BRISTOL METROPOLITAN ACADEMY

Knowledge Organisers 2024-25

Year 9 – Term 3

Monday 6th January	Week A
Monday 13th January	Week B
Monday 20th January	Week A
Monday 27th January	Week B
Monday 3rd February	Week A
Monday 10th February	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	Same process as outlined for English above. DT have 5 questions and not 10.
ICT	For term 1, continue to use the KO to do revision/key words etc in your homework books.
Music/Art	For music and art, you will have two practical tasks to complete each term for each subject. These will be found in the question booklets and will be checked by you classroom teacher.

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

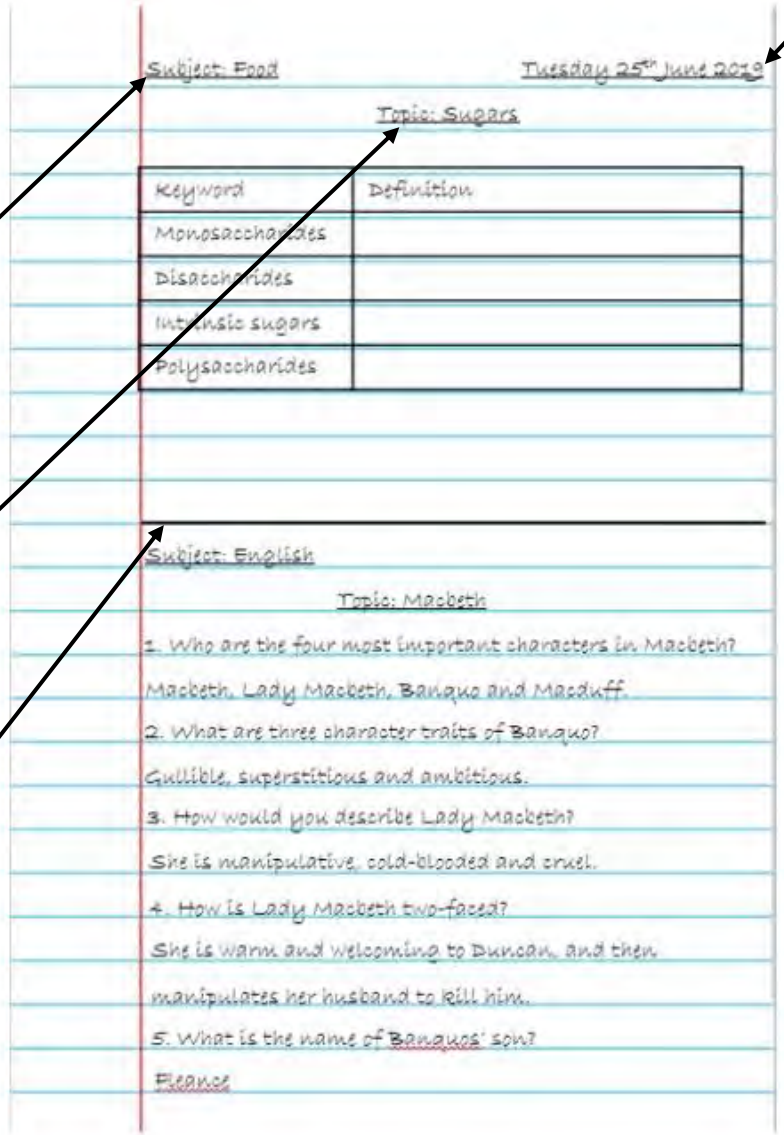
How to present your homework:

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?

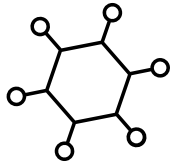
Fleance

Home Learning Strategies to help you revise

Brain Dump

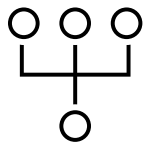
Write down everything you know about o certain topic on a page. Use your KO to add extra notes in a different colour.

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.

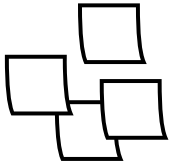
Vocabulary

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?

THE ART OF PROTEST

A **protest** is a public expression of disagreement, towards an idea or action.

A **protest** is a mass group that gather for or against a political cause.

It often consists of walking in a mass march formation, beginning with or meeting at a designated endpoint, or rally, to hear speakers.

Symbol- in art and visual language is an image that respresents an idea. For example the dove is recognised as a symbol of peace.

Frank Cieciorka

April 26, 1939 – November 24, 2008)

He was an American graphic artist, painter, and activist.

Member of the socialist party.

Created many protest posters and badges for multiple causes.

Content: In this project you will learn about protest art as well as some graphic design and communication skills.
Knowledge – learn about different artists who have created protest art and how to design a poster or flyer
Understand – how and why artists and designers protest art.
Skills – You will learn how to analyse artists work, improve drawing skills, typography and font design, lino printing skills
Outcome – Posters, flyers, badges that could be used to protest or raise awareness of a cause or issue.

Title: All Power to the People

Material:
- poster
- work on paper

Date: 1995
- PAPER
- SCREEN PRINT

Dimensions:
22 in HIGH x 17 in WIDE

KEYWORDS
Protest
Raise Awareness
Discrimination
Human Rights
Allyship
Cause
Graphic Design
Symbol
Typography
Font
Lino Print
Lino cutting tool
Printing roller
Printing Ink

YEAR 9 TERMS 1-3 KNOWLEDGE ORGANISER
PROTEST ART PROJECT

Network Hardware

Modem – Allows a device to connect to the internet.

Network switch – Connects devices together using ethernet cables.

Wireless Access Point – Allows devices to send and receive data over the air (WiFi).


Wireless access Point


Modem


Switch

Internet vs WWW

Internet – A global network of connected computers. Allows you to access:

- Cloud storage
- Streaming services (e.g. Netflix)
- Online gaming
- Mobile apps like TikTok



World Wide Web – A collection of all the *web pages* (e.g. Facebook, Wikipedia) that are linked together using hyperlinks that start with "www.". You use the internet to access the World Wide Web.

Cyber security:

Malware – Malicious (hostile/bad) software

Types of Malware:

Virus – Malware that is attached to a program or file.

Worms – Malware capable of replicating itself to spread between computers without the user's help.

Trojans – Malware that disguises itself as a legitimate program e.g. a game.

Spyware – Malware that collects information from the computer without the user's consent, e.g. passwords or bank details.

Protecting your computer:

Firewall – controls the flow of data in and out of a

Encryption – Scrambles or obscures information to

Strong passwords – Prevent unauthorised ac

Physical security e.g. locked doors – prevents entry to the building containing the servers.

Anti malware software:

- ✓ Scans computer for malicious software
- ✓ Removes or quarantines malicious software
- ✓ Prevents malware from spreading to other files

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

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.

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

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

Year 9 D&T – Pewter Project

What is pewter?

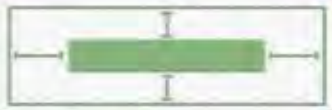
- **Pewter is a malleable metal alloy consisting of tin, antimony, copper, bismuth, and sometimes silver. Modern pewter consists of are 94% tin.**
- **Pewter has a low melting point (around 170–230 °C) making it ideal for melting on a chip forge and brazing hearth and casting**

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.

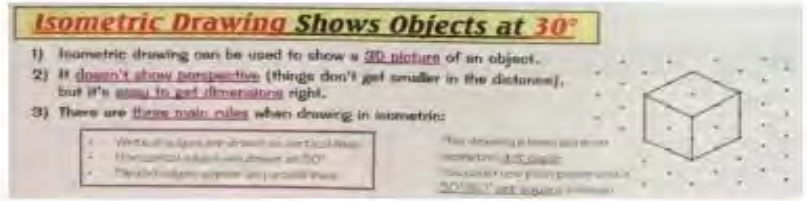
DELETE PART – Use this tool to delete separate lines and objects.

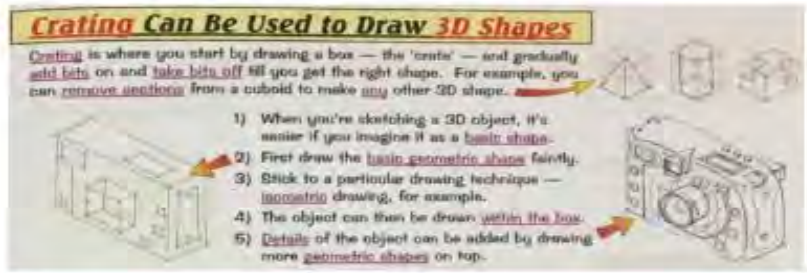
DELETE ANY – Use this tool to delete whole lines and objects.

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.

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,

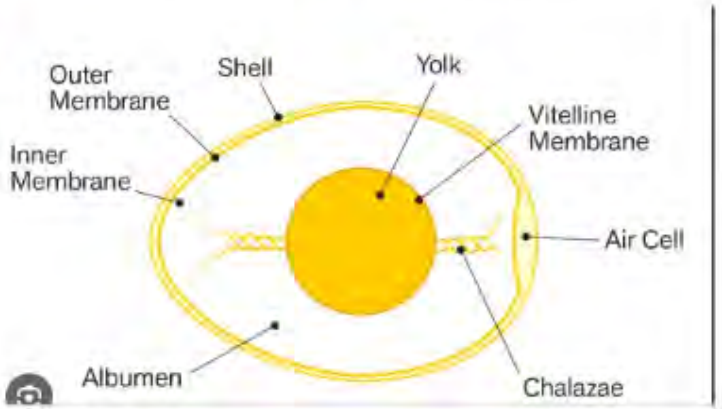
Proteins can denature when:

They are heated

They come into contact with acidic/alkaline ingredients

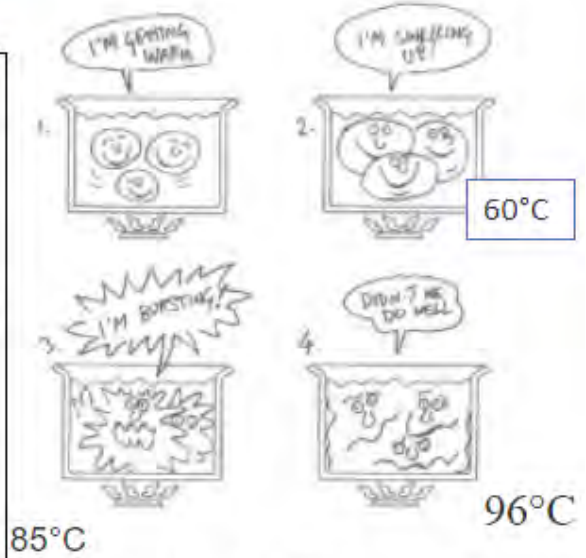
They are whisked, beaten or kneaded

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.

9.10 Leisure and heathy living

3 time frames
Infinitives
Time phrases

opinions
justifications
describing and comparing

Cabot Learning Federation

Verbs and the present tense in French

The infinitive

When you look up a verb in the dictionary, you find its original, unchanged form which is called the ***infinitive*** (manger, boire, jouer, visiter, habiter, aller etc.). The infinitive ends in **–re**, **-er** or **–ir.**

Forming the present tense in French

Take off the last 2 letters of the infinitive (**–re**, **-er** or **–ir)** and add the following endings depending on the pronoun:

*Important! There are some key irregulars to learn which don't follow this pattern – aller (as shown here), être, avoir and faire are really important!

	RE verb	ER verb	IR verb
Je (I)	-s	-e	-s
tu (you)	-s	-es	-s
il/elle (he/she)		-e	-t
nous (we)	-ons	-ons	-issons
vous (you all)	-ez	-ez	- issez
ils/elles (they)	-ent	-ent	- issent

Verbs and the near future tense in French

You can talk about the future by using the **near future** tense.

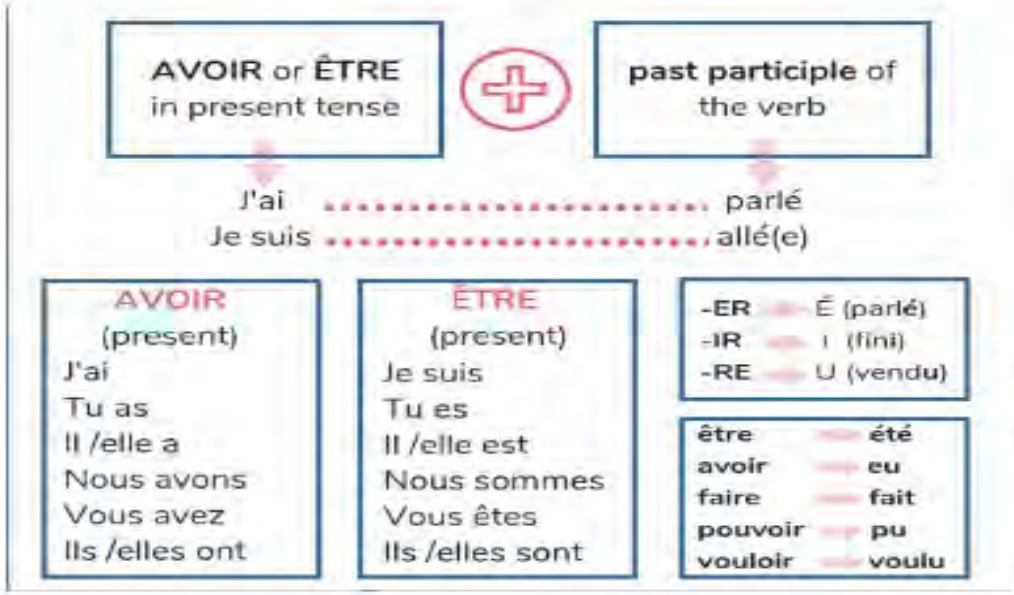
Use part of the verb ALLER + a + the infinitive to say what you are **going** to do.

Ce soir je vais jouer au tennis. *This evening I am going to play tennis.*

Demain Paul va a faire un gateau. *Tomorrow Paul is going to make a cake.*

Aller (to go)	
Je vais	I am going
Tu vas	You are going
Il/elle va	He /she/one is going
Nous allons	We are going
Vous allez	You (lot) are going
Ils/elles vont	They are going

Verbs and the past tense in French



9.10 Leisure and heathy living

3 time frames
Infinitives
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Cabot Learning Federation

1.Expressing FUTURE intentions :
J'ai l'intention de + infinitive (I plan to/ I intend to ...)
Je voudrais + infinitive (I would like to...)

2.Using infinitives after j'aime/je m'aime pas/je déteste/je préfère :
You can also use an infinitive after opinion verbs such as aimer, détester and préférer. They are usually translated with a **gerund** (a verb ending with -ing) in English:
J'aime *habiter* à Newcastle - I like living in Newcastle.
Tu préfères *jouer* au foot ou au tennis? - Do you prefer playing football or tennis?
Je déteste *boire* du café parce que c'est dégoûtant – She hates drinking coffee because it's disgusting.

3.Opinions
J'aime - I like
J'aime beaucoup- I like **a lot**
Je n'aime pas beaucoup- I don't like **much**
Je préfère – I prefer
Je déteste - I hate
Je ne peux pas supporter - I can't stand

4.Justification
Parce que - because
Ainsi– therefore/so
Par conséquent - consequently

5.Comparisons
Plus…..que –more…than
Moins…que - less…than
Aussi…que – as…as

6.Superlative
Le/la plus – the most
Le/la moins – the least
Le/la mieux – the best
Le/la pire – the worse

7.Time phrases
Normalement - normally
D'habitude - usually
Généralement - generally
Quelquefois – sometimes

Ensuite – next
Rarement - rarely
Le weekend prochain– next weekend
La semaine prochaine - next week

Le weekend dernier - last weekend
Le mois dernier - last month
L'été dernière - last summer
Pendant le confinement - during lockdown

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9.10 Leisure and Healthy Living FRENCH

ACTIVITY VERBS	
aller	To go
jouer	To play
manger	To eat
visiter / rendre visite	To visit / pay a visit
faire	To do
danser	To dance
boire	To drink
regarder	To watch
écouter	To listen
lire	To read
acheter	To buy
finir	To finish
écrire	To write
dormir	To sleep
nader	To swim
rester	To stay
voyager	To travel
chanter	To sing
envoyer des textos	To text
contacter	To contact
appeler	To call
cuisiner	To cook
aider	To help
travailler	To work
se relaxer	To relax
se reposer	To rest

INTENSIFIERS			
très	very	extrêmement	extremely
tellement	so	trop	too
assez	quite	vraiment	really
un peu	a bit	pas du tout	not at all

HEALTHY LIVING VERBS	
se coucher	To go to bed
avoir envie de	To fancy (feel like)
trouver (un emploi)	To get a job
courir	To run
se droguer	To take drugs
se soûler	To get drunk
se sentir bien/mal	To feel well/unwell
être au régime	To be on a diet
être en forme	To be in shape
garder la forme	To stay in shape
eviter	To avoid
fumer	To smoke
essayer (+ infinitive)	To try (to do something)
se lever	To get up
s'inquiéter	To worry
se sentir	To feel
avoir mal	To have pain
avoir sommeil	To feel sleepy
surmonter	To overcome

LES GENS	PEOPLE
avec	with
mes ami(e)s	my friends
mon frère	my brother
ma sœur	my sister
mes parents	my parents
ma famille	mi family
seul	alone

ENDROITS	PLACES
Chez moi	At my home
Chez mon ami(e)	At my friend's house
Dans ma chambre	In my bedroom
Dans le salon	In the living room
Dans le jardín	In the garden
Dans mon quatier	In my neighbourhood
En Angleterre	In England
À l'étranger	Abroad
En ville	In town
À la campagne	In the countryside
À la montagne	In the mountains
Au bord de la mer	At the coast

ADJECTIVES	
relaxante	relaxing
agréable	pleasant
sérieux / sérieuse	serious
sportif / sportive	sporty
enrichissant / enrichissante	enriching
amusant / amusante	fun
passionnant / passionnante	exciting
rapide	quick
énervant / énervante	annoying
gratifiant / gratifiante	rewarding
ennuyeux / ennuyeuse	boring
facile	easy
difficile	difficult
intéressant / intéressante	interesting
bon/ bonne pour la santé	healthy
mauvais/ mauvaise pour la santé	unhealthy

Importance of oceans:

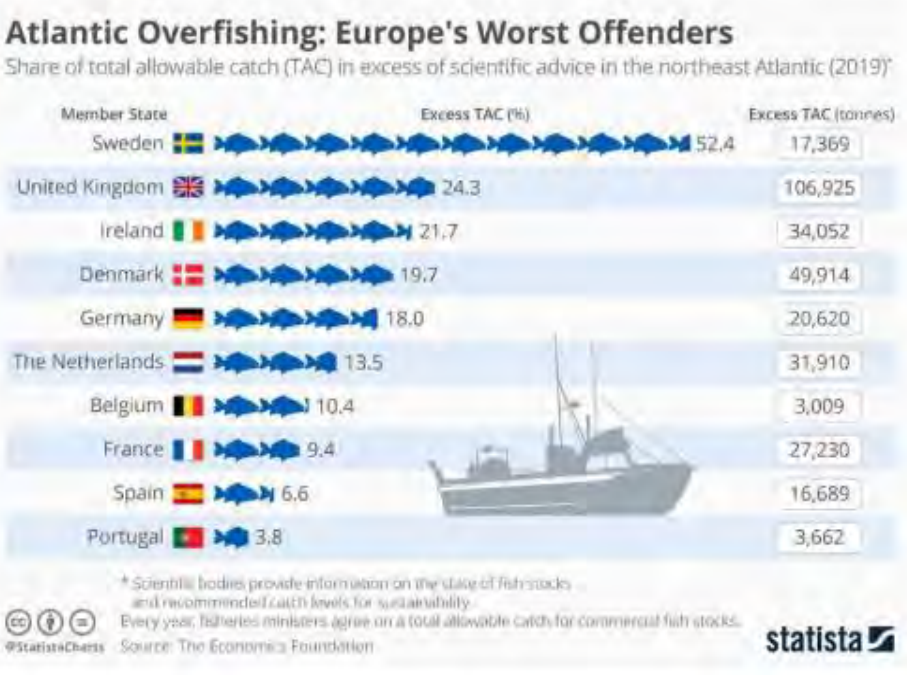
The air we breathe	Produce 50% of the world's oxygen.
Climate regulation	Oceans are important to transfer heat from the equator to poles.
Job creation/economy	350 million jobs globally are linked to the ocean.
Food	1 billion people depend on fish for their protein.
Carbon store	Oceans store 5 x more carbon than the rainforests.

Great Pacific Garbage Patch

+ largest of five offshore plastic accumulation zones.
+ each patch is formed within a ***gyre.***
+ gyre = a large circular ocean current
+ 1.15 – 2.41 million tonnes of plastic enter the ocean each year from rivers.
+ more than 50% of this plastic does not sink as it is less dense than water.
+ the plastics are trapped in the currents and don't leave until they are broken down into smaller microplastics.
+ microplastics find their way into the food chain.

Year 9 Geography Oceans (1)

Overfishing	catching more fish than the natural system can replace.
Sustainable fishing	Respecting habitats and leaving enough fish in the ocean.
1900	Oceans contained 6 times more fish than today.
58%	Oceans fished to their limits
31%	Oceans over-fished
$35 billion	Amount spent by governments globally to support fishing.



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)

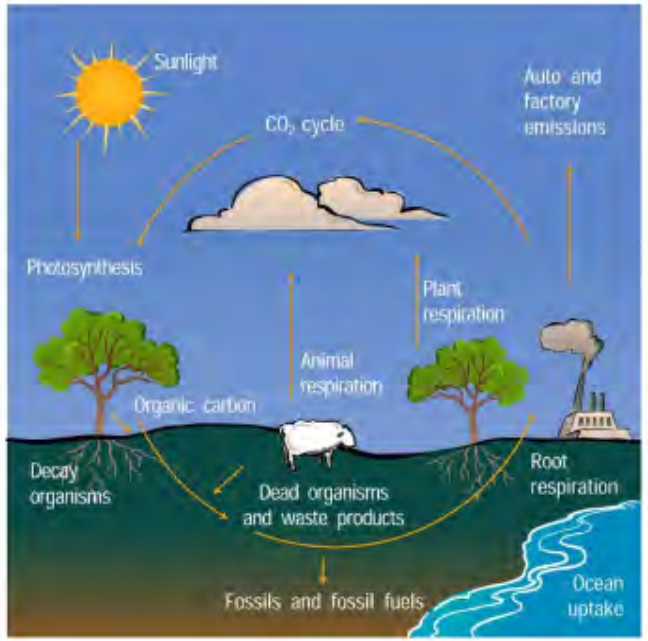
Ocean acidification – a change in properties of ocean water that can be harmful for plants and animals.

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

9.10 Leisure and heathy living vocabulary list

Die Aktivitäten	activities
gehen/fahren	to go
spielen	to play
essen	to eat
besuchen	to visit
machen	to do
tanzen	to dance
trinken	to drink
fernsehen	to watch TV
hören	to listen
lesen	to read
kaufen	to buy
beenden	to finish
sehen	to see
schreiben	to write
schlafen	to sleep
schwimmen	to swim
treffen	to meet
reisen	to travel
singen	to sing
SMS schicken	to text
kontaktieren	to contact
anrufen	to call/phone
telefonieren	To telephone
kochen	to cook
herunterladen	to download
arbeiten	to work
helfen	to help
nachdenken	to meditate
sich entspannen	to relax
sich ausruhen	to rest

Orte	Places
Zu Hause	At home
bei meinem Freund	At my friend's house
bei meinem Vater	At my dad's
bei meiner Mutter	At my mum's
bei meinen Großeltern	At my grand-parents'
in meinem Schlafzimmer	In my room
im Wohnzimmer	In the living room
im Garten	In the garden
in meiner Gegend	In my neighbourhood
in England	In England
im Ausland	Abroad
in der Stadt	In town
auf dem Land	In the countryside
in den Bergen	In the mountains
an der Küste	By the seaside

Leute	People
mit	With
Meine Freunde	My friends
Mein Bruder	My brother
Meine Schwester	My sister
Meine Eltern	My parents
Meine Familie	My family
allein	Alone

Intensifiers

sehr– very zu– too
so– so wirklich – really
ziemlich – quite äußerst – extremely
ein bisschen – a bit, überhaupt nicht - not at all

Adjektive	Adjectives
nett	Kind
angenehm	Pleasant
froh/glücklich	Happy
geschwätzig	Chatty
schön	Beautiful
lustig	Funny
niedlich/süß	Cute
hübsch/schön	Pretty
sauber	Clean
perfekt	Perfect
schnell	Fast
reich	Rich
klug	clever
schüchtern	Shy
fleißig	Hard working
traurig	Sad
langweilig	Boring
nervig	Annoying
ernst	Serious
einfach	Easy
schwer	Difficult
streng	Strict
hässlich	Ugly
laut	Noisy
unhöflich	Rude
schrecklich	Horrible/Awful
faul	Lazy
sportlich	Sporty
bereichernd	Enriching
interessant	Interesting
alt	Old
entspannend	Relaxing
gesund	Healthy
ungesund	unhealthy

Healthy living key verbs	
ins Bett gehen	to go to bed
Lust haben	to fancy, to feel like
laufen	to run
Drogen nehmen	to take drugs
sich betrinken	to get drunk
sich gut/krank fühlen	to feel well/ill
auf Diät sein	to be on a diet
Fit sein	to be fit
vermeiden	to avoid
rauchen	to smoke
versuchen	to try to
aufstehen	to get up
in Form bleiben	to keep fit
sich sorgen	to worry
schmecken/probieren	to try, to taste,
sich fühlen	to feel
überwinden	to overcome
Schmerzen haben	to have a pain (in)
müde sein	to be tired

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9.10 Leisure and heathy living

3 time frames
Infinitives
Time phrases

opinions
justifications
describing and comparing

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Verbs and the present tense in German

The infinitive

When you look up a verb in the dictionary, you find its original, unchanged form which is called the ***infinitive*** (essen, trinken, spielen, sein, feiern, gehen etc.).

Forming the present tense in German

(I do or I am doing – German does not have a separate '-ing' form)

Take the infinitive – knock off the ending (en) and then add the ending relevant to the person you are talking about. Regular verbs follow the same pattern as 'machen'.

*Important! There are some key irregulars to learn which don't follow this pattern – sein and fahren (as shown here) and fahren are really important!

	machen To do	spielen To play	fahren To go
ich(I)	mache	spiele	fahre
du (you)	machst	spielst	fährst
er/sie (he/she)	macht	spielt	fährt
wir (we)	machen	spielen	fahren
ihr (you all)	macht	spielt	fahrt
Sie (you polite)/sie (they)	machen	spielen	fahren

German and the future tense

You can talk about the future 2 different ways

1. Use a future time phrase and the present tense

Nächste Woche spiele ich Tennis= Next week *I am going to play tennis.*

2. Use a part of 'werden' + an infinitive

Morgen werden wir ins Kino gehen. *Tomorrow we will go to the cinema*

Es wird toll sein = it will be great

werden (will/to be going to)	
ich werde	I will
du wirst	You (sing) will
er/sie/es wird	He /she/it will
wir werden	We will
ihr werdet	You (lot) are going
Sie/sie werden	You polite/They will

Verbs and the past tense in German

Take the present tense of 'haben' or 'sein' + the past participle.

Verbs to do with movement (gehen/fahren etc) take sein

haben = to have	sein = to be
ich habe	ich bin
du hast	du bist
er/sie/es hat	er/sie/es ist
wir haben	wir sind
ihr habt	ihr seid
Sie haben	Sie sind
sie haben	sie sind

Ich habe Tennis gespielt = I (have) played tennis

Ich bin ins Kino gegangen = I went to the cinema

German

9.10 Leisure and heathy living

3 time frames
Infinitives
Time phrases

opinions
justifications

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1.Expressing FUTURE intentions :
Ich habe vor, zu + infinitive (I plan to/ I intend to ...)
Ich möchte + infinitive (I would like to...)

2.Using gern/nicht gern/lieber :
These phrases are used with a verb
Ich wohne **gern** in Newcastle - I **like** living in Newcastle.
Gehst du **gern** ins Kino? - Do you like going to the cinema?
Ich spiele **nicht gern** Tischtennis, weil es langweilig ist. - I **don't like** playing football because it is boring
Ich lese lieber Bücher = I **prefer** reading books

3.Opinions
Ich mag - I like/**ich mag...nicht**
Ich liebe- I love
Ich interessiere mich für = I am interested in
Ich bin dagegen – I am against
Ich hasse - I hate
Ich kann...nicht leiden - I can't stand
.....gefällt mir = I like.....

4.Justification
denn – because
weil - because
deshalb– therefore/so
dennoch/trotzdem - nevertheless
obwohl = although

5.Comparisons
Add 'er' to the adjective. You can't add the word 'mehr' = more.
Er ist klein**er** = he is small**er** es ist billig**er** = it is cheap**er**
Exceptions are besser (better)/größer(bigger)/älter(older)
Superlative
You add an '-ste' to the adjective, sometimes '-este' to make it easier to say. Fred ist der Klein**ste** = Fred is the small**est.** Ellie ist die Laut**este**
Comparing Things
Joe ist älter **als** Fred = Joe is older **than** Fred
Joe ist **weniger** alt **als** Fred = Joe is **less** old **than** Fred
Joe ist **so** alt **wie** Fred = Joe is **as** old **as** Fred
Joe ist **genauso** alt **wie** Fred = Joe is **just as** old **as** Fred

7.Time phrases
normalerweise- normally **dann** – then
gewöhnlich - usually **selten** - rarely
neulich - recently **nächstes Wochenende**– next weekend
manchmal – sometimes **nächste Woche** - next week

letztes Wochenende - last weekend
letzten Monat - last month
letzten Sommer - last summer
während Lockdown - during lockdown

History – Year 9 Knowledge Organiser Term 3

What was life like in Nazi Germany?

Key Events

1	**9th November 1918** - The leader of Germany, **Kaiser** Wilhelm, **abdicated**. A democratic government set up, **the Weimar Republic.**
2	**11th November 1918** - Germany signed **armistice** agreement.
3	**28th June 1919 – The Treaty of Versailles** is signed deciding the terms of peace between the Allies and Germany.
4	**1923** – Germany was **struggling to pay the reparations** to France. They printed more money leading to **hyperinflation.** The USA provide a loan to help them recover.
5	**November 1923 – The Munich Putsch** – The NSDAP try to take over the Weimar Government, they fail and Hitler is sent to prison.
6	**October 1929 – The Wall Street Crash**, the American stock market collapsed and needed their loans back from Germany.
7	**30th January 1933** – Hitler is named **chancellor** of Germany.
8	**February 1933 – The Reichstag Fire** was blamed a Dutch communist and used as propaganda, support gained for NSDAP.
9	**23rd March 1933 - The Enabling Act** was passed which meant Hitler was able to make laws without consulting the Reichstag.
10	**30th June 1934 - The Night of the Long Knives** - purge of SA leadership who threatened Hitler and other political opponents.
11	**2nd August 1934** – President **Hindenburg died. Hitler** combines the role of chancellor and president and becomes **Führer** (leader).

Key Skills

12	Causation	Explaining how events are caused by developments that came before.
13	Consequence	The result or effect of an event.
14	Source Analysis	**Nature**: What is the type of source? **Content**: What does it tell us? **Origin**: Who wrote it? When? Where? **Purpose**: Why was the source made?

Key Terms

15	peace armistice	a document which is signed to halt fighting whilst peace negotiations take place.
16	November criminals	the name given to the men who signed the peace armistice.
17	abdication	Renouncing (giving up) the throne.
18	Treaty of Versailles	A treaty which formally ended WWI.
19	reparations	Germany was to made to pay £6.6 billion reparations for damage during the war.
20	NSDAP	National Socialist German Workers' Party – Was known as the Nazi Party.
21	Weimar Republic	The democratic government elected after the end of WWI.
22	chancellor	The head of the German government appointed by the president.
23	Reichstag	The name of Germany's parliament.
24	propaganda	Information, can be biased, that promotes a political cause/point of view.
25	Third Reich	The name of the Nazi regime (government).
26	Kinder, Küche and Kirche	'Children, Kitchen, Church.' Nazi's asked women to do these instead of work.

Key Groups/People

								
Kaiser Wilhelm	**Adolf Hitler**	**Joseph Goebbels**	**President Hindenburg**	**SA**	**SS**	**Gestapo**	**Hitler Youth**	**League of German Maidens**
Leader of Germany during WW1 until 1918.	German politician and leader of the Nazi Party.	Nazi minister for propaganda 1933 - 1945.	President of Germany from 1925 – 1934.	Protectors of Nazi leaders formed in 1921.	Established 1925 to protect Hitler & then policed Third Reich.	The Nazi's secret police force.	The HJ, boys would join the main group from age 14.	The female equivalent of the HJ they would join from age 14.

Key Words

Frequency: Total.
Mean: Total of data divided by the number of pieces of data.
Mode: The value that occurs most frequently.
Median: Middle number when they are in order.
Range: Difference between the largest and smallest values.

Examples

5, 9, 9, 9, 11, 12, 13, 15, 16

Averages

$$Mean = \frac{5+9+9+9+11+12+13+15+16}{9} = \frac{99}{9} = 11$$

Median = 11 (The middle number shown above)

Mode = 9 (This number occurs most often)

Measure of Spread

Range = 16 – 5 = 11
(A bigger range means the data is more spread out)

Advantages and Disadvantages

Average	Advantage	Disadvantage
Mode	Can be used for qualitative data Easy to obtain	There can be more than one mode or even no mode
Median	Not affected by very large or very small values	Can be time consuming when there is a lot of data
Mean	Takes into account all of the data	Very small or very large values affects the mean

What you need to know:

Averages from Frequency Tables

a) Find the mean of this data

Goals Scored (x)	Frequency (f)	fx
0	2	0 × 2 = 0
1	2	1 × 2 = 2
2	5	2 × 5 = 10
3	1	3 × 1 = 3
Total	10	15

Step 1: calculate the total frequency
Step 2: calculate $f \times x$
Step 4: calculate the mean

Mean = $\frac{Total\ fx}{Total\ f}$

$$\frac{Total\ fx}{Total\ f} = \frac{15}{10} = 1.5 \text{ goals}$$

b) Find the mode

The mode is the one with the highest frequency

Highest frequency = 5 Mode = 2 goals

c) Find the median

Median value = $\frac{Total\ frequency + 1}{2}$

$$\frac{11}{2} = 5.5th\ value$$

add the frequency column until you reach the value in-between the 5th and 6th value

Median = 2 goals

d) Find the range

Highest number of goals = 3
Smallest number of goals = 0
Range = 3 – 0 = 3

Averages from Grouped Data

a) Estimate the mean of this data

Length (L cm)	Frequency (f)	Midpoint (x)	fx
$0 < L \leq 10$	10	5	10 × 5 = 50
$10 < L \leq 20$	15	15	15 × 15 = 225
$20 < L \leq 30$	23	25	23 × 25 = 575
$30 < L \leq 40$	7	35	7 × 35 = 245
Total	55		1095

Step 1: calculate the total frequency
Step 2: find the midpoint of each group
Step 3: calculate $f \times x$
Step 4: calculate the mean

Mean = $\frac{Total\ fx}{Total\ f}$

$$\frac{Total\ fx}{Total\ f} = \frac{1095}{55} = 19.9\text{cm}$$

b) Identify the modal class from this data set

Modal class = the group that has the highest **frequency**

Modal Class is $20 < L \leq 30$

c) Identify the group in which the median would lie

Median value = $\frac{Total\ frequency + 1}{2}$

$$\frac{56}{2} = 28th\ value$$

add the frequency column until you reach the 28th value

Median is in the group $20 < x \leq 30$

Tip
For grouped data, the mean can only be an estimate as we do not know the exact values in each group..

Types of data

Qualitative data: data collected that is described in words **not** numbers.
e.g. race, hair colour, ethnicity.

Quantitative data: this is the collection of numerical data that is either discrete or continuous.

Discrete data: numerical data that is categorised into a finite number of classifications.
e.g. number of siblings in a family, shoe size, .

Continuous data: numerical data that can take any value. This data is usually measured on a large number scale.
e.g. height, weight, time, capacity.

What you need to know:

Types of Angles

Less than 90° | 90° angle | Bigger than 90° but less than 180° | Bigger than 180° but less than 360°

Types of Lines

Perpendicular Lines

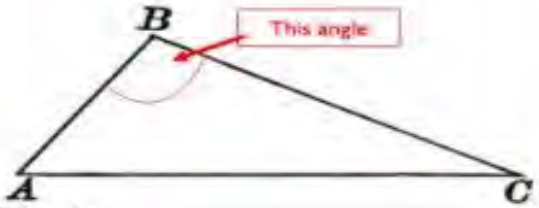
Intersect (cross) at 90°

Parallel Lines

Never meet

Angle Notation

Angles are measured in degrees (°).
An angle can be identified like this ∠ABC
The middle letter is the vertex.



Measuring Angles

When measuring angles, make sure that the centre of the protractor is over the **vertex** (corner) of the angle and that the base line of the protractor is along one of the lines of the angle

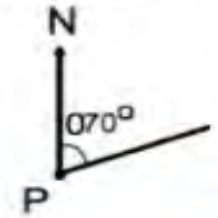
Always read from zero. In this example use the inside scale

Ensure the centre and base line are lined up with the angle lines

Key Concepts

Scales are used to reduce real world dimensions to a useable size.

A **bearing** is an angle, measured **clockwise** from the **north** direction. It is given as a **3 digit** number.



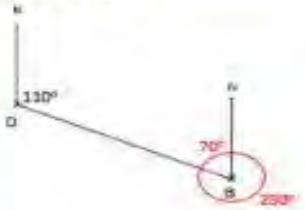
Key Words

Scale
Bearing
Clockwise
North

Reminder:

Examples

The diagram shows the position of a boat B and dock D.



The scale of the diagram is 1cm to 5km.

a) Calculate the real distance between the boat and the dock.
6cm = 6 × 5
= 30km

b) State the bearing of the boat from the dock.
110°

c) Calculate the bearing of the dock from the dock.
180° − 110° = 70° because the angles are cointerior
360° − 70° = 290° because angles around a point equal 360°

Key Terms:

Line segment – a line between two points

Point – An exact location.

Intersecting – where two or more lines cross, their common point.

Angle – the amount of turn between two lines and their common point.

Vertically Opposite – angles formed when two or more straight lines cross at a point.

Parallel – always the same distance apart and never touching.

Vertex (plural Vertices) – a corner

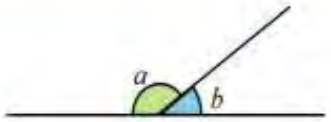
Perpendicular – at right angles

What you need to know:

Angles on a straight line

Angles on a straight line add up to 180°

Example – Find angle XWY



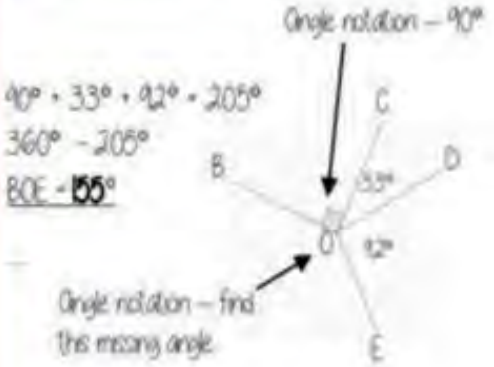
$a + b = 180°$

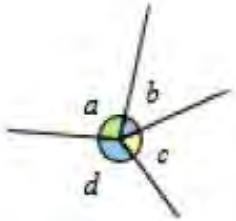
because there are 180° in a half turn.

Angles around a point

Angles around a point add up to 360°

Example – Find BOE





$a + b + c + d = 360°$

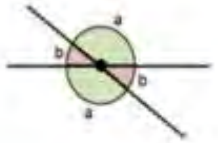
because there are 360° in a full turn.

TIP -

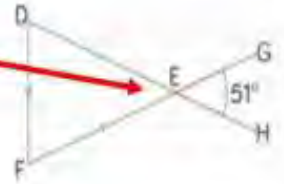
Sometimes you will need to use more than one angle fact to solve a problem

Vertically Opposite angles

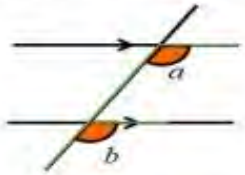
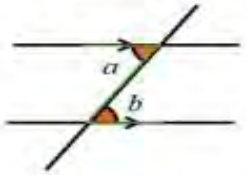
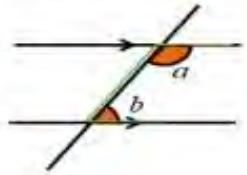
Vertically opposite angles are equal



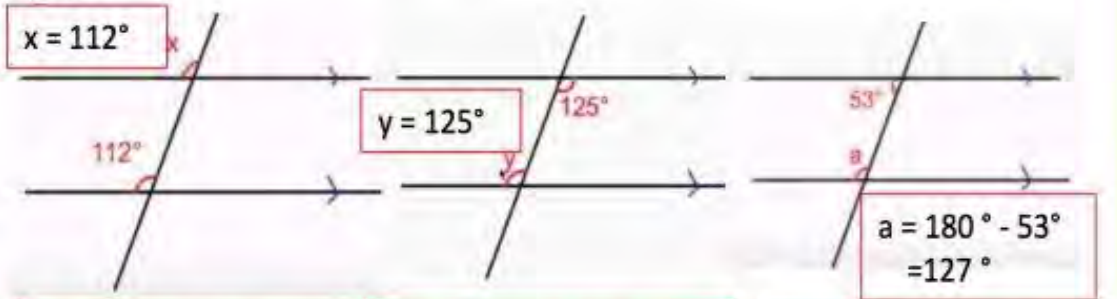
= 51° because it is vertically opposite



Angles on parallel lines

Corresponding angles are equal	Alternate angles are equal	Interior angles add up to 180°
		
$a = b$	$a = b$	$a + b = 180°$
Look for an F-shape	Look for a Z-shape	Look for a C- or U-shape

Examples –

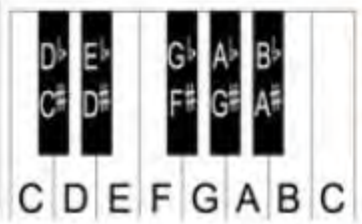


The 'F' can go in any direction. | The 'Z' can go in any direction. | The 'C' can go in any direction.

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)

Training Type	Example	Component of Fitness Used	Sporting Example
Continuous Training **Definition** - Training at a steady speed without rest. Improves cardiovascular endurance, it will also make the heart bigger and stronger. Needs to be between 20 minutes and 2 hours.	Continuously running for 1 hour at a steady speed.	Cardiovascular Endurance	Marathon running 
Fartlek Training **Definition** – Training that requires a change in speed and terrain. Often known as 'speed play'.	Cross-country running with sprint activities every so often. 	**Components of fitness used** – Aerobic endurance or anaerobic endurance depending on the intensity.	**Where it is used in sport** – Many team sports because of the constant change of speed and long periods of moderate activity. Also cross country running.
Interval Training **Definition** – Intervals of work and intervals of rest. You need to work at 90-100% of maximum intensity to improve anaerobic fitness. You need to work at 60-75% of maximum intensity to improve aerobic fitness.	For the anaerobic system – there should be short intervals of high intensity training. For the aerobic system – there should be intervals of slower work, but for a longer time period.	Components of fitness used – Aerobic and anaerobic fitness 	Where it is used in sport – Can be used for team sports such as hockey and football. Or it can be used for athletics running events.
Circuit Training **Definition** – A series of exercises arranged in a particular way called a circuit. The resistance used is mainly body weight and each exercise focuses on a different muscle group. There is a rest period between each exercise. Circuit training can also incorporate skills activities, such as a football player may include dribbling, passing, shuttle runs and shooting.	Press ups, star jumps, dips, squats, sit ups, skipping, crunches, chin ups.	Components of fitness used – Muscular endurance. 	Where it is used in sport – Rowers and boxers need muscular endurance to last the duration.
Weight Training **Definition** – Involves progressive resistance using a number of repetitions and sets depending on the strength required.	For maximum strength you need a high weight but low repetitions. For muscular endurance you need a low weight but high repetitions.	**Components of fitness used** – Muscular strength and muscular endurance 	**Where it is used in sport** – Weight lifters and rugby players need maximum strength. Swimmers and cyclists need strength endurance.
Plyometrics **Definition** – Involves rapid and repeated stretching and contracting of muscles, designed to increase strength and power. If the muscles have previously been stretched they tend to generate more force when contracting.	**Example** – In-depth jumping is when an athlete jumps on to and off boxes. It can involve any bounding, hopping and jumping of the muscles.	**Components of fitness used** – Muscular strength and power. 	**Where it is used in sport** – Any events that involve sprinting, throwing and jumping.

RS

War: When people disagree Knowledge Organiser

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**.

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	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

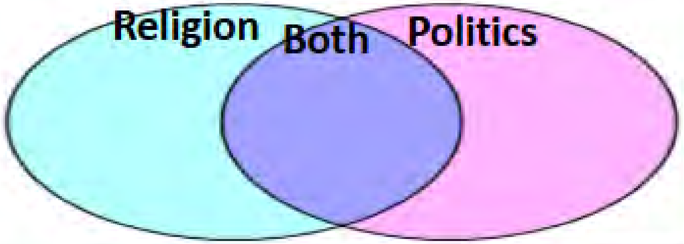
What are the two types of Jihad?

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:	Lesser jihad:
The personal, inward struggle of all Muslims to live in line with the teachings of their faith.	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'idah 5:32 |

[ip]

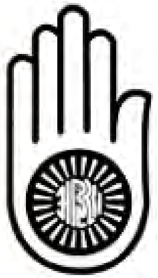
The Golden Rule

"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

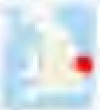
'The witch Hunts'

Who? [illegible]

When? [illegible]

Where? East Anglia - England

By Whom? [illegible]



What happened?

[illegible]

NATIVE AMERICAN PERSECUTION

Who? Native American tribes

When? [illegible]

Where? Southern United States

By Whom? American government

What happened?

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

[illegible]

AZTECS PERSECUTION

Who? The Aztec Empire

When? February 1519 – August 13, 1521

Where? Aztec Empire (Modern day Mexico)

By Whom? Spanish Conquistadores

What happened?

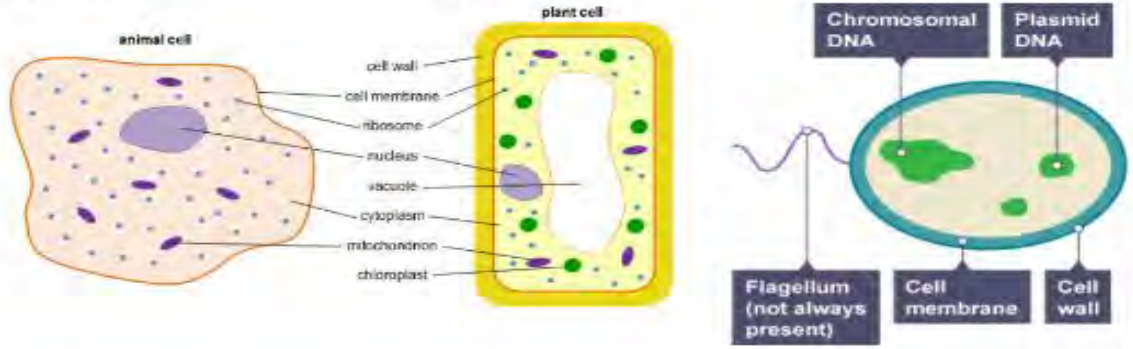
Between 1519 and 1521 the Spanish, under the leadership of conquistador Hernan Cortés, conquered the Aztec Empire.

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.**

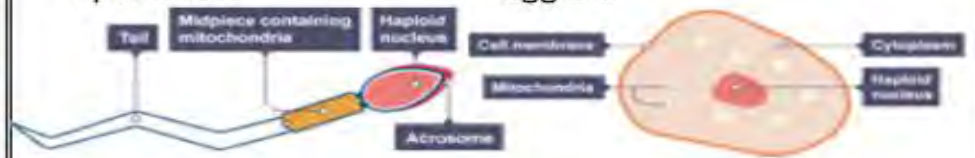
Cell Structure

- Animal cell
- Plant cell
- Bacterial cell

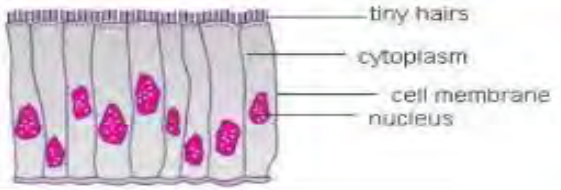


Specialised cells

- Sperm cell
- Egg cell

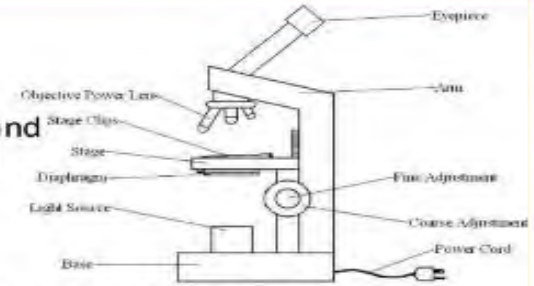


- Ciliated cell



Making Microscope Slides

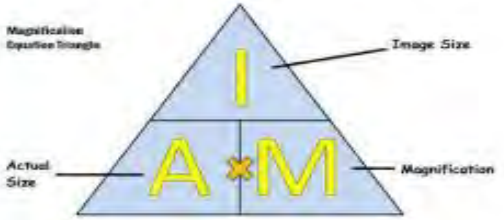
1. Take a thin slice of specimen
(to let light through)
2. Put a drop of water on a slide and use tweezers to add the specimen
(water holds it in place)
3. Add a drop of stain
(makes it easier to see)
4. Use a mounted needed to lower a cover slip and press down firmly
(so there are no bubbles)
5. Put 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



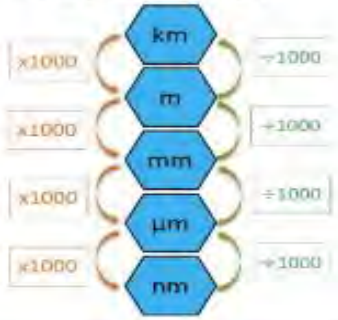
Magnification

- 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

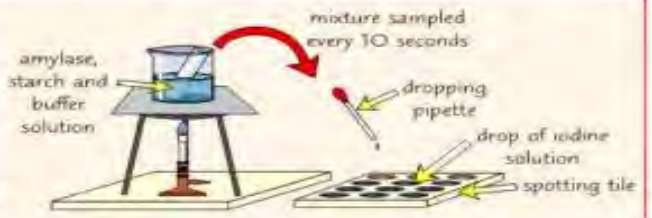
CPG F & H tier: pages 15-17.

Enzyme Structure

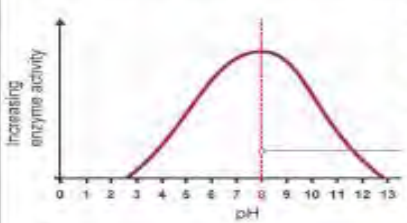
Enzymes speed up chemical reactions where things are split apart or joined together. Enzymes only work with one substrate, they have a high specificity due to the shape of the active site. The substrate's shape has to match the active site's shape exactly. This is called the 'lock and key' model.

Investigating Enzymes

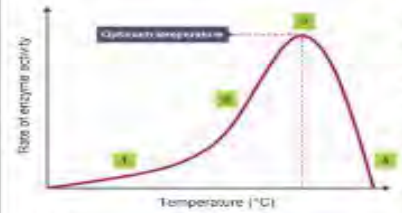
The enzyme amylase catalyses the break down of the starch into maltose (sugar). The enzyme is added to buffer solutions of different pHs. The time it takes for the enzyme to work is calculated by continuously sampling the mixture and adding it to iodine. Only when all of the starch has been broken down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



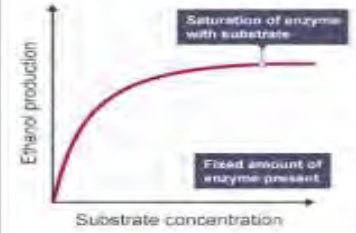
Factors affecting enzymes



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.

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

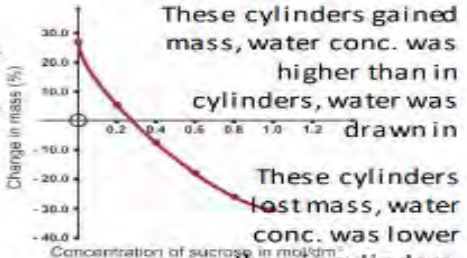
1. Prepare sucrose solutions of 5 concentrations
2. Measure the mass of potato cylinders
3. Put one cylinder into a test tube of each solution
4. Leave for 40 mins
5. Pat dry and reweigh

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 | Chemistry Topic 3 – Chemical Changes | Required Knowledge

CGP F & H tier: pages 104 - 108

Acids (p):
- **Source of hydrogen ions (H^+) when in solution.**
- pH 1 – pH 6 (neutral = pH 7)
- Strong acids are corrosive and can be harmful to humans.
- Examples: Vinegar; citrus fruits; bee stings.

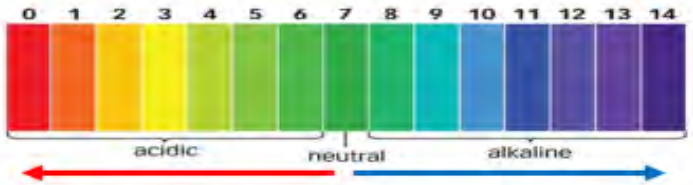
Alkalis & bases (p): pH 8 – pH 14.
- **Alkalis are sources of hydroxide ions (OH^-) when in solution.**
- Bases are any substances that react with acids to form salt and water only.
- All alkalis are soluble bases.
- Examples: Wasp stings; bleach; indigestion tablets; toothpaste.

pH scale (p): A measure of the proportion of hydrogen ions or hydroxide ions in a solution.

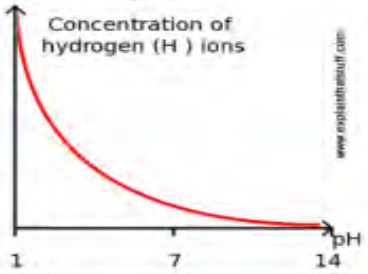
Increasing concentration of hydrogen ions

Increasing concentration of hydroxide ions

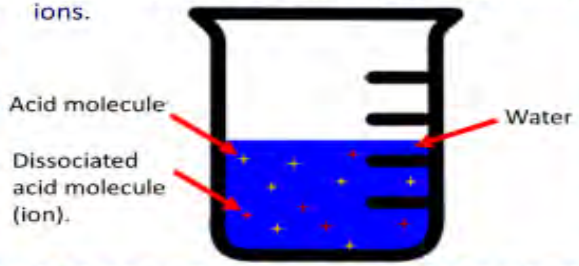
As hydrogen ion concentration increases 10x, pH of the solution decreases by 1.



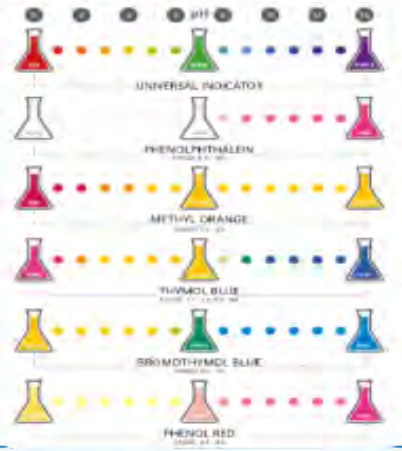
More acidic More alkaline



Acid strength (p):
- The pH scale shows the strength of an acid (or alkali).
- The strength of an acid is determined by the proportion of ions which dissociate (split) in solution, e.g. $HCl \rightarrow H^+ + Cl^-$.
- Strong acids: High proportion of dissociated ions.
- Weak acids: Low proportion of dissociated ions.



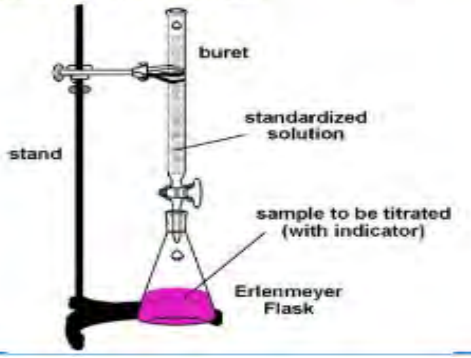
Indicators (p): Different chemicals can be used to test the pH of solutions.



Neutralisation (p): Chemical reaction between acid (pH1-6) and alkali (pH8-14) produces a salt and water (neutral at pH7).
- Neutralisation happens because of reactions due to ionic charges of atoms.
- Acids and alkalis dissociate (split) into ions (charged atoms) in solution.
  - Hydrochloric acid: $HCl \rightarrow H^+ + Cl^-$
  - Sodium hydroxide (alkali): $NaOH \rightarrow Na^+ + OH^-$
- The hydrogen and hydroxide ions react to form water: $H^+ + OH^- \rightarrow H_2O$
- The sodium and chlorine atoms react to form sodium chloride (salt): $Na^+ + Cl^- \rightarrow NaCl$

Acid concentration (p):
- Acids are sources of hydrogen ions when in solution.
- The concentration of the solution is determined by the amount of acid dissolved in a volume of solvent.
- Measured in moles (e.g. 1M, 2M).
- Concentrated acid: Large amount of acid per litre of solvent.
- Dilute acid: Small amount of acid per litre of solvent.

Soluble salts & titration (p):
- When a neutralisation reaction produces a soluble salt, it can be extracted by crystallization (evaporating the solvent).
- To create a neutral product (pH7), exactly the right amount of acid and alkali must be used.
- **Titration** measures exact amounts of acid added to an alkali.
- Single-colour indicators show clearly when pH7 is reached.



Acids & metals (p): Acid + metal → salt + hydrogen
- Evidence: Effervescence, or the production of hydrogen bubbles. Testing with a lit splint should produce a squeaky pop.
- Strength of reaction depends on metal's place in reactivity series.
- Magnesium + sulfuric acid → magnesium sulfate + hydrogen
- $Mg\ (s) + H_2SO_4\ (aq) \rightarrow MgSO_4\ (aq) + H_2(g)$

Acids & carbonates (p): Acid + metal carbonate → salt + water + carbon dioxide
- Evidence: Bubbling the carbon dioxide through limewater will turn the limewater cloudy.
- E.g.: Copper carbonate + sulfuric acid → copper sulfate + water + carbon dioxide
- $CuCO_3(s) + H_2SO_4(aq) \rightarrow CuSO_4(aq) + H_2O(l) + CO_2(g)$

EDEXCEL 9-1 Combined Science | **Chemistry Topic 3 – Chemical Changes** | Required Knowledge

CGP F & H tier: pages 109 -112

Insoluble salts & precipitates (p):

- Some salts produced by an acid-alkali reaction are not soluble – they do not dissolve in any solvents.
- These are called precipitation reactions, as they cause precipitate to form.
- Precipitate is insoluble particles of solid which form in the solvent.
- Preparation of insoluble salts:
  1. Mix the two solutions;
  2. Filter the mixture to remove most of the precipitate;
  3. Rinse the beaker with distilled water and pass this through the filter to retain any remaining precipitate.

Soluble	Insoluble
All nitrates	None
Most sulfates	Lead sulfate, barium sulfate and calcium sulfate
Most chlorides, bromides and iodides	Silver chloride, silver bromide, silver iodide, lead chloride, lead bromide, lead iodide
Sodium carbonate, potassium carbonate, ammonium carbonate	Most other carbonates
Sodium hydroxide, potassium hydroxide, ammonium hydroxide	Most other hydroxides

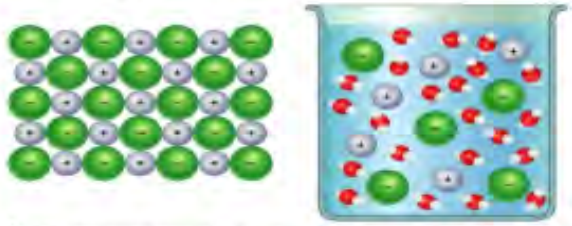
State symbol **(s)** indicates a precipitate. Example: reaction of limewater with carbon dioxide:

Calcium hydroxide (limewater) + carbon dioxide → calcium carbonate + water

$$Ca(OH)_2(aq) + CO_2(g) \rightarrow CaCO_3(s) + H_2O(l)$$

Ions & electrolytes (p):

- Atoms which have lost or gained electrons.
- Charged (positive or negative).
- Ionic solids dissolve into free ions in water.
- Any liquid with free ions in solution is called an **electrolyte**.
- Electrolytes can conduct electricity.

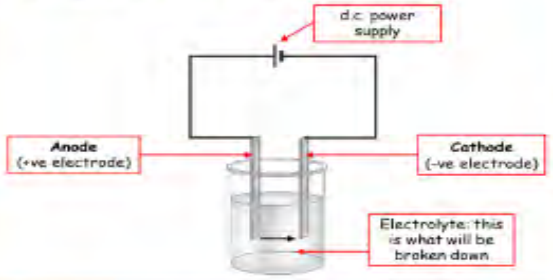


A (a) The ions cannot move in the lattice structure of solid sodium chloride. (b) The ions can move when sodium chloride is dissolved in water.

Electrolysis (p):

- Means of separating out ionically-bonded compounds.
- Negative ions collect at the anode (positive electrode).
- Positive ions collect at the cathode (negative electrode).

Click to add text



H – Reactions at electrodes (p):

- **OIL RIG**: **O**xidation **I**s **L**oss, **R**eduction **I**s **G**ain.
- At the anode, negative ions lose electrons (oxidation).
- At the cathode, positive ions gain electrons (reduction).
- Example:
  - Zinc chloride electrolyte
  - Cathode reaction: $Zn^{2+} + 2e^- \rightarrow Zn$
  - Anode reaction: $2Cl^- \rightarrow Cl_2 + 2e^-$

Naming salts (p):

Acid	*Salt formed*
Hydrochloric Acid →	Chloride
Sulfuric Acid →	Sulfate
Nitric Acid →	Nitrate

H - Ionic equations (p):

- All salts are ionically bonded.
- Ionic equations show only the ions which change.
- For example:
  - Lead nitrate + sodium chloride → lead chloride + sodium nitrate
- Full equation: $Pb(NO_3)_2(aq) + 2NaCl(aq) \rightarrow PbCl_2(s) + 2NaNO_3\ (aq)$
- **Ionic equation: $Pb^{2+}(aq) + 2Cl^- \rightarrow PbCl_2(s)$**
- All ions which do not change are called **spectator ions**.

Acids & metal oxides / metal hydroxides (p):

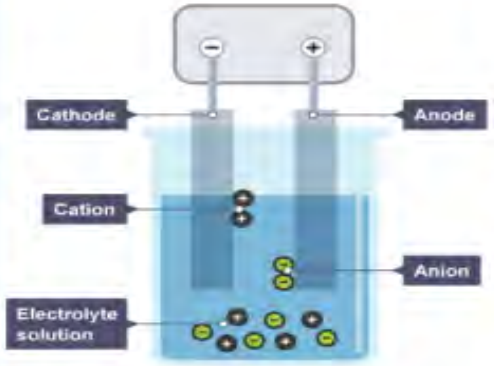
- **Metal oxide + acid → salt + water**
- E.g.: Copper (II) oxide + hydrochloric acid → copper chloride + water

$$CuO + 2HCl \rightarrow CuCl_2 + H_2O$$

- Metal hydroxide + acid → salt + water
- E.g.: Calcium hydroxide + nitric acid → calcium nitrate + water

$$Ca(OH)_2 + 2HNO_3 \rightarrow Ca(NO_3)_2 + 2H_2O$$

Negative ion	Element given off at anode
Chloride, Cl^-	Chlorine, Cl_2
Bromide, Br^-	Bromine, Br_2
Iodide, I^-	Iodine, I_2
Sulfate, SO_4^{2-}	Oxygen, O_2



$$H_2O \rightleftharpoons H^+ + OH^-$$

State symbols (p):

- In chemical equations, state symbols can be included after every chemical to show the state (solid, liquid, gas) of the chemical.
- **(s)** = solid
- **(l)** = liquid
- **(g)** = gas
- **(aq)** = in solution / dissolved.

EDEXCEL 9-1 Combined Science | **Chemistry Topic 4 – Extracting Metals and Equilibria** | Required Knowledge

CGP F & H tier: pages 114 - 117

Oxidisation (Pg 114)

- A reaction involving oxygen.
- **Oxidisation** is the addition of oxygen, **reduction** is the loss of oxygen.

E.g. $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$

- Iron oxide is reduced to iron (as oxygen is removed).
- Carbon monoxide is oxidised to carbon dioxide (as oxygen is added).

Reactivity (Pg 114)

- Shows how easily metals are oxidised.
- A reactivity series shows metals in order of reactivity.

- Also a measurement of saying how easily a metal atom gives up electrons to become an ion.
- More reactive = gives up electrons more easily.

Oxidisation & reduction (Pg 116)

- **Oxidisation** is also the **loss** of **electrons**.
- **Reduction** is the **gain** of **electrons**.

O I L R I G

When dealing with electrons: Oxidation Is Loss, Reduction Is Gain.

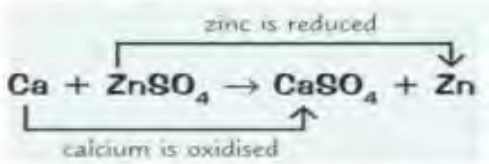
Metal reactions (Pg 115)

- Metals with different reactivity react to acids and water in different ways:

Metal	Reaction with water	Reaction with dilute acid	Tendency of metal atoms to form cations
potassium	react with cold water to form hydrogen and a metal hydroxide	react violently	increasing ability of metal atoms to form positive ions
sodium			
calcium		react to form hydrogen and a salt solution	
magnesium	react very slowly, if at all, with cold water but react with steam to form hydrogen and a metal oxide		
aluminium			
zinc			
iron			
copper	do not react with cold water or steam	do not react	
silver			
gold			

Displacement reactions (Pg 116)

- Metals differently with metals salts, depending on the reactivity of the metals.
- The more reactive element takes the place of the less reactive element.
- The more reactive metal loses electrons (is oxidised) while the more reactive metals gains electrons (is reduced).
- Remember OILRIG.



- Calcium is more reactive than zinc, and takes it's place in the metals salt to become calcium sulfate leaving pure zinc on it's own.

Ore (Pg 117)

- A rock containing enough metal in in to make it **economically worthwhile** to extract the metal.

Metal extraction (Pg 117)

- Unreactive metals, e.g. gold, removed from the Earth's crust in pure form.
- More reactive metals form metals compounds, e.g. bauxite (aluminium oxide) the source of aluminium.
- The method for extracting metals from ores depends on the reactivity of the metal.

Method 1: Reduction with carbon (Pg 117)

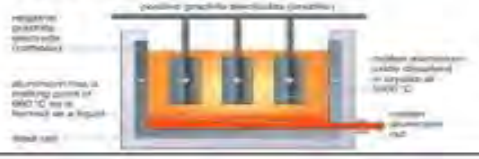
- The ore is reduced, the carbon replacing the less reactive metals, leaving pure metals behind.
- Iron oxide (haematite) is the source of pure iron.

$2Fe_2O_3$ + $3C$ → $4Fe$ + $3CO_2$

iron oxide + carbon → iron + carbon dioxide

Method 2: Electrolysis (Pg 118)

- The ore is melted and an electrical current passed through it. The pure metal forms on the negative electrode.



Method 3: Biological methods (Pg 118)

- **Bioleaching** uses bacteria grown on copper ore which produce a solution containing the metals ions.
- The copper is extracted by reduction with iron and purified by electrolysis.
- **Phytoextraction** uses plants that grow and absorb the metal compounds. When burned they form an ash which the metal can be extracted from.
- Advantages/disadvantages:

Recycling (Pg 119)

- Reusing materials already extracted from the Earth is cheaper and has environmental benefits.
- Recycling aluminium cans is 95% more energy efficient per tonne over extracting it from ore.
- Prevents environmental damage from further mining
- Prevents landfill of cans.

EDEXCEL 9-1 Combined Science | **Chemistry Topic 4 – Extracting Metals and Equilibria** | Required Knowledge | **CGP F & H tier: pages 118 -120**

Life cycle assessments

- New planned products are assessed using and LCA.
- Each aspect is considered to see if it impacts the environment too significantly.

Example: **Car B** is the most logical choice to manufacture based on the statistics considered...

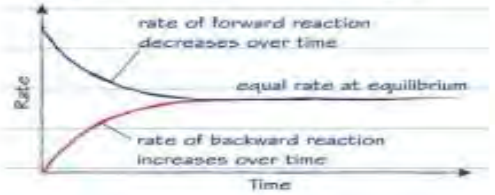
Car	CO_2 emissions (tonnes)	Waste solid produced (kg)	Water used (m^3)	Expected lifespan of product (years)
A	17	10 720	8.2	11
B	21	5900	6.0	17
C	34	15 010	9.5	12

- Least solid waste and water used.
- Second best for CO2 emissions
- Longest lifespan

Dynamic Equilibrium

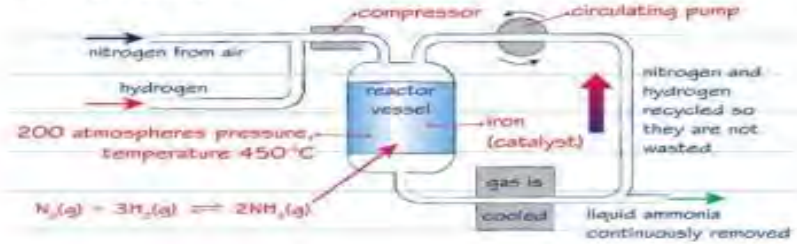
- In a closed system, reversible reactions reach **dynamic equilibrium**.
- This means the rate of the forward reaction is equal to the rate of the backwards reaction.

- The dynamic bit means that these reactions do NOT stop, products are formed from reactants and reactants react to form products...it just means the concentrations of the reactants and products does not change.



The Haber process

- Reaction between hydrogen and nitrogen to form ammonia.
- You need to remember the conditions for the process...
  - Pressure of 200 atmospheres
  - Temp of 450 °C
  - Iron catalyst



Le Chatelier's Principle

- The principle states, any change to either temp, pressure or concentration in a reversible reaction and the equilibrium position will move to counteract that change.
- This means we can adjust these factors to get more product or more reactant, if that's what is needed.
- Details of how each change effects the reaction can be found below, using the Haber process as an example.

TEMPERATURE All reactions are exothermic in one direction and endothermic in the other (see page 134).

1) If you decrease the temperature, the equilibrium will move in the exothermic direction to produce more heat.
2) If you increase the temperature, the equilibrium will move in the endothermic direction to absorb the extra heat.

PRESSURE Changing this only affects equilibria involving gases.

1) If you increase the pressure, the equilibrium will move towards the side that has fewer moles of gas to reduce pressure.
2) If you decrease the pressure, the equilibrium will move towards the side that has more moles of gas to increase pressure.

CONCENTRATION

1) If you increase the concentration of the reactants, the equilibrium will move to the right to use up the reactants (making more products).
2) If you increase the concentration of the products, the equilibrium will move to the left to use up the products (making more reactants).
3) Decreasing the concentration will have the opposite effect.

Reversible reactions

- Reactions where products can react to form the original reactants.
- Reactions go **both** ways!

$$A + B \rightleftharpoons C + D$$

- Note the arrow points in both directions, showing this is a reversible reaction.

Factors effecting the equilibrium position

- Different factors can be used to shift the position of the equilibrium point...either to produce more product or more reactants.
- The factors are **temperature**, **pressure** (for reactions involving gasses) and **concentration** (of the reactants and products).

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 negra (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

¿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 historia	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
Free machine embroidery
function
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.

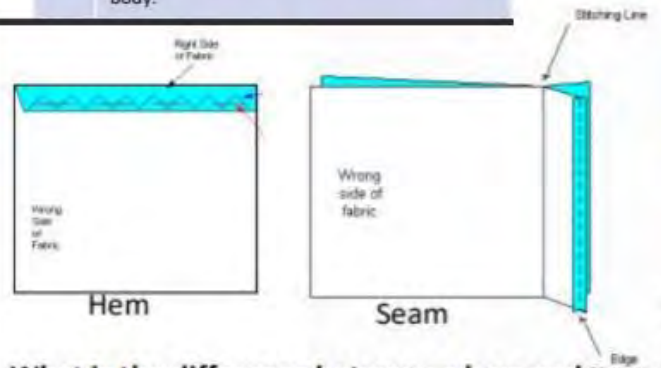
colour
design
shape
machine
pattern
line
Texture
tone
theme
Fabric
thread
sew

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.

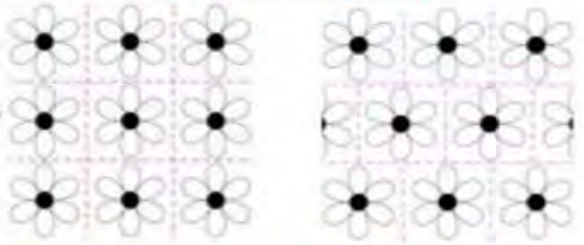


What is the difference between a hem and a seam?

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

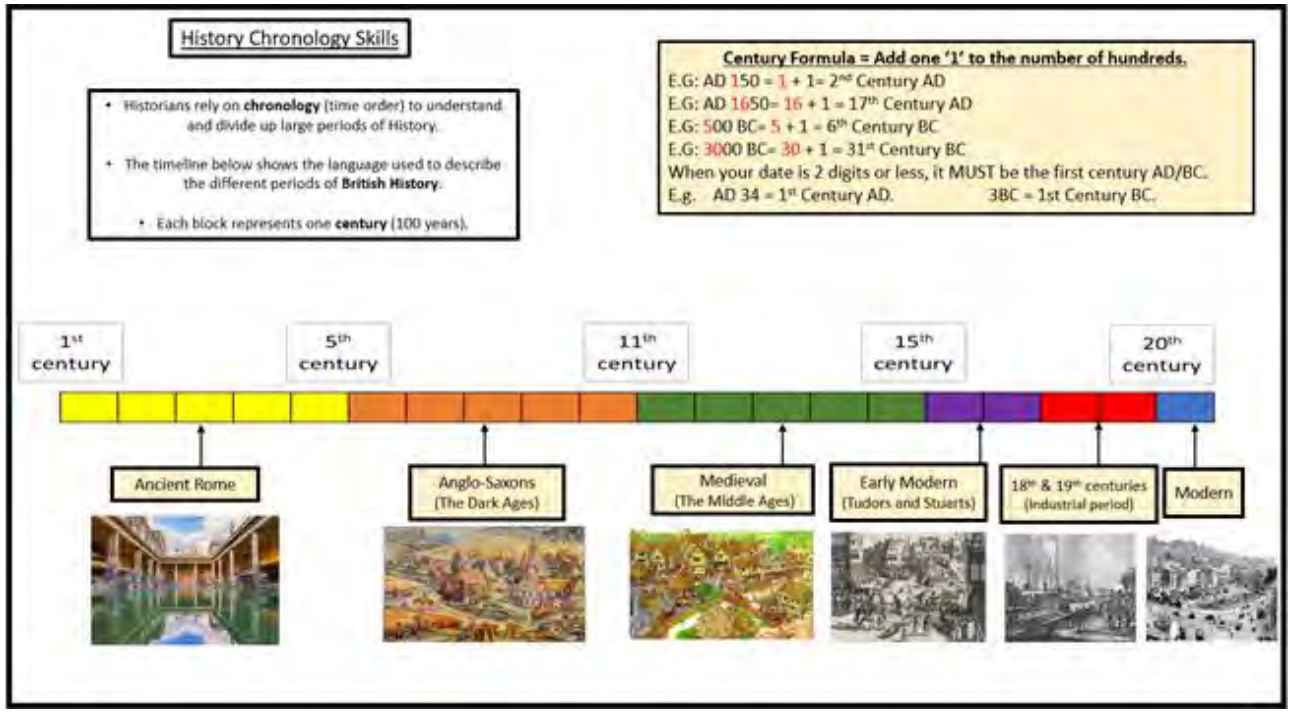
One similarity is…

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.


UNITED KINGDOM
LOW / HILLS / MOUNTAINS
Orkney Islands
Shetland Islands
Prime Meridian
Outer Hebrides
Highlands
Scotland
North Sea
Atlantic Ocean
Inverness
Aberdeen
Ben Nevis
Edinburgh
Northern Ireland
Glasgow
Sunderland
N
United Kingdom (UK)
Londonderry
Belfast
Carlisle
PENNINES
Leeds
Irish Sea
Isle of Man
Dublin
Liverpool
England
Ireland
Cambrian Mts.
The Fens
Birmingham
Ipswich
Oxford
Wales
London
Bristol
Celtic Sea
130 mi
130 km
Cardiff
Thames
Portsmouth
Dover
Plymouth
Exeter
Falmouth
English Channel
Channel Tunnel
France
© WorldAtlas.com


EUROPE
©GraphicMaps.com
15° W
0°
15° E
30° E
45° E
60° E
ARCTIC CIRCLE
Barents Sea
White Sea
Norwegian Sea
Iceland
Faroe Islands (Denmark)
Norway
Finland
Russia
400 mi
400 km
60° N
Atlantic Ocean
Scotland
North Sea
Sweden
Estonia
Latvia
Lithuania
(European Russia)
Ural Mountains
Baltic Sea
Northern Ireland
Netherlands
Belarus
UK
Belgium
Denmark
Poland
Ireland
England
Germany
Ukraine
50° N
Wales
Czech Rep
Slovakia
Sea of Azov
Kazakhstan
English Channel
Luxembourg
Liechtenstein
Moldova
Azores
Switzerland
Austria
Hungary
Romania
Madeira Islands
Bay of Biscay
France
Slovenia
Croatia
Bosnia and Herzegovina
Monaco
Black Sea
Caspian Sea
Serbia
Bulgaria
Italy
San Marino
Georgia
Andorra
Montenegro
Macedonia
Vatican
Albania
Corsica (France)
Armenia
40° N
Spain
Sardinia (Italy)
Greece
European Turkey
Turkey
Azerbaijan
Portugal
Balearic Islands
Iran
0°
Sicily (Italy)
Canary Islands
Malta
Crete (Greece)
Cyprus
Syria
ASIA
Algeria
Gibraltar (UK)
PRIME MERIDIAN
Tunisia
15° E
Mediterranean Sea
Lebanon
30° E
Iraq
Morocco
Israel
Jordan
Libya
30° N
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AFRICA
Egypt
Saudi Arabia
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ASIA
EUROPE
AFRICA
AUSTRALIA
OCEANIA
NORTH AMERICA
Russian Federation
China
India
Mongolia
Kazakhstan
Indonesia
Japan
Pacific Ocean
Arctic Ocean
Indian Ocean
Atlantic Ocean
ARCTIC CIRCLE
TROPIC OF CANCER
EQUATOR
INTERNATIONAL DATE LINE
MONDAY
SUNDAY
MIDDLE EAST
SOUTHEAST ASIA
Barents Sea
Norwegian Sea
Kara Sea
Laptev Sea
Bering Sea
Alaska
Aleutian Islands
Kamchatka Peninsula
Ostrov Sakhalin (Russia)
Ostrova Anzhu (Russia)
Kuril Islands (Russia)
Sea of Okhotsk
Sea of Japan (East Sea)
Lake Baikal
North Korea
South Korea
Yellow Sea
East China Sea
Hong Kong (China)
Macau (China)
Gulf of Tonkin
Ryukyu Islands (Japan)
Bonin Islands (Japan)
Volcano Islands (Japan)
Okinawa (Japan)
Taiwan
Philippines
Philippine Sea
Hainan (China)
Laos
Burma
Thailand
Vietnam
Cambodia
Brunei
Malaysia
South China Sea
Sulu Sea
Celebes Sea
Borneo (Indo.)
Sumatra (Indo.)
Java (Indo.)
Bali (Indo.)
Flores Sea
Savu Sea
East Timor
Arafura Sea
New Guinea (Indonesia)
Coral Sea
Banda Sea
Java Sea
Andaman Sea
Bay of Bengal
Andaman and Nicobar Islands (India)
Lakshadweep Islands (India)
Laccadive Sea
Arabian Sea
Gulf of Aden
Gulf of Oman
Gulf of Thailand
Persian Gulf
Red Sea
Aral Sea
Caspian Sea
Black Sea
Ural Mts.
Uzbekistan
Turkmenistan
Kyrgyzstan
Tajikistan
Afghanistan
Pakistan
Nepal
Bhutan
Bangladesh
Sri Lanka
Maldives
Singapore
Phuket (Thailand)
Socotra (Yemen)
Yemen
Oman
U.A.E
Saudi Arabia
Qatar
Bahrain
Kuwait
Iraq
Iran
Syria
Lebanon
Israel
Jordan
Turkey
Novaya Zemlya (Russia)
British Indian Ocean Territory (UK)
worldatlas
1000 mi
1000 km
60° E
90° E
120° E
180°
150° E
60° N
45° N
30° N
15° N
0°
15° S


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