Parallel universes.
- Fictional worlds.

Keywords

Keywords:

Prescient - having or showing knowledge of events before they take place.

Scrutinise - examine or inspect closely and thoroughly.

Complacent - showing smug or uncritical satisfaction with oneself or one's achievements.

Terrestrial - on or relating to the earth.

Inferior - lower in rank, status, or quality.

Superior - higher in rank, status, or quality.

Imperialism - when one country exercises power over another through various methods of control.

Missionary - a person sent on a religious mission, especially one sent to promote Christianity in a foreign country.

Perish - die, especially in a violent or sudden way.

Disillusionment - a feeling of disappointment resulting from the discovery that something is not as good as one believed it to be.

Apocalyptic - describing the complete destruction of the world.

Optimistic - thinks the best possible thing will happen and hopes for it even if it's not likely.

SPAG

A semi-colon (;) is used to separate two main clauses (sentences). It replaces conjunctions such as and AND but.
Example:
The teacher joked; the pupil laughed.

Tier 3 vocabulary

Connotation: a feeling, idea or image a word evokes.

Foreshadowing: clues provided by the writer to pre-empt an event.

Juxtaposition: contrast which occurs in close proximity (within a small space)

Motif: a repeated symbol

Pathetic fallacy: the use of weather t indicate mood/a means for foreshadowing.

Tension/suspense: a feeling of anxiety a character or reader experiences in anticipation of an event.

Rhetoric: the art of effective or persuasive speaking or writing, especially the exploitation of figures of speech and other compositional techniques.

Narrator: a person who narrates something, especially a character who recounts the events of a novel or narrative poem.

Unreliable Narrator: any narrator who misleads readers, either deliberately or unwittingly.

Allusion: an expression designed to call something to mind without mentioning it explicitly; an indirect or passing reference.

Science Fiction: fiction based on imagined future scientific or technological advances and major social or environmental changes, frequently portraying space or time travel and life on other planets.

Tier 2 vocabulary

Extra-terrestrial: (noun) life from outside of earth

Futuristic: (adjective) of or having to do with the future, futurism, or futurology

Imperialism: when one country exercises power over another through various methods of control.

Exploitation: the action or fact of treating someone unfairly in order to benefit from their work.

Exodus: a mass departure of people.

Evolution: the process by which new species or populations of living things develop from preexisting forms through successive generations.

Oppression: a situation in which people are governed in an unfair and cruel way and prevented from having opportunities and freedom.

Authority: a person or organization having political or administrative power and control.

Ethical: relating to moral principles or the branch of knowledge dealing with these.

Colonialism: a practice or policy of control by one people or power over other people or areas, often by establishing colonies and generally with the aim of economic dominance.

Savage: fierce, ferocious, or cruel; untamed.

Civilised: having a high state of culture and social development

Unit 2: Science Fiction

Poetry:
Us **Zaffar Kunia** - describes the ways that the word us means both separation and unity and how that gap could be bridged.

An Address to Potential Aliens **John Hegley** - questioning the possibility of extraterrestrial life.

You laughed and laughed and laughed **Gabrile Okara** - the colonizer's mockery and contemptuous disparagement of indigenous African culture and worldview are confronted and ultimately silenced by the warmth of the native's 'fire' laughter."

A Vision **Simon Armitage** - an elevated and beautiful description of the ideal civic life, subverted by the final revelation that the "Cities like dreams", which these models encapsulate, are "now fully extinct".

Themes

Warfare and fear. The Martians' weaponry was one of HG Wells' predictions for the future of warfare. Wells also predicted chemical warfare and robots.

Imperialism. The Martian's invasion of earth mirrors the British Empire.

Destruction of civilisation/social Darwinism. 'War of the Worlds' explores this theory by suggesting that all humanity, regardless of strength or social class, suffers under the Martians' rule. Wells forces his readers to revise their view of humanity's place in the universe.

Poetic terms

Meaning – the main message of the poem

Speaker – the voice of the poem.

Imagery – the words which paint images in the reader's mind.

Simile – indirect comparison (like/as)

Metaphor – direct comparison

Personification – when a non-living object is described as looking like or behaving like a human.

Tone – the feeling/atmosphere of the poem

Structure – the organisation of the poem, its rhyme scheme, the rhythm.

Stanza – grouped lines in a poem

Form – the type of poem – i.e. sonnet, ode.

Caesura – punctuation which occurs mid-line; slows the rhythm.

Enjambment – lack of terminal punctuation, speeding up the poem.

End-stopping – punctuation at the end of a line

Metre – number of beats per line

Plosive – sound made by stopping airflow – b,t,k, d, p; it creates a harsh sound.

Onomatopoeia – a word which sounds like the thing it is describing – i.e. bang

Alliteration – the repetition of the same sound

Sibilance – the repetition of the 's' sound

Conventions of a speech

Writing Core Task:

Write a speech to the leader of an alien race and their followers to convince them not to colonise Earth.
- Vocabulary and word power
- Organised response
- Developing Detail

<u>Conventions of a speech</u>
Rhetorical question – a question posed to an audience, to which the speaker predicts the answer and gains support from the audience by asking.

Rule of three - Grouping words or ideas in threes makes them memorable and persuasive.

Emotive Language - Language that appeals to the emotions.

Hyperbole - Using exaggeration for effect.

Anecdote - Using real life examples to support your argument.

Personal pronouns - Using 'we', 'I', 'you' to make your audience feel included.

<u>Is Spaceflight Colonialism?</u>

Fifty years after Apollo 11, it's time to revisit the laws of space.

As Americans celebrate the monumental semi-centennial of the Apollo 11 landing, the commemorations should also invite reflection on the troubled history of spaceflight and the laws that govern it.

Example of opening of a speech:

We choose to go to the Moon We choose to go to the Moon speech by John F. Kennedy September 12th 1962.

We meet at a college noted for knowledge, in a city noted for progress, in a state noted for strength, and we stand in need of all three, for we meet in an hour of change and challenge, in a decade of hope and fear, in an age of both knowledge and ignorance. The greater our knowledge increases, the greater our ignorance unfolds.

Despite the striking fact that most of the scientists that the world has ever known are alive and working today, despite the fact that this Nation's own scientific manpower is doubling every 12 years in a rate of growth more than three times that of our population as a whole, despite that, the vast stretches of the unknown and the unanswered and the unfinished still far outstrip our collective comprehension.

Year 9 Knowledge Organiser

Food

What do we need **proteins** for?

Functions
- 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?

Excess
- Kidney and liver diseases
- Weight gain

Deficiency
- 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?

Functions
- 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?

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

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

What do we need **fats** for?

Functions
- Source of energy
- Insulation
- Dissolve vitamins
- Build hormones
- Build cell membranes

What happens if we have too much or too little?

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

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

There are two different types of fats

Saturated
- Butter
- Cream
- Eggs

Unsaturated
- Olive oil
- Avocado

Visible fats


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

Invisible fats


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

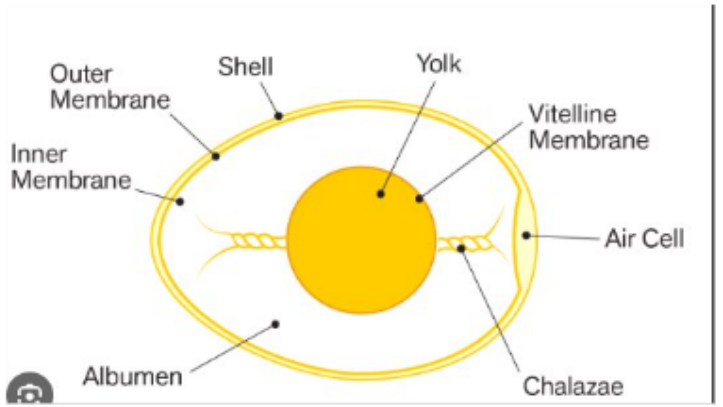
Proteins can denature when:


They are heated


They come into contact with acidic/alkaline ingredients

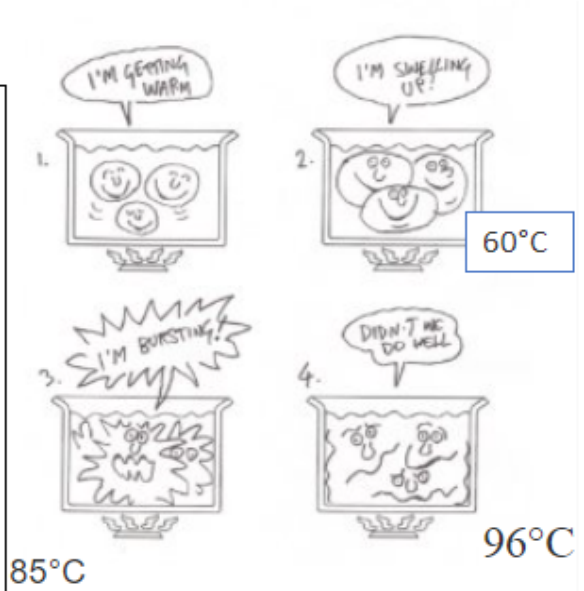

They are whisked, beaten or kneaded


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

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.

9.11 My school Knowledge Organiser

School – Subjects, uniform and time
Future plans & jobs

Cabot Learning Federation

The present tense	ER verb	IR verb	RE verb
Je (I)	-e	-is	-s
tu (you)	-es	-is	-s
Il/Elle/On (he/she/one)	e	-it	-
Nous (we)	-ons	-issons	-ons
Vous (you all)	-ez	-issez	- ez
Ils /Elles (they)	-ent	-issent	-ent

The future tense in French

You can talk about the future by using the **near future** tense.
Use part of the verb ALLER and the infinitive to say what you are **going** to do.

Ce soir, je vais jouer au tennis. This evening I am going to play tennis.
Demain, Paul va faire un gâteau. Tomorrow Paul is going to make a cake.

You can also use the following phrases with an infinitive to refer to the future.
Je veux= I want
Je voudrais = I would like
J'aimerais = I would like
J'espère = I hope
J'ai l'intention de = I intend / I am planning

Adjectives describe nouns e.g., a **black** blazer.

In French, adjectives normally go after the words they are describing e.g., une chemise bleue (a blue shirt) and they must agree with the noun they are describing.

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 veste noire (a black blazer).

If that same noun is also plural, the adjective will be feminine **AND** plural as well e.g., les chaussettes noires (black socks).

Comparatives – to express more or less than

… est plus + adjective + que - is more…adjective…than
… est moins + adjective + que - is less…adjective… than
… est aussi + adjective + que – is as…adjective…as
For example:
L'anglais est plus intéressant que la géographie. (English is more interesting than Geography)
L'histoire est moins amusant que l'E.P.S. (History is less fun than PE)
Le français est aussi difficile que les maths. (French is as difficult as maths).

9.11 My School Life – Vocabulary List

Les matières	School subjects
L'anglais	English
L'espagnol	Spanish
Le français	French
Le théâtre	Drama
Le dessin	Art
Le sport / l'EPS	PE
L'informatique	Computer Science
L'éducation civique	PSHE
La technologie	Technology
Les mathématiques	Maths
Les sciences	Science
Les sciences humaines	Humanities

Quelles sont les règles?	What are the rules?
On doit / On ne doit pas	You must / You must not
On peut / On ne peut pas	You can / You can not
Il faut	You must
Il est interdit de/d'	It is forbidden to
Écouter en classe	(to) listen in class
Utiliser son portable	(to) use your phone in class
Porter des bijoux	(to) wear jewellery
Porter du maquillage	(to) wear make-up
Porter des baskets	(to) wear trainers
Manquer les cours	(to) miss lessons
Être à l'heure	(to) be on time
Mâcher du chewing-gum	(to) chew chewing-gum
Faire ses devoirs	(to) do homework

Qu'est-ce que tu en penses?	What do you think of it?
C'est/Ce n'est pas	It is/It is not
Intéressant (e)	Interesting
Pratique	Practical
Utile/inutile	Useful/not useful
Facile/Difficile	Easy/difficult
Ennuyeux (se) /barbant (e)	Boring
Passionnant (e)	Exciting
Créatif (ve)	Creative
Important (e)	Important
Trop	Too
Très	Very
Assez	Quite
Un peu	A bit (a little)

Qu'est-ce que tu voudrais faire dans le futur?	What would you like to do in the future?
Je vais	I am going
Je voudrais/J'aimerais	I would like
Réussir mes examens	To pass my exams
Recevoir des bonnes notes	To get good results
Faire un apprentissage	To do an apprenticeship
Chercher du travail	To search for a job
Faire du bénévolat	To do voluntary work
Voyager autour du monde	To travel the world
Avoir des enfants	To have children
me marier	To marry
Apprendre à conduire	To learn to drive
Devenir	To become
Médecin/Veterinaire	A doctor/a vet
Professeur/Avocat(e)	A teacher/a lawyer
Mécanicien(ne)/Plombier(ière)	A mechanic/a plumber
Pompier (ière)	A firefighter
Coiffeur(euse)	A hairdresser

Comment est ton uniforme scolaire?	What is your school uniform like?
Je porte	I wear
Il faut porter	You must wear
 Une veste/ un blazer	A blazer/jacket
 Un pull	A jumper
 Une chemise	A shirt
 Un t-shirt	A t-shirt
Une cravate	A tie
 Une jupe	A skirt
 Des chaussettes	Socks
 Un pantalon	Trousers
 Des chaussures	Shoes
 Un collant	Tights
Un hijab	Hijab
Moche	Ugly
Beau/belle	Beautiful
(In)confortable	(un)comfortable
Cher	Expensive
Pas cher/bon marché	Not expensive/cheap
À la mode	Fashionable
Démodé(e)	Old-fashioned

La journée scolaire	The school day
Je quitte la maison	I leave the house
Je vais au collège	I go to school
Les cours commencent à	Lessons start at
Les cours terminent à	Lessons end at
Ça dure	It lasts
La récréation	Breaktime
L'heure du déjeuner	Lunchtime
Le matin	The morning
L'après-midi	The afternoon
Le soir	The evening
Un élève	A pupil
Un prof	A teacher

Geography

Can you make a decision?

Decision making is a key skill in geography - and in life! This theme is all about developing your ability to process information, apply your own understanding and justify your opinions.

Key Geographical Words

Stakeholders	Individuals or groups of people interested or invested in something
Sustainability	When something can continue into the future with little or no change / impact
Social	Relating to people and/or society
Economic	Relating to money and/or the economy of a place
Environmental	Relating to the natural surroundings of a place or the world's natural environment
GIS	Geographical Information Systems – layers of numerical data over spatial maps
Flooding	When a river overflows its banks, or the sea level rises and causes water to go where it would not normally be
Renewable Energy	Energy and power from sources that will not run out e.g. solar, wind, hydroelectric

Understanding the Issue

In order to make good decisions you have to be **well-informed**.

This is why geographers spend a lot of time **information gathering** and **conducting investigations.**

The more information you have, the better you will understand the issue. This is important as it helps you **find a solution**

When presented with information it is helpful to:

- **Skim read** it and assess what you have in front of you
- **Choose** sections to read thoroughly
- **Organise** the information based on what it tells you

Assessing the options

When presented with options or solutions, it is important to **weigh up** the **evidence** that supports or goes against each option.

This can easily be done using a table layout →

Sometimes applying a score helps to make the final decision

	+	-	Score /10
1			
2			
3			

Writing a response

The written response needs to include:

- Your decision (first sentence/paragraph)
- Supporting evidence
- Reasons for dismissing alternative options

Write in well-structured paragraphs:

Point – make a statement
Evidence – use data / evidence to support your point
Explain – demonstrate your geographical understanding of the issue
Link – back to other points and your choice

The Northwest Passage

What:

- A sea route connecting the Atlantic and Pacific Oceans.
- Usually impassable due to sea ice.
- Has been passable recently due to melting sea ice

Why:

- Due to climate change, the sea ice has melted allowing ships to pass through
- There are both human and physical causes of climate change (see table)

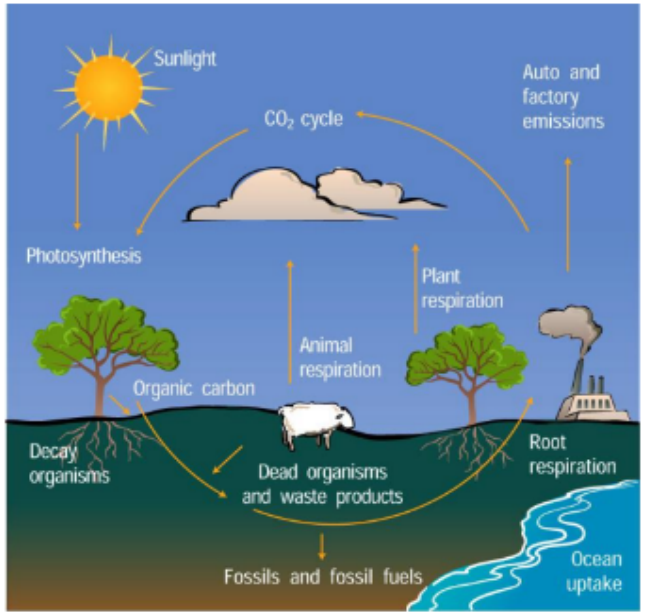
Ocean acidification – a change in properties of ocean water that can be harmful for plants and animals.

The ocean is becoming more acidic as its water absorbs carbon dioxide from the atmosphere. (see the carbon cycle)

30% - how much more acidic the ocean has become in the past 100-200 years.

Biodiversity – the variety of plant and animal life in a particular habitat.

IMPACTS OF ACIDIFICAITION	
Fish - the pH of blood in the fish changes due to the lower pH in the ocean. (acidosis)	**Osyters, mussels etc.** – struggle to build their shells in more acidic water conditions.
Plants and algae – lots of species thrive in more acidic conditions. Algae needed to build coral reefs does not do so well.	**Coral reefs** – can limit and slow growth of new coral. By 2080 oceans will be so acidic that health coral will be eroding quicker than being built.



The Carbon Cycle

Human	Physical
Agriculture – methane (greenhouse gas) released from rice cultivation and cattle**.**	**Volcanoes –** big eruptions can change the earths climate. The material released can prevent solar energy reaching the earth.
Deforestation – carbon stored in trees is released when the tree is burnt or cut down and rots. Every year, estimate of 1.5 billion tonnes of carbon dioxide released from deforestation**.**	**Orbital Theory –** over long timescales the earth's orbit changes around the sun, sometimes oval and sometimes oval. The angle of tilt of the axis also changes, and wobbles. This changes the amount and place of sunlight arriving at the earth's surface.
Fossil Fuels – burning coal, oil and gas releases pollutants and greenhouse gases into the atmosphere.	**Ocean currents –** Due to ice melting, the ocean is absorbing more solar radiation and thus getting warmer.

Year 9 Geography Oceans (2)

German

9.11 My school – vocab. list

Was ist dein Lieblingsfach?	**Favourite Subject.**
Englisch	English
Spanisch	Spanish
Französisch	French
Theater	Drama
Kunst	Art
Sport	PE
Informatik	Computer Science
Musik	Music
Technologie	Technology
Erdkunde	Geography
Geschichte	History
Religion	RE
Mathe/Mathematik	Maths
Naturwissenschaften	Science
Deutsch	German
Wie findest du?	**What do think about?**
Es ist	It is
interessant	Interesting
praktisch	Practical
nützlich	Useful
nutzlos	Useless
einfach	Easy
schwierig	Difficult
langweilig	Boring
spannend	Exciting
kreativ	Creative
wichtg	Important
zu	Too
sehr	Very
ziemlich	Quite

Beschreib deine Schuluniform	**Describe your school uniform**
Ich trage	**I wear..**
eine Jacke/einen Blazer	Blazer
einen Pullover	Jumper
ein Hemd	Shirt
ein T-Shirt	T-shirt
eine Krawatte/einen Schlips	Tie
einen Rock	Skirt
Socken	Socks
eine Hose	Trousers
Schuhe	Shoes
Strumpfhose	Tights
hässlich	Ugly
schön	Pretty
(un)bequem	(un) comfortable
teuer	Expensive
billig	Cheap
modisch	Fashionable
altmodisch	Unfashionable

Der Schultag	**The school day**
Ich verlasse die Schule	I leave home
Ich gehe zur Schule	I go to school
Die Stunden beginnen	Lessons start...
Die Schule ist...zu Ende	School ends...
Es dauert	It lasts...
Die Pause	Break
Die Mittagspause	Lunch break
Morgens	In the morning
Nachmittags	In the afternoon

Was sind die Schulregeln?	**What are the rules?**
Man darf(nicht)	You are allowed
Man kann (nicht)	You can('t)
Man muss	You must
Es ist verboten	It is forbidden
Im Unterricht zuhören	To listen in class
Ein Handy im Klassenzimmer haben	To have a phone in class
Schmuck tragen	To wear jewellery
Make –up tragen	To wear make up
Sportschuhe tragen	To wear trainers
Unterricht verpassen	To miss lessons
pünktlich sein	To be on time
Kaugummi kauen	To chew gum
Hausaufgaben machen	To do homework

Was möchtest du in der Zukunft machen?	**What do you want to do in the future?**
Ich möchte.....	I would like.....
Prüfungen bestehen	To pass my exams
gute Noten haben	To get good grades
eine Lehre machen	To do an apprenticeship
einen Job suchen	To look for a job
freiwillig arbeiten	To work as a volunteer
reisen	To travel
Kinder haben	To have children
heiraten	To get married
fahren lernen	To learn how to drive
Arzt(-in)	Doctor
Lehrer (in)	Teacher
Rechtsanwalt (in)	Lawyer
Mechaniker (in)	Mechanic
Klempner	Plumber
Feuerwehrmann/frau	Firefighter
Tierarzt(in)	Vet
Friseur/Friseuse	Hairdresser

9.11 My school Knowledge Organiser

School – Subjects, uniform and time
Future plans & jobs

Cabot Learning Federation

infinitives	machen	können	RE verb
ich(I)	mache	kann	lerne
du (you)	machst	kannst	lernst
er/sie/man (he/she/ one)	macht	kann	lernt
Wir (we)	machen	können	lernen
ihr (you all)	macht	könnt	lernt
Sie (you) /sie (they)	machen	können	lernen

The future tense in German

You can talk about the future by using the present tense + a future time phrase or use the future tense which is:-
Use part of the verb werden and the infinitive to say what you are going to do/will do

Heute abend spiele ich Tennis. This evening I am going to play tennis.
Morgen wird Paul Kuchen essen. Tomorrow Paul will eat cake.

You can also use the following phrases with an infinitive to refer to the future.
Ich will= I want
Ich möchte = I would like

Adjectives describe nouns e.g., a **black** blazer.

In German, adjectives go before the words they are describing e.g., eine blaue Krawatte (a blue tie) and they must agree with the noun they are describing.

Adjectives must agree with the noun (or pronoun) they describe in gender and in number.

This means that if the noun an adjective describes masculine, the adjective must be masculine e.g., einen schwarzen Blazer (a black blazer).

If the noun is plural, the adjective will be plural as well e.g., schwarze Socken (black socks).

Comparatives – to express more or less than
Add **'er'** to the adjective, but in words of more than 1 syllable an umlaut is sometimes added too. You must also add **als = than**
klein = klein**er**(smaller) lang = l**änger**
wichtig = wichtig**er** (more important)
Mathe ist interessant**er als** Deutsch
mehr = more/weniger = fewer/besser = better

History – Year 9
Knowledge Organiser
Term 4

How and why was the Holocaust possible?

Context

Between 1933 and 1939, after Adolf Hitler and the Nazi's came to power in 1933, Jewish people in Germany faced terrible **discrimination** and **prejudice** and some were killed. **During WW2** (1939-45) the mass killing of approximately **six million Jewish people** across Europe occurred.

Key Events

1	**30th January 1933** – Hitler became Chancellor of Germany.
2	**22nd March 1933** – The first concentration camp opened in Germany – Dachau.
3	**1st April 1933** – The Nazi's organised a boycott of Jewish businesses.
4	**16th September 1935** – The Nuremburg Laws were passed.
5	**5th October 1938** – Jewish people have to hand in their passports and they are stamped with the letter J.
6	**9th and 10th November 1938** – Kristallnacht – A night of violence when Jewish shops and synagogues were attacked.
7	**15th November 1938** – All Jewish children are expelled from schools.
8	**December 1938** – The first Kindertransport arrived in Britain.
9	**1st September 1939** – Germany invaded Poland. WW2 began.
10	**22nd June 1941** – Germany invaded the USSR.
11	**8th December 1941** – The first death camp, Chelmno, begins operation.
12	**20th January 1942** - The Wannsee Conference - meeting where leading Nazi's decided to deport all European Jews to death camps.
13	**April-May 1943** – The Warsaw ghetto uprising.
14	**7th May 1945** – Germany surrendered to Britain and France.
15	**9th May 1945** – Germany surrendered to the USSR.

Topic

16	Holocaust	The planned attempt by the Nazi regime and its collaborators in Nazi-occupied Europe to annihilate the "entire" Jewish people, following the Nazi invasion of Russia in 1941.

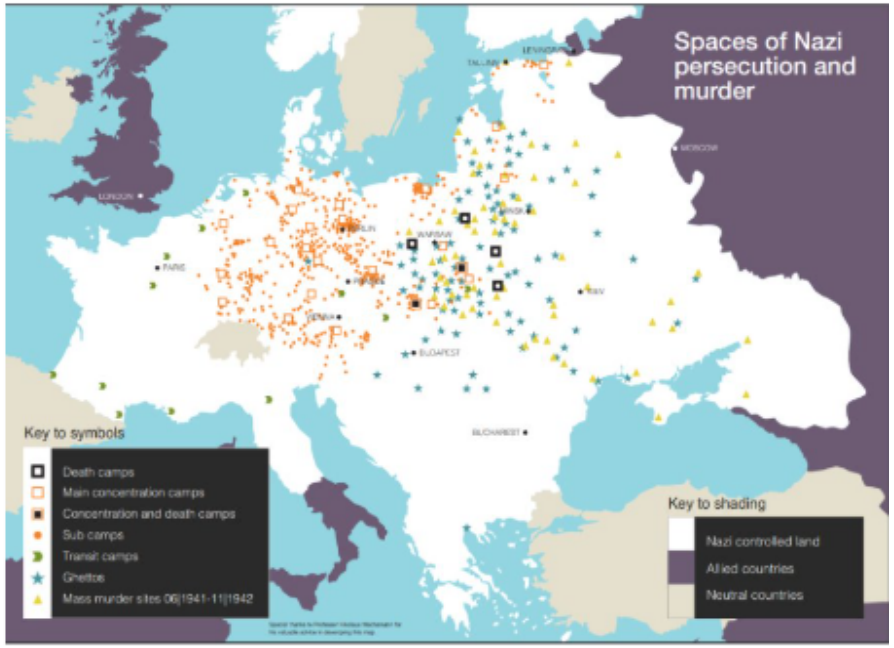
Historical Skills

Use of sources	**Content**: What does the source tells us? **Nature**: What type of source is it? **Origin**: Who made the source? When? Where? **Purpose**: Why was the source created?
Interpretations	To understand different **opinions** from Historians and consider the reasons for their opinions.

Key Terms

17	Antisemitism	Prejudice, discrimination or persecution against Jews.
19	Concentration Camp	Prison camp to which the Nazis sent Jews, their opponents and other people they considered undesirable.
20	Death Camp	Killing centres established by the Nazis in Central Europe during WW2.
21	Einsatzgruppen	The killing squads who followed the army into Poland and Russia following the invasions of these countries.
22	Genocide	The deliberate and systematic attempt to exterminate a whole race of people.
23	Ghetto	An area of a city into which the local Jewish population was forcibly packed and forced to stay in increasingly appalling conditions.

Spaces of Nazi persecution and murder



Substitution

Evaluate (find the value of) the expressions, given that:

$a = 2, \quad b = 3, \quad c = -5$

Note – Always use the correct order of operations

1. $4b = 4 \times 2 = 8$
2. $7b - 3c = (7 \times 3) - (3 \times -5) = 21 - -15 = 21 + 15 = 36$
3. $5b^2 + 1 = 5 \times (3)^2 + 1 = 5 \times 9 + 1 = 45 + 1 = 46$
4. $2c^3 = 2 \times (-5)^3 = 2 \times -125 = -250$
5. $\frac{3ac}{2b} = \frac{3\times2\times-5}{2\times3} = \frac{-30}{6} = -5$

For fractions work out the numerator and denominator separately first

Inequalities show the **range** of numbers that satisfy a rule.

$x < 2$ means x is less than 2
$x \leq 2$ means x is less than or equal to 2
$x > 2$ means x is greater than 2
$x \geq 2$ means x is greater than or equal to 2

The list of integers for $-2 < x \leq 1$ is -1, 0, 1.

Check the symbols carefully, if they have the line underneath they include the end value.

Greater than $>$ | Greater than or equal to $\geq$
Less than $<$ | Less than or equal to $\leq$
Not equal to $\neq$

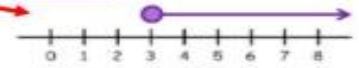
An open circle means that the value is not included:

$x > 2$ x is greater than 2

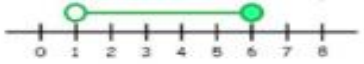
The arrow points in the same direction as the inequality.

A filled in circle means that the value is included:

$x \geq 3$ x is greater than or equal to 2



If x is between two values, use two circles:



$1 < x \leq 6$

x is greater than 1, but less than or equal to 6.

Solving one step equations/inequalities

To solve any equation or inequality we need to do the inverse of the operation that we see.

$t + 4 = 10$
$-4 \quad -4$
$t = 6$

The inverse of add is subtract and vice versa.

$c - 3 > 6$
$+3 \quad +3$
$c > 9$

$6y < 30$
$\div 6 \quad \div 6$
$y < 5$

The inverse of multiply is divide and vice versa.

$\frac{m}{7} = 4$
$\times 7 \quad \times 7$
$m = 28$

Solving two step equations/inequalities

To solve a two step equation or inequality we need to complete 2 inverse calculations in a specific order.

$6y + 2 = 32$
$-2 \quad -2$
$6y = 30$

Subtract first because the 2 is separate from the y.

$\div 6 \quad \div 6$
$y = 5$

Divide because it is the inverse of multiplying.

$\frac{w-5}{3} \geq 4$
$\times 3 \quad \times 3$
$w - 5 \geq 12$

Multiply first because the entire expression is divided by 3.

$+5 \quad +5$
$w \geq 17$

Add because it is the inverse of subtracting.

Solving equations with brackets

We must expand the bracket first and then solve by doing the inverse of the operations. We use the same method for inequalities.

$3(2x + 5) = 39$

Expand brackets first.

$6x + 15 = 39$
$-15 \quad -15$
$6x = 24$

The inverse of +15 is -15.

$\div 6 \quad \div 6$
$x = 4$

The inverse of x 6 is ÷6.

Solving with unknowns on both sides

To solve an equation or inequality with unknowns on both sides we need to collect all of the same terms together, still by looking at the inverse.

$5x - 20 \leq 3x + 4$
$-3x \quad -3x$
$2x - 20 \leq 4$
$+20 \quad +20$
$2x \leq 24$
$\div 2 \quad \div 2$
$x \leq 12$

We subtract 3x from both sides because it is the smaller term of x.

Then solve like a normal two step equation.

$2x - 10 = 5x + 2$
$-2x \quad -2x$
$-10 = 3x + 2$
$-2 \quad -2$
$-12 = 3x$
$\div 3 \quad \div 3$
$-4 = x$

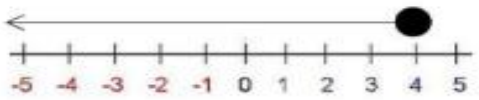
We subtract 2x from both sides because it is the smaller term of x.

Then solve like a normal two step equation.

Top tip: Always subtract/add the smaller number of terms to avoid getting a negative term at the end.

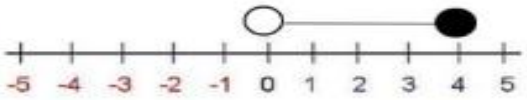
Solve this inequality and represent your answer on a **number line:**

$5x - 6 \leq 14$
$+6 \quad +6$
$5x \leq 20$
$\div 5 \quad \div 5$
$x \leq 4$



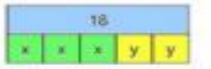
Solve this inequality and represent your answer on a **number line:**

$4 < 3x + 1 \leq 13$
$-1 \quad -1$
$3 < 3x \leq 12$
$\div 3 \quad \div 3$
$1 < x \leq 4$



Simultaneous equations are when **more than one equation** are given, which involve **more than one variable**. The variables have the **same value** in each equation.

Solve by subtraction



$x = 4$
$y = 3$

$3x + 2y = 18$
$- \quad x + 2y = 10$

$2x = 8$
$\div 2 \quad \div 2$
$x = 4$

$x + 2y = 10$
$(4) + 2y = 10$
$-4 \quad -4$
$2y = 6$
$\div 2 \quad \div 2$
$y = 3$

Solve by addition

$3x + 2y = 16$
$+ \; 6x - 2y = 2$

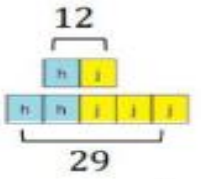
$9x = 18$
$\div 9 \quad \div 9$
$x = 2$

$3x + 2y = 16$
$3(2) + 2(y) = 16$
$6 + 2y = 16$
$-6 \quad -6$
$2y = 10$
$y = 5$

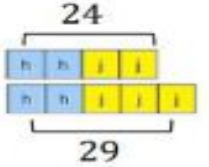
Solve by adjusting one

$h + j = 12$
$2h + 2j = 29$

No equivalent values



$2h + 2j = 24$
$2h + 2j = 29$



By proportionally adjusting one of the equations – now solve the simultaneous equations choosing an addition or subtraction method

Songwriting

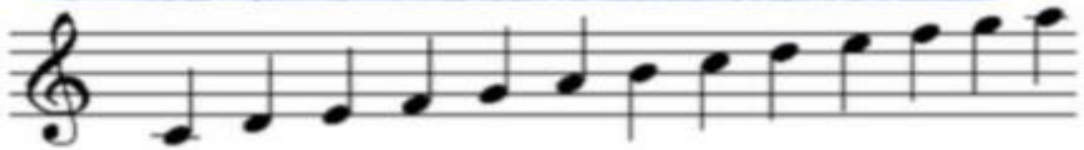
Keywords

- **Structure** - How the parts of a song are ordered.
- **Riff** - A repeating pattern of notes, normally played on a guitar or bass.
- **Hook** - A short memorable melody normally heard in the chorus.
- **Verse** - A section of a song that repeats but the lyrics often change.
- **Chorus** - A second of a song that repeats with the same lyrics each time. Often the catchy and memorable part of the song.
- **Chord** - 2 or more notes played at the same time.
- **Lyrics** - The words sung in a song.
- **Composition** - When you write a song.

SHARP #

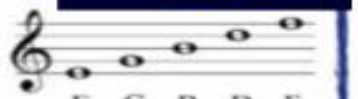
FLAT ♭

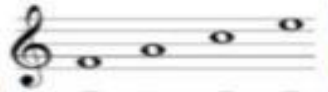
NATURAL ♮



The Elements of Music

- **Tempo** (Speed)
- **Timbre** (Sound of the Instrument)
- **Pitch** (High or Low Notes)
- **Dynamics** (Loud or Soft
- **Texture** (Layers of Music)
- **Duration** (Length of Notes)
- **Silence** (No Sound)
- **Structure** (Order of Sections)
- **Rhythm** (Long and Short Notes)



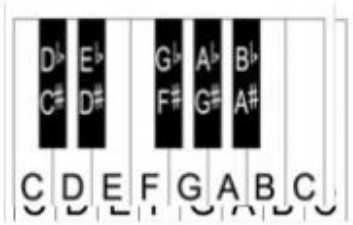


Symbol	Name	Length
	Minim	2 Beats
	Crotchet	1 Beat
	Quaver	½ Beat
	Pair of Quavers	2 x ½ Beat
	Rest	1 Beat

Year 9 Terms 3 & 4: Music for Moving Image

Key Words

Ostinato
Syncopation
Sequence
Imitation
Inversion
Pedal Note
Dissonance
Chromaticism
Cluster Chords
Leitmotif
Mickey Mousing



Musical Elements

Dynamics	(volume)
Rhythm	(duration of notes)
Tempo	(speed)
Context	(background info)
Structure	(sections)
Melody	(organisation of pitches)
Instrumentation	(instruments & voices)
Texture	(layers)
Harmony	(chords & progressions)
Tonality	(key)

Composers & Pieces

- John Williams
- Hans Zimmer
- Rachel Portman
- Jerry Goldsmith
- Danny Elfman
- Angela Morely
- Bernard Herman
- Enio Morricone
- Ramin Djawadi

Film Music Genres studied

Horror, Romantic
Sci-fi / Futuristic, Nature documentaries
Video games

Instruments & Techniques

Strings	(Violin, Viola, Cello, Double Bass)
Pizzicato	(plucking strings)
Woodwind	(Flute, oboe, clarinet, bassoon)
Brass	(Trumpet, French Horn, Trombone, Tuba)
Percussion	(Timpani, Bass drum, Snare drum, triangle, maracas, bells)
Synthesisers	(computer generated sounds & FX)

PE Knowledge Organiser

FITNESS TESTING

POWER

Vertical jump

Equipment: Wall, tape measure, chalk

Usually measured in: cm

MUSCULAR STRENGTH

Grip dynamometer

Equipment: Grip dynamometer

Usually measured in: KgW

FLEXIBILITY

Sit and reach

Equipment: Sit and reach box

Usually measured in: cm

SPEED

35-metre sprint

Equipment: tape measure and stopwatch

Usually measured in: seconds (s)

Component of fitness	Fitness test
Flexibility	Sit and reach
Strength	Grip Dynamometer
Aerobic endurance	Multi-stage fitness test Forestry step test
Speed	35-metre sprint
Speed and agility	Illinois agility run
Power	Vertical jump test
Muscular endurance	1-minute press-up test 1-minute sit-up test
Body composition	Body mass index (BMI) Bioelectrical impedance analysis (BIA) Skinfold testing – Jackson-Pollock nomogram method

BODY COMPOSITION

Body Mass Index (BMI)

Equipment: Scales and tape measure

Usually measured in: kg/m^2

Bioelectrical Impedance Analysis (BIA)

Equipment: BIA analyser and a mat

Usually measured in: % body fat

Skinfold test

Equipment: Skinfold callipers

Usually measured in: % body fat

AEROBIC ENDURANCE

Multistage fitness test

Equipment: Bleep test CD, tape measure, cones

Usually measured in: ml/kg/min

Forestry step test

Equipment: Step (Males = 40cm high / Females = 33cm high), metronome, stopwatch.

Usually measured in: ml/kg/min

SPEED AND AGILITY

Illinois agility test

Equipment: cones, tape measure, stopwatch

Usually measured in: seconds (s)

MUSCULAR ENDRUANCE

One-minute sit-up test

Equipment: A mat and a stopwatch

Usually measured in: sit-ups per minute

One-minute press-up test

Equipment: A mat and a stopwatch

Usually measured in: press-ups per minute

War: When people disagree Knowledge Organiser

RS

NEED TO KNOW WORDS

Justice	A situation where people are treated fairly or correctly
Pacifism	The belief that no violence or war can ever be justified
Civilians	People who are not members of the armed forces or other military group
Jihad	To struggle to follow Allah, in some situations this may require the use of violence to prevent further suffering. (lesser Jihad)
War	Armed conflict between two countries or different groups
Just War	A war which is considered morally justified as it follows Thomas Aquinas' 7 rules of Just War.
Justified	When an action is considered good because of the reasons for it or outcome it might produce.

What are the causes of conflict?

The causes of any war are complex. Wars are rarely about just one thing. They can be declared when a state or states act to:

- attack or invade another state, to **gain territory or resources**
- **resist** such an attack or invasion by an aggressor
- **protect another** state from attack by an aggressor
- **impose domination or political change** on another state, or to resist such domination
- **challenge a threat** to 'essential national interests' by another state
- counter perceived threats from a **different ideology, religion or ethnic group**
- defend the **national honour** when under threat

War can also occur internally within a state between organised groups. This is known as **civil war**.

SCAN ME

Who or what are the casualties of conflict?

Estimated number of military and civilian fatalities in major UK conflicts since World War Two

The main casualties of war include:

- servicemen and women who lose their lives or are injured
- civilians who lose their lives or are injured
- civilians who have their families, homes and way of life damaged or destroyed
- damage to the country's infrastructure, eg roads and bridges destroyed
- refugees who have to flee their country of birth to find safety

What does Christianity teach about war and peace?

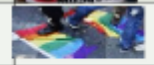
Live by the sword, die by the sword Matthew 26		Love your enemies and pray for those who persecute you. Matthew 5:44
And let him who has no sword sell his mantle and buy one. Luke 22:36	nation shall not lift up sword against nation, neither shall they learn war any more. Isaiah 2:4 SCAN ME	Defend the rights of the poor and orphans; be fair to the needy and helpless. Rescue them from the power of evil men. Psalm 82

What are the two types of Jihad?

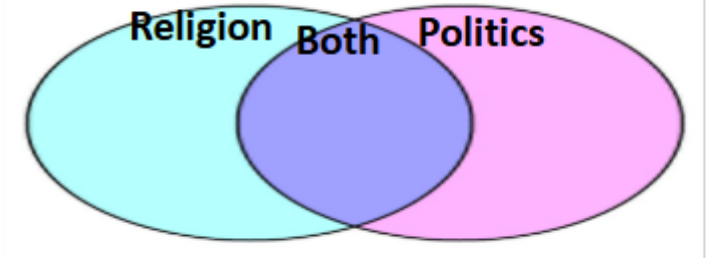
SCAN ME

Greater	Lesser	
The struggle against oneself	Non-violent	Violent
	The word of justice in front of the oppressive ruler	To defend, not attack
Spiritual	Verbal	Physical (military)
Against yourself	Against the oppressive ruler	Against those who fight you

What happens when people disagree?

Key Word		Definition
Persecution		Cruel or unfair treatment, especially because of race or religious or political beliefs.
Schism		A tear or split. In religion it is when the religion splits into opposing groups.
Denomination or sect		A branch or group within a religion. For example, Sunni and Shia in Islam, or Catholic and Protestant in Christianity.
Islamophobia		The fear of, hatred of, or prejudice against the religion of Islam or Muslims in general.
Homophobia		Dislike of or prejudice against gay people.
Holocaust		Also known as the Shoah, between 1941 and 1945, this was the genocide of European Jews during World War II.

What's the difference between religion and politics?



Religion = a system of faith and worship

Politics = the influence of governments or other groups that hold power.

Place these words on a venn diagram.

Voting	Prayer	Crime and punishment
Beliefs	Worship	Government
God	leaders	Laws

Jihad: The struggle of Muslims to make themselves and their society pleasing to Allah.

society, themselves, struggle

Greater jihad: The personal, inward struggle of all Muslims to live in line with the teachings of their faith.

Lesser jihad: The outward, collective struggle to defend their faith, family and country from threat.

MISSIONARY = SOMEONE SENT ON A RELIGIOUS MISSION TO PROMOTE CHRISTIANITY IN ANOTHER COUNTRY OR REGION

APOSTASY = GIVING UP YOUR FAITH

FUMIE = IMAGE OF CHRIST OR VIRGIN MARY (A 'STEPPING' PICTURE)

Whoever kills an innocent life it is as if he has killed all of humanity..

[Surat Al-Ma'ideh 5:32]

[ip]

The Golden Rule

"Do unto others as you would have them do unto you"

Matthew 7:12

Shed not recklessly the blood of another with thy sword, lest the Sword on High falls upon thy neck.

"WHAT IS HURTFUL TO YOURSELF DO NOT DO TO YOUR FELLOW MAN." – TALMUD, SHABBAT 31A (JUDAISM)

HOW ARE PEOPLE PERSECUTED?

WOMEN OF ENGLAND PERSECUTION

'The witch Hunts'

Who? Women in the British Isles

When? The witch hunts lasted from 1645, just after the Battle of Naseby, to 1647.

Where? East Anglia in England

By Whom? By the Christian authorities & a man called Matthew Hopkins 'The Witch-Finder General'

What happened?

People, especially women, who were different in one way, through age, or physical disability, or mental disability, were picked out by those who wanted to believe there was some specific reason why things had gone wrong in the community.

They were accused of being witches & were put on trial. If found guilty they would be executed.

NATIVE AMERICAN PERSECUTION

Who? Native American tribes

When? 1881 - 1888

Where? Southern United States

By Whom? American government

What happened?

This period of American history is known as 'The Trail of Tears'.

The United States government forced native Americans to move from their homelands in the Southern United States to Indian Territory in Oklahoma. Peoples from the Cherokee, Muscogee, Chickasaw, Cheyenne, and Seminole tribes were marched at gunpoint across hundreds of miles to reservations.

AZTECS PERSECUTION

Who? The Aztec Empire

When? February 1519 – August 13, 1521

Where? Aztec Empire (Modern day Mexico)

By Whom? Spanish Conquistadores

What happened?

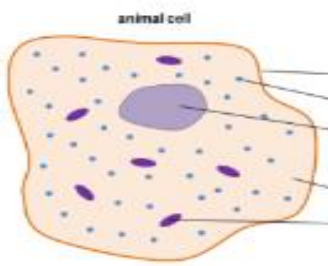
Between 1519 and 1521 the Spanish, under the leadership of conquistador Hernan Cortés, conquered the Aztec Empire.

Cortés arrived with around 500 men, 16 horses, and some cannon. They captured the Aztec king, Montezuma II, & killed him. Fighting began & a second Aztec king was killed. The Spanish conquistadores took the capital city Tenochtitlan (now Mexico City).

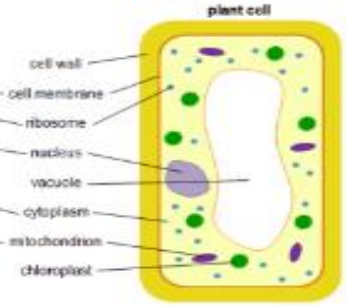
EDEXCEL 9-1 Combined Science | **Biology Topic 1 – Key Concepts** | Required Knowledge **CPG F & H tier: pages 11-14.**

Cell Structure

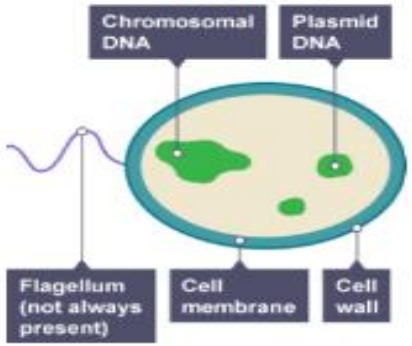
- Animal cell



- Plant cell



-Bacterial cell

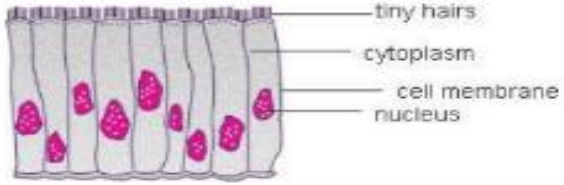


Specialised cells

- Sperm cell

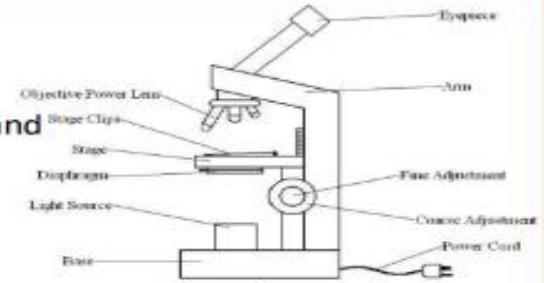
- Egg cell

- Ciliated cell



Making Microscope Slides

1. Take a thin slice of specimen
(to let light through)
2. Put a drop of water on a slide and use tweezers to add the specimen
(water holds it in place)
3. Add a drop of stain
(makes it easier to see)

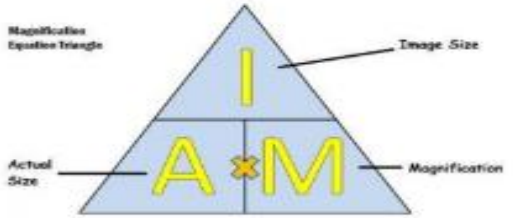


4. Use a mounted needed to lower a cover slip and press down firmly
(so there are no bubbles)
5. Put the slide on the stage and secure using the clips
6. Choose the lowest powered objective lens
7. Use the coarse focusing knob to move the stage up and down while looking through the eyepiece
(to focus the image)
8. Adjust the focus using the fine adjustment knob
9. Put a clear ruler on the state to measure the diameter of your field of view
(this will allow you to estimate the size of the specimen)
10. Repeat focusing with higher-powered objective lens if needed

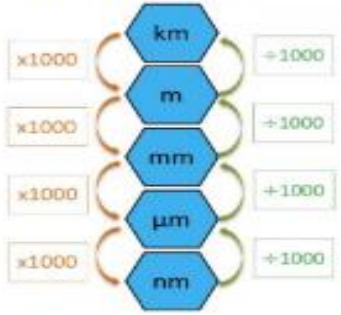
Magnification

- Equation

Magnification = image size ÷ actual size



- Unit conversion

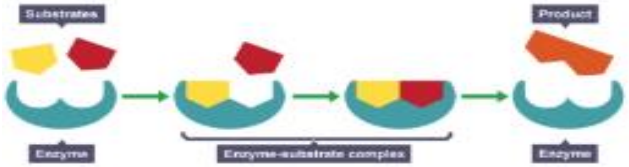


Light vs. Electron Microscopes

Light microscope	Electron microscope
Inexpensive to purchase and operate	Expensive to purchase and operate
Simple and easy specimen preparation	Complex and lengthy specimen preparation
Magnifies up to 2000×	Magnifies over 500 000×
Specimens may be living or dead	Specimens are dead, and must be fixed in a plastic material

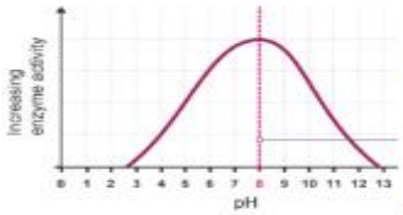
EDEXCEL 9-1 Combined Science| **Biology Topic 1 – Key Concepts**| Required Knowledge | **CPG F & H tier: pages 15-17.**

Enzyme Structure

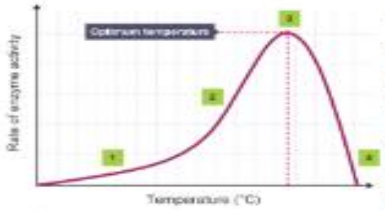


Enzymes speed up chemical reactions where things are split apart or joined together. Enzymes only work with one substrate, they have a high specificity due to the shape of the active site. The substrate's shape has to match the active site's shape exactly. This is called the 'lock and key' model.

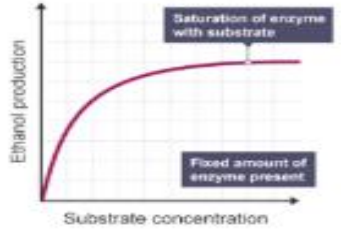
Factors affecting enzymes



As the enzyme experiences conditions away from the optimum the shape of the active site begins to change meaning the substrate can't fit as well and less reactions will occur.



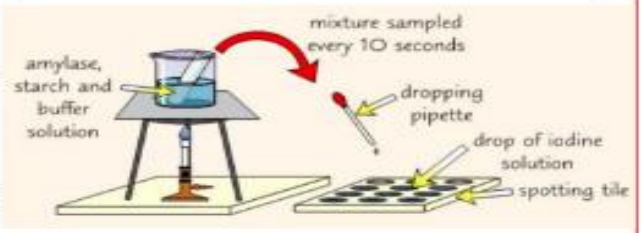
As the enzyme experiences warmer conditions it (and the substrate) will move more quickly, there will be more collisions and more reactions. After the optimum the heat causes the shape of the active site to change in the same way as pH.



As more substrate is added the more collisions there will be with available enzymes and more reactions, up until a certain (saturation point), where all of the enzymes are already working at their maximum rate.

Investigating Enzymes

The enzyme amylase catalyses the break down of the starch into maltose (sugar). The enzyme is added to buffer solutions of different pHs. The time it takes for the enzyme to work is calculated by continuously sampling the mixture and adding it to iodine. Only when all of the starch has been broken down will the iodine stop changing colour. Calculation needed: Rate = 1 ÷ time taken.



Specific digestive enzymes

Carbohydrase

Starch — Glucose

Protease

Protein — Amino acids

Lipase

Lipids — Fatty acids + glycerol

All of these digestive processes can happen in reverse = synthesis.

Investigating Osmosis

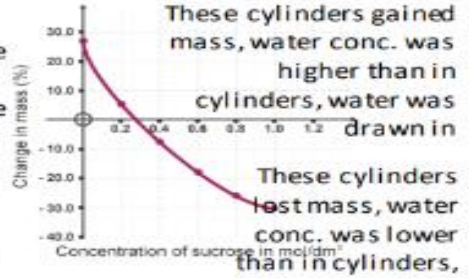
1. Prepare sucrose solutions of 5 concentrations
2. Measure the mass of potato cylinders
3. Put one cylinder into a test tube of each solution
4. Leave for 40 mins
5. Pat dry and reweigh

Results

Calculate percentage change in mass.

Percentage change = final mass – initial mass x100
initial mass

The point where the line crosses the x-axis means the concentration inside and outside of the potato cylinder were the same.



These cylinders gained mass, water conc. was higher than in cylinders, water was drawn in

These cylinders lost mass, water conc. was lower than in cylinders, water was drawn out

Transport

Diffusion

Movement of particles from high concentration to low concentration e.g. carbon dioxide into plant leaves

Osmosis

Movement of water particles across a partially permeable membrane from high water concentration to low water concentration e.g. water into plant roots

Active Transport

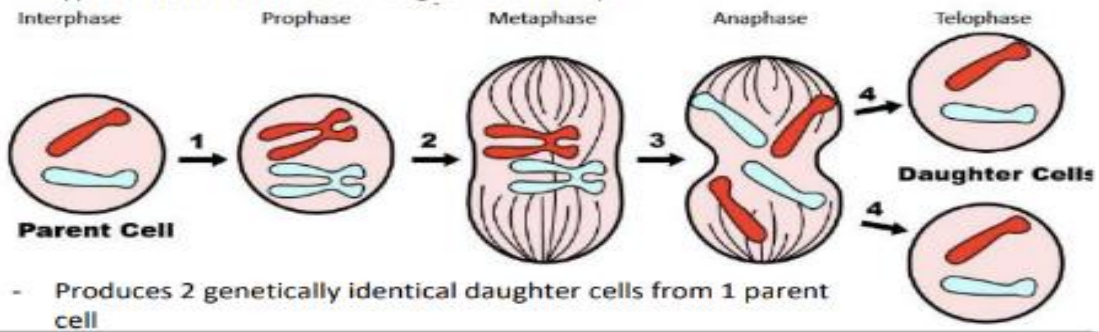
Movement of particles across a membrane from high concentration to lower concentration, using energy transferred during respiration e.g. nitrates into plant roots

EDEXCEL 9-1 Combined Science| **Biology Topic 2 – Cells and Control**| Required Knowledge

CPG F & H tier: pages 20-22. 26.

Mitosis (p20)

- Type of cell division used for growth and repair

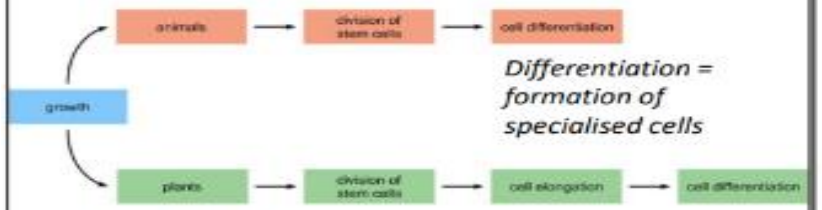


- Produces 2 genetically identical daughter cells from 1 parent cell

Interphase – cell makes extra sub-cellular parts. DNA replication occurs, chromosome copies stay attached.
Prophase – nucleus breaks down and spindle fibres appear. Chromosomes become visible
Metaphase – chromosomes use spindle fibres to line up along the **m**iddle of the cell.
Anaphase – chromosome copies are separated and move **a**part to each end of the cell using spindle fibres.
Telophase – a new nuclear membrane forms around each set of chromosomes.
Cytokinesis – new cell membrane forms to separate the 2 daughter cells.

IPMATC

Growth (p21)

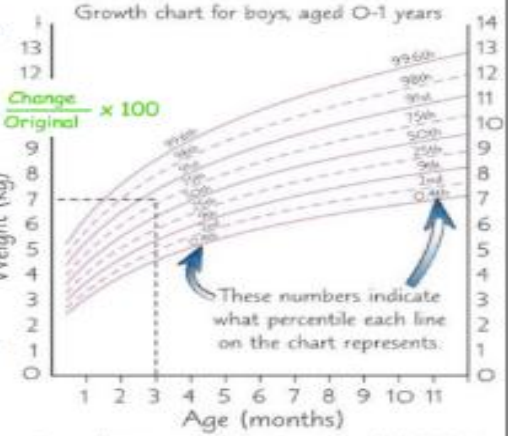


Differentiation = formation of specialised cells

- Measure growth using percentage change

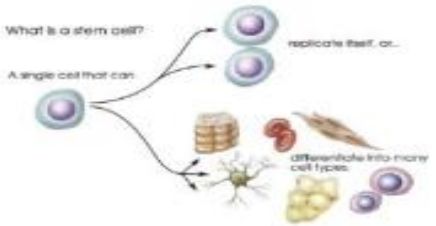
Percentage change = $\frac{\text{Change}}{\text{Original}} \times 100$

- Or using percentile charts which divide a measurements from a large group into 100 equal sections →



E.g. a three-month-old who weighs 7 kg is just above 75th percentile — roughly 75% of three-month-olds are lighter and 25% are heavier.

Stem Cells (p22)

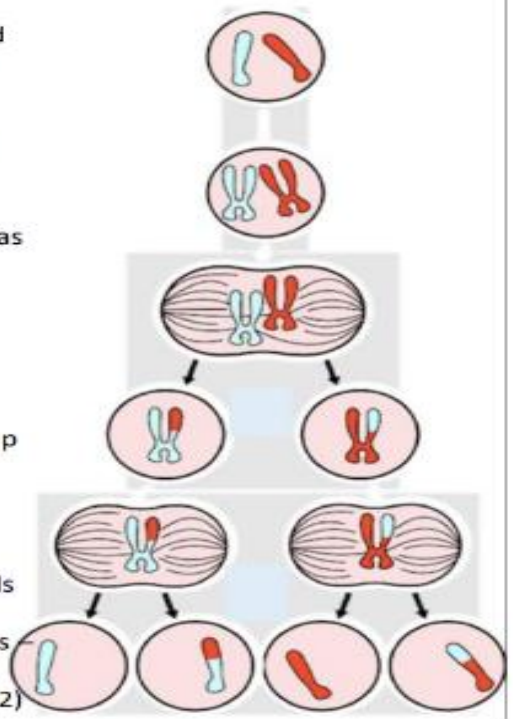


- Embryonic stem cells found in embryos can differentiate into any specialised cell
- Adult stem cells are limited in the type of cell they can differentiate into
- Lots of potential uses
- Ethical issues

- Plant stem cells called meristem cells are found in shoots and roots and can differentiate into any cell type

Meiosis (p26)

- Type of cell division used to form gametes (sperm and egg cells)
- Produces 4 genetically different daughter cells from 1 parent cell
- The chromosomes are copied in the same way as mitosis
- Pairs of copied chromosomes line up along the middle of the cell
- The pairs separate
- The chromosomes line up along the middle of the cell again
- The copies within each pair then separate
- This leaves 4 haploid cells (half of the original number of chromosomes – in this diagram 1 chromosome instead of 2)

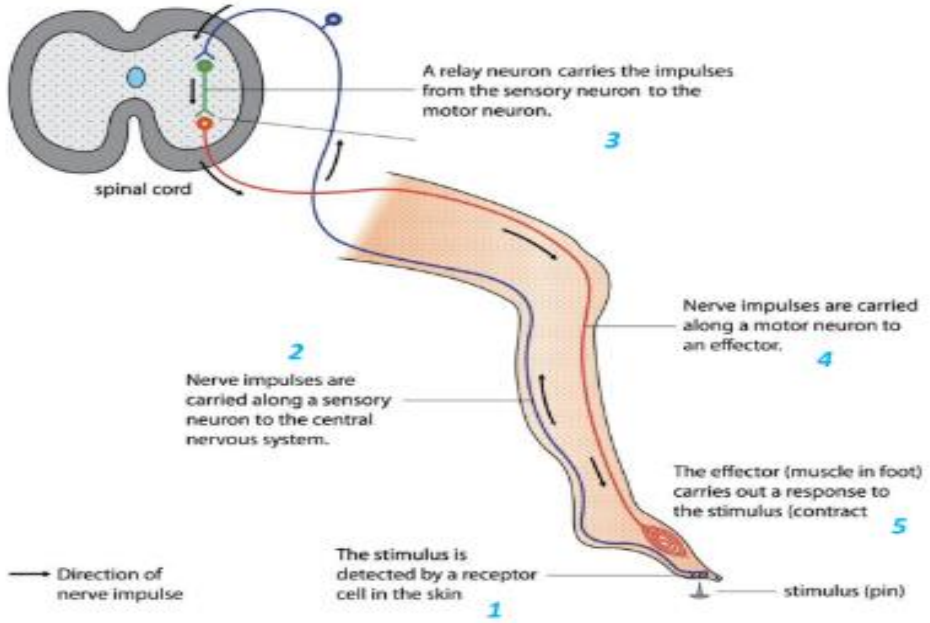


EDEXCEL 9-1 Combined Science | **Biology Topic 2 – Cells and Control** | Required Knowledge

CPG F & H tier: pages 23- 24.

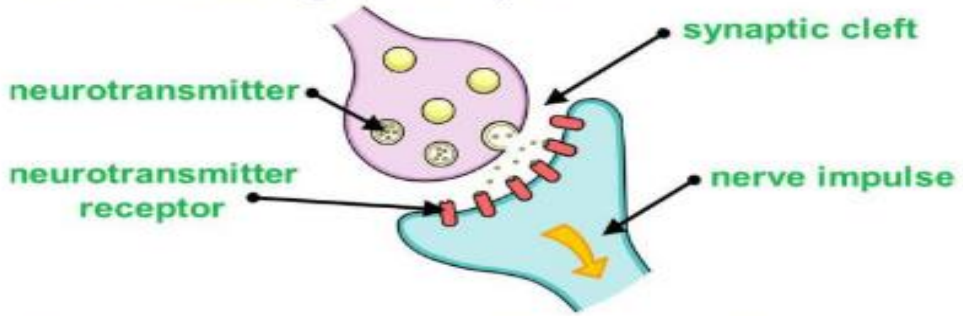
Reflexes (p24)

- An automatic response to a stimulus



Synapses (p24)

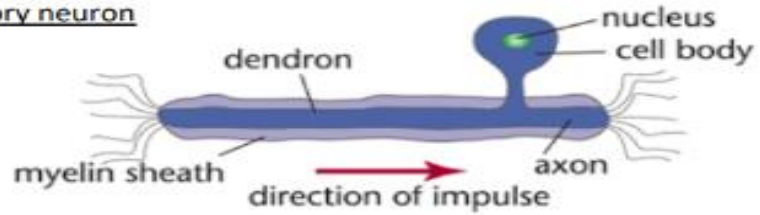
A synapse is a junction between two neurones across which electrical signals must pass.



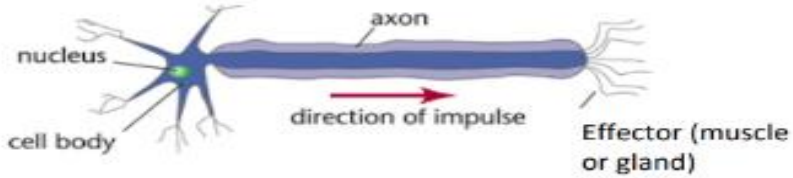
Neurotransmitter molecules diffuse from vesicles towards the neurotransmitter receptors, moving from an area of high concentration to low concentration.

Nervous System (p23)

- Central nervous system = brain and spinal cord
- Peripheral nervous system = all other neurons (nerve cells) around the body, including sensory motor and relay neurons
- Sensory neuron



- Motor neuron



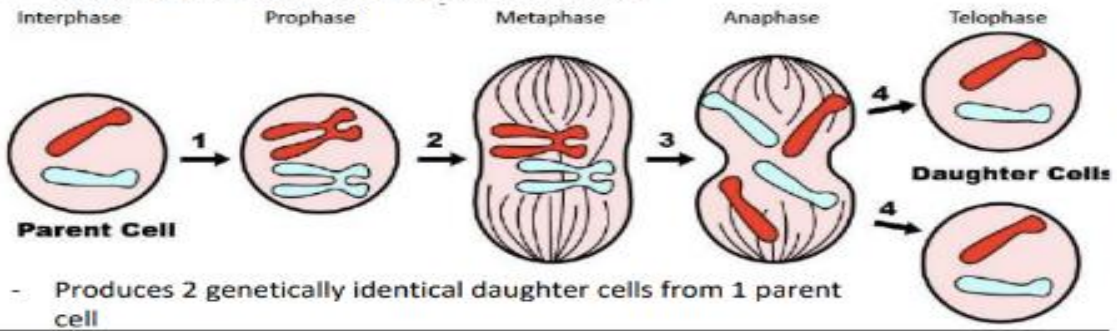
Don't forget to try the revision questions for topics 1 & 2 on page 25!

EDEXCEL 9-1 Biology| **Topic 2 – Cells and Control**| Required Knowledge

CPG Biology: pages 24-26. 32.

Mitosis (p24)

- Type of cell division used for growth and repair

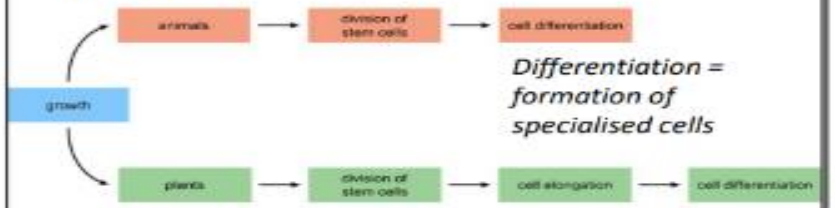


- Produces 2 genetically identical daughter cells from 1 parent cell

Interphase – cell makes extra sub-cellular parts. DNA replication occurs, chromosome copies stay attached.
Prophase – nucleus breaks down and spindle fibres appear. Chromosomes become visible
Metaphase – chromosomes use spindle fibres to line up along the **middle** of the cell.
Anaphase – chromosome copies are separated and move **apart** to each end of the cell using spindle fibres.
Telophase – a new nuclear membrane forms around each set of chromosomes.
Cytokinesis – new cell membrane forms to separate the 2 daughter cells.

IPMAT

Growth (p25)

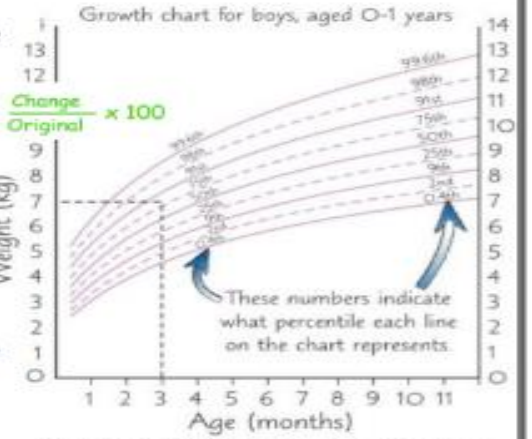


Differentiation = formation of specialised cells

- Measure growth using percentage change

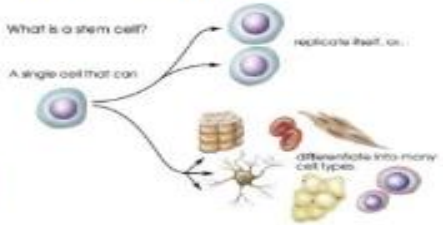
Percentage change = $\frac{\text{Change}}{\text{Original}} \times 100$

- Or using percentile charts which divide a measurements from a large group into 100 equal sections →



E.g. a three-month-old who weighs 7 kg is just above 75th percentile — roughly 75% of three-month-olds are lighter and 25% are heavier.

Stem Cells (p26)

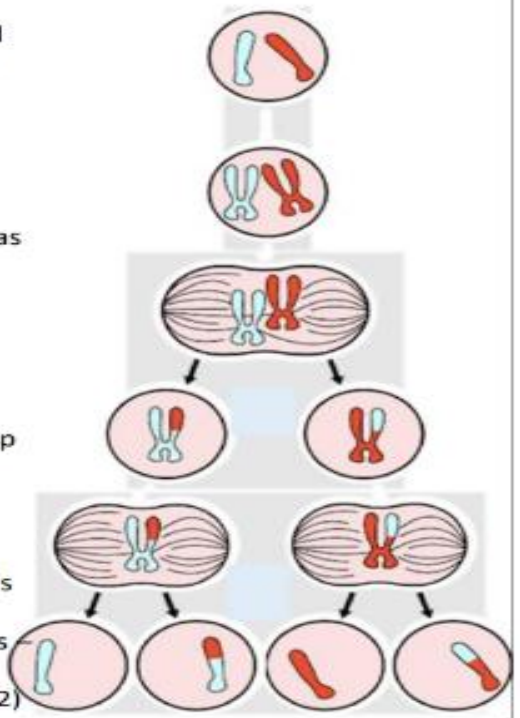


- Embryonic stem cells found in embryos can differentiate into any specialised cell
- Adult stem cells are limited in the type of cell they can differentiate into
- Lots of potential uses
- Ethical issues

- Plant stem cells called meristem cells are found in shoots and roots and can differentiate into any cell type

Meiosis (p32)

- Type of cell division used to form gametes (sperm and egg cells)
- Produces 4 genetically different daughter cells from 1 parent cell
- The chromosomes are copied in the same way as mitosis
- Pairs of copied chromosomes line up along the middle of the cell
- The pairs separate
- The chromosomes line up along the middle of the cell again
- The copies within each pair then separate
- This leaves 4 haploid cells (half of the original number of chromosomes – in this diagram 1 chromosome instead of 2)

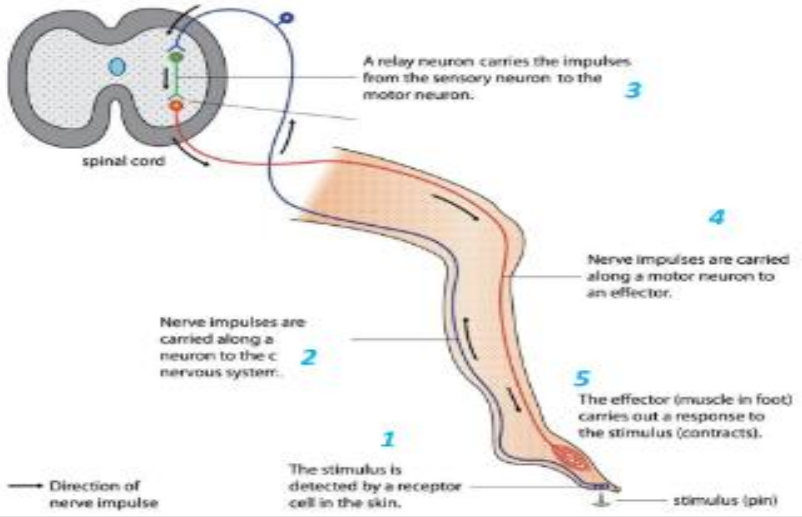


EDEXCEL 9-1 Biology | **Topic 2 – Cells and Control** | Required Knowledge

CPG Biology: pages 27-30.

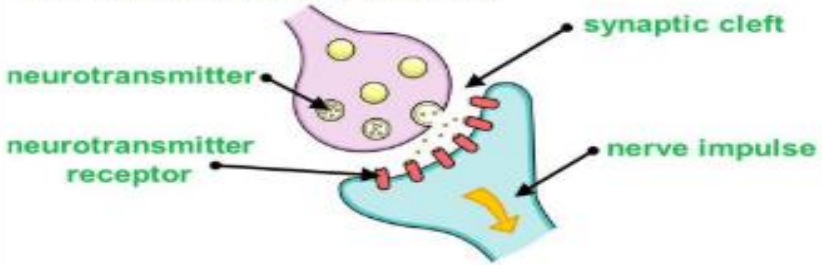
Reflexes (p29)

- An automatic response to a stimulus



Synapses (p29)

A synapse is a junction between two neurones across which electrical signals must pass.

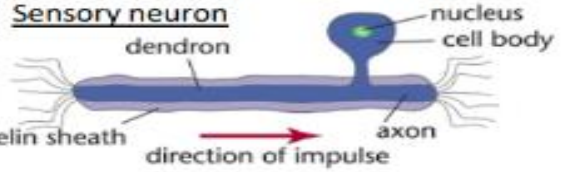


Neurotransmitter molecules diffuse from vesicles towards the neurotransmitter receptors, moving from an area of high concentration to low concentration.

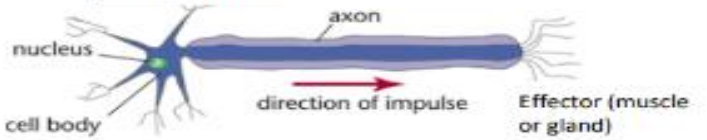
Don't forget to try the revision questions for topics 1 & 2 on page 31!

Nervous System (p27)

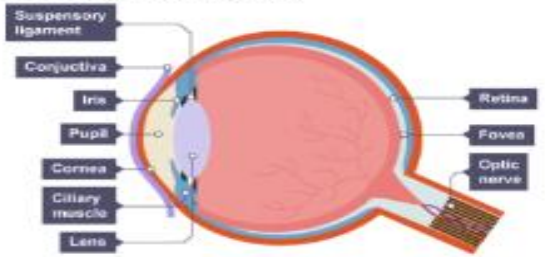
- Central nervous system = brain and spinal cord
- Peripheral nervous system = all other neurons (nerve cells) around the body, including sensory motor and relay neurons
- Sensory neuron



Motor neuron



Eye Structure (p30)



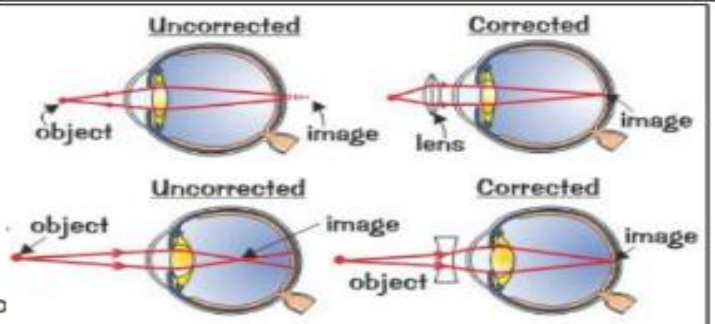
Structure	Function
Cornea	Refracts light - bends it as it enters the eye
Iris	Controls how much light enters the pupil
Lens	Focuses light onto the retina
Retina	Contains the light receptors
Optic nerve	Carries impulses between the eye and the brain

Brain (p29)

- Cerebral hemispheres: largest part, centre of intelligence, memory, speech and consciousness. Left = right
- Cerebellum: controls muscle function, speech, thought, emotions, reading writing and learning
- Medulla oblongata: centre for controlling respiration, circulation and digestion
- Studied using CAT or PET scans.

Eye Problems (p30)

- Long sighted: image forms behind retina. Corrected using convex lens to bring rays together and move image forwards
- Short sighted: image forms in front of retina. Corrected using concave lens to spread out rays and move image back
- Colour blindness: genetic condition with fault cones cells in the retina leading to difficulty differentiating colours. Not able to be corrected.
- Cataracts: a clouding of the lens. Corrected by replacing the lens.



9.11 My school Knowledge Organiser

School – Subjects, uniform and time
Future plans & jobs

The present tense	AR verb	ER verb	IR verb
yo (I)	-o	-o	-o
tu (you)	-as	-es	-es
él/ella (he/she)	-a	-e	-e
nosotros/as (we)	-amos	-emos	-imos
vosotros/as (you all)	-áis	-éis	- ís
ellos/ellas (they)	-an	-en	-en

The future tense in Spanish

You can talk about the future by using the **near future** tense.
Use part of the verb IR + a + the infinitive to say what you are **going** to do.

Este tarde **voy a jugar** al tenis. *This evening I am going to play tennis.*
Mañana Paul **va a hacer** un pastel. *Tomorrow Paul is going to make a cake.*

You can also use the following phrases with an infinitive to refer to the future.
Quiero = I want
Me gustaría = I would like
Quisiera = I would like
Espero = I hope

Adjectives describe nouns e.g. a **black** blazer.

In Spanish, adjectives normally go after the words they are describing e.g. una camisa azul (a blue shirt) and they have to agree with the noun they are describing.

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 chaqueta negr**a** (a black blazer).

If that same noun is also plural, the adjective will be feminine AND plural as well e.g. las medias negras (black tights).

Comparatives – to express more or less than

… es más…adjective…que - is more…adjective…than
… es menos …adjective ….que - is less…adjective… than
… es tan…adjective….como – is as…adjective…as
For example:
*El inglés es **más** interesante **que** la geografía. (English is more interesting than Geography)*
*La historia es **menos** activa **que** la educación física. (History is less active than PE)*
*El francés es **tan** difíil **como** las matemáticas. (French is as difficult as maths).*

9.11 My school -Spanish Vocab List

Cabot Learning Federation

Spanish

¿Cuál es tu asignatura favorita?	What is your favourite subject?
1. El inglés	English
2. El español	Spanish
3. El francés	French
4. El teatro	Drama
5. El dibujo	Art
6. El deporte	PE
7. La informática	Computer Science
8. La música	Music
9. La tecnología	Technology
10. La geografía	Geography
11. La historía	History
12. La religion	RE
13. La educación personal y social	PSHE
14. Las matemáticas	Maths
15. Las ciencias	Science
16. Las humanidades	Humanities
¿Cuál es tu opinión?	What is your opinion?
17. Es	It is
18. Interesante	Interesting
19. Práctico	Practical
20. Útil	Useful
21. Ínutil	Useless
22. Fácil	Easy
23. Difícil	Difficult
24. Aburrido	Boring
25.Emocionante	Exciting
26. Creativo	Creative
27. Importante	Important

¿Qué llevas?	What do you wear?
28. Llevo…	I wear
29. Una chaqueta	Blazer
30. Un jersey	Jumper
31. Una camisa	Shirt
32. Una camiseta	T-shirt
33. Una corbata	Tie
34. Una falda	Skirt
35. Unos calcetines	Socks
36. Unos pantalones	Trousers
37. Unos zapatos	Shoes
38. Unas medias	Tights
¿Cómo es tu uniforme escolar?	What is your school uniforme like?
39. Es…	It is …
40. Feo	Ugly
41. Bonito	Pretty
42. (in)cómodo	(un) comfortable
43. Caro	Expensive
44. Barato	Cheap
45. De moda	Fashionable
46. Pasado de moda	Unfashionable

La jornada escolar	The school day
47. Salgo de casa	I leave home
48. Voy al insti	I go to school
49. Las clases empiezan…	Classes start…
50. Las clases terminan…	Classes end …
51. Dura…	It lasts …
52. El recreo	Break
53. La hora de comer	Lunch
54. Por la mañana	In the morning
55.Por la tarde	In the afternoon

¿Cuáles son las reglas?	What are the rules?
56. (no) se debe	You must(n't)
57. (no) se puede	You can('t)
58. Hay que	You have to
59. Está prohibido	It is forbidden
60. Escuchar en clase	To listen in class
61. Usar el móvil en clase	To use your phone in class
62. Llevar joyas	To wear jewellery
63. Llevar maquillaje	To wear make up
64. Llevar zapatillas de deporte	To wear trainers
65. Dañar las instalaciones	To damage the facilities
66. Respetar el turno de palabra	To wait your turn to speak
67. Comer chicle	To chew gum
68. Hacer los deberes	To do homework

¿Qué quieres hacer en el futuro?	What do you want to do in the future?
69. Quiero / Me gustaría …	I want / I would like …
70. Aprobar mis exámenes	To pass my exams
71. Sacar buenas notas	To get good grades
72. Hacer un aprendizaje	To do an apprenticeship
73. Buscar trabajo	To look for a job
74. Trabajar como voluntario	To work as a volunteer
75. Viajar por el mundo	To travel the world
76. Tener hijos	To have children
77. Casarme	To get married
78. Aprender a conducir	To learn how to drive
79. ¿Qué vas a ser en el futuro?	What are you going to be in the future?
80. Voy a ser …	I am going to be …
81. Médico/a	Doctor
82. Profesor(a)	Teacher
83. Abogado/a	Lawyer
84. Mecánico	Mechanic
85. Fontanero	Plumber
86. Bombero	Firefighter
87. Veterinario	Vet
88. Peluquero	Hairdresser

Textiles Hierarchy of Key words

Tier 3 'Academic' keywords.

Plain seam
analyse
sustainable
embellishment
Woven/ bonded/ knitted
function
Free machine embroidery
develop

Tier 2 Valuable keywords used in most lessons every lesson.

Complementary colours
contrast
environment
fastening
compare
embroidery
equipment
iron
context
appliqué
effect
improve

Tier 1 Basic keywords used in almost every lesson.

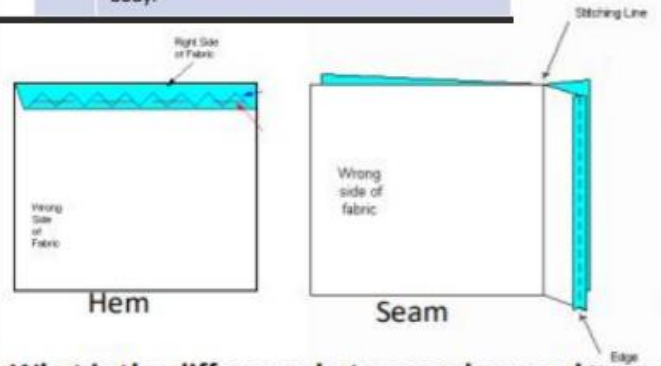
colour
design
shape
machine
pattern
line
Texture
tone
theme
Fabric
thread
sew

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.

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 crackled. Batik is characterised by a unique, nearly pattern-less appearance.

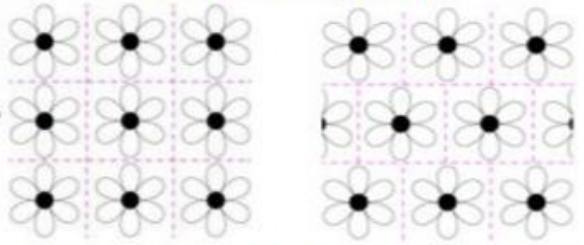


What is the difference between a hem and a seam?

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 6 R's when it comes to sustainability

The motif has been repeated to make two different patterns



plain repeat pattern

brick repeat pattern/ offset repeat pattern

Use these in your writing and speaking

Use connectives to link each paragraph!	**Explain an idea:** • Although • Except • Unless • However • Therefore	**Sequencing:** • Firstly • Secondly • Next • Finally • Since
Adding to: • Furthermore • Also • As well as • Moreover	**Cause and effect:** • Thus • So • Therefore • Consequently	**Contrasting:** • Whereas • Instead of • Alternatively • Otherwise • Then again
To empathise: • Above all • Ultimately • Especially • Significantly	**To compare:** • Likewise • Equally • In the same way • Similarly	**Give examples:** • 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

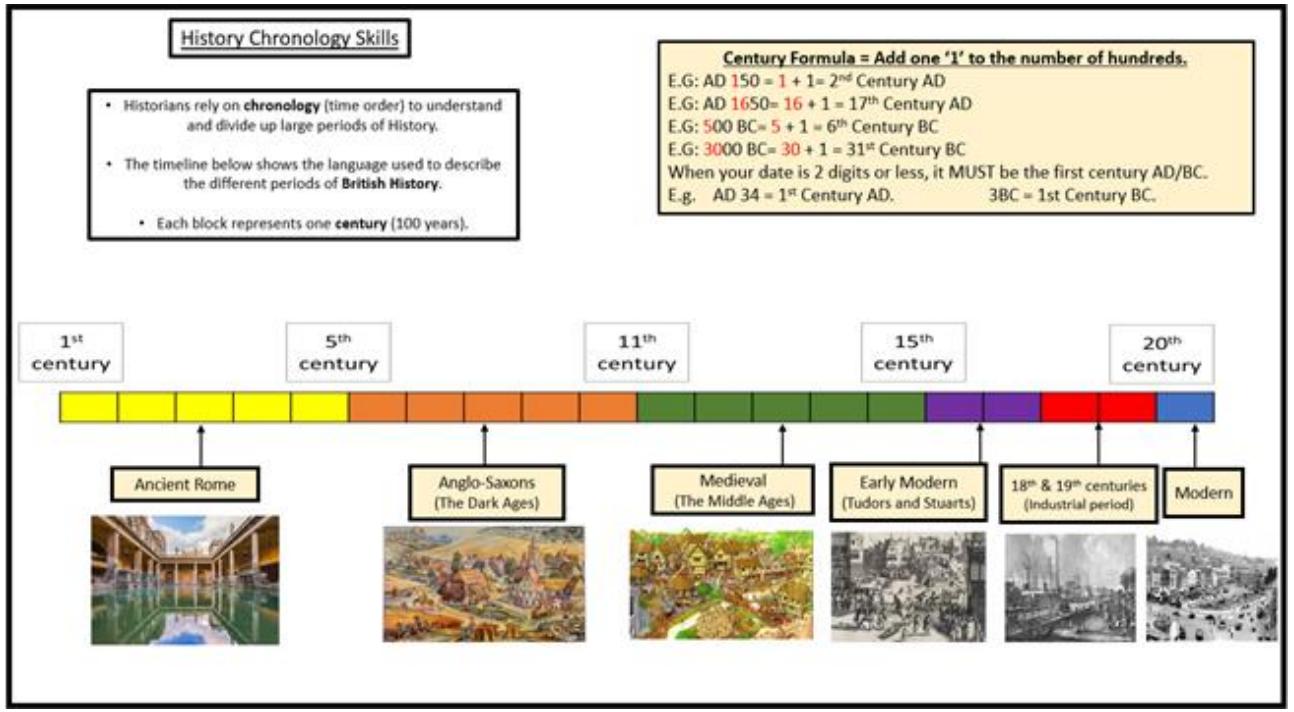
One similarity is...

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…



Use these in your writing and speaking in DT

Design and Technology Keywords

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

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

Key

relative atomic mass
atomic symbol
name
atomic (proton) number

* 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.

©GraphicMaps.com
Barents Sea
Novaya Zemlya (Russia)
Kara Sea
Laptev Sea
Arctic Ocean
NORTH AMERICA
Norwegian Sea
ARCTIC CIRCLE
Ostrova Anzhu (Russia)
worldatlas
Russian Federation
Ural Mts.
Bering Sea
Alaska
European Russia
EUROPE
Lake Baykal
Ostrov Sakhalin (Russia)
Sea of Okhotsk
Kamchatka Peninsula
Aleutian Islands
Aral Sea
Kazakhstan
Caspian Sea
Mongolia
North Korea
Black Sea
Uzbekistan
Kuril Islands (Russia)
Turkey
Turkmenistan
Kyrgyzstan
Tajikistan
ASIA
Sea of Japan (East Sea)
INTERNATIONAL DATE LINE
MONDAY SUNDAY
Lebanon
Syria
MIDDLE EAST
Afghanistan
Japan
Israel
Iraq
Persian Gulf
Iran
Nepal
China
Yellow Sea
South Korea
Pacific Ocean
Jordan
Bahrain
Pakistan
Bhutan
Hong Kong (China)
Kuwait
Qatar
Bangladesh
Macau (China)
East China Sea
Ryukyu Islands (Japan)
Bonin Islands (Japan)
India
Gulf of Tonkin
TROPIC OF CANCER
Saudi Arabia
U.A.E.
Gulf of Oman
Oman
Burma
Laos
Hainan (China)
Taiwan
Okinawa (Japan)
Volcano Islands (Japan)
Red Sea
Bay of Bengal
Yemen
Arabian Sea
Laccadive Sea
Andaman and Nicobar Islands (India)
Thailand
Vietnam
Philippines
Gulf of Aden
Lakshadweep Islands (India)
SOUTHEAST ASIA
South China Sea
Andaman Sea
Brunei
Philippine Sea
AFRICA
Socotra (Yemen)
Sri Lanka
Phuket (Thailand)
Cambodia
Sulu Sea
Malaysia
Gulf of Thailand
Celebes Sea
New Guinea (Indonesia)
EQUATOR
Maldives
0°
Borneo (Indo.)
Singapore
Java Sea
Banda Sea
Indonesia
Sumatra (Indo.)
OCEANIA
British Indian Ocean Territory (UK)
Indian Ocean
Java (Indo.)
Bali (Indo.)
Flores Sea
Savu Sea
East Timor
Arafura Sea
Coral Sea
1000 mi
1000 km
AUSTRALIA
worldatlas
©GraphicMaps.com
60° E
90° E
120° E
150° E
180°
60° N
45° N
30° N
15° N
15° S

Azores (Portugal)
Portugal
Spain
EUROPE
Turkey
ASIA
15° W
Algiers
Tunisia
Mediterranean Sea
Syria
Israel
Iran
Iraq
MIDDLE EAST
Madeira Is. (Portugal)
30°N
Morocco
Cairo
Jordan
Persian Gulf
Canary Is. (Spain)
Algeria
Libya
Egypt
Kuwait
Qatar
Western Sahara
Atlantic Ocean
TROPIC OF CANCER
U.A.E.
Oman
Mauritania
Nile River
Saudi Arabia
Niger
Red Sea
Cape Verde
Senegal
Mali
Arabian Sea
15° N
Dakar
Chad
Eritrea
Yemen
Gambia
Burkina Faso
Benin
Lake Chad
Sudan
Gulf of Aden
Guinea-Bissau
Guinea
Djibouti
Socotra (Yemen)
Togo
Cote D'Ivoire
Nigeria
South Sudan
Ethiopia
Sierra Leone
Accra
Central African Rep.
Somalia
Liberia
Ghana
Gulf of Guinea
Cameroon
Uganda
Indian Ocean
0° EQUATOR
Eq. Guinea
Rwanda
Kenya
Nairobi
Sao Tome & Principe
Dem.Rep. of the Congo
Congo
Lake Victoria
Zanzibar (Tanzania)
800 mi
800 km
Gabon
Burundi
Tanzania
Cabinda (Angola)
Malawi
Seychelles
AFRICA
PRIME MERIDIAN
Lake Malawi
Angola
Comoros
15° S
Zambia
Lusaka
Mozambique Channel
Namibia
Zimbabwe
Mauritius
Botswana
TROPIC OF CAPRICORN
Windhoek
Reunion (France)
Madagascar
Atlantic Ocean
Mozambique
30° S
South Africa
Swaziland
worldatlas
Indian Ocean
Lesotho
Cape Town
60° E
30° W
15° W
0°
15° E
30° E
45° E
©GraphicMaps.com

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/wISEU13mRBE
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					