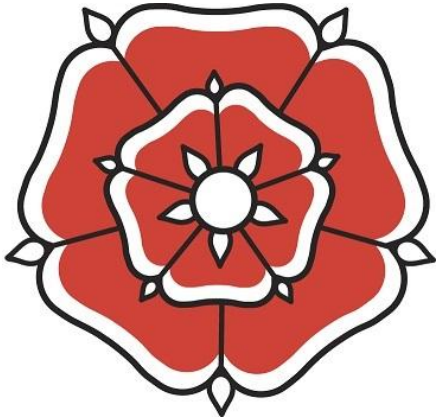
Maidenhill School Knowledge Organiser

Year 9 – Term 3



Be kind, Aspire, Persevere, Achieve

Name:	Tutor: 9

Planner

Week 2	Notes
Monday 5th January	INSET DAY
Tuesday 6th January	
Wednesday 7th January	
Thursday 8th January	
Friday 9th January	

Week 1	Notes
Monday 12th January	
Tuesday 13th January	
Wednesday 14th January	
Thursday 15th January	
Friday 16th January	

Week 2	Notes
Monday 19th January	
Tuesday 20th January	
Wednesday 21st January	KS4 Choices Evening
Thursday 22nd January	
Friday 23rd January	

Week 1	Notes	
Monday 26th January	Taster lessons	
Tuesday 27th January		
Wednesday 28th January		
Thursday 29th January		
Friday 30th January		

Planner

Planner

Week 2	Notes	
Monday 2nd February	Taster lessons	
Tuesday 3rd February		
Wednesday 4th February		
Thursday 5th February		
Friday 6th February		

Week 1	Notes
Monday 9th February	Preference form opens
Tuesday 10th February	
Wednesday 11th February	
Thursday 12th February	
Friday 13th February	Preference form deadline

Self-certification / Out of lessons

Self-certification

Every student is entitled to self-certify to go to the toilet on 2 occasions each term, when they do not have a medical exemption (this is issued by school only, in conjunction with parents). This will equate to 12 opportunities a year.

Sign below and show to your teacher. If you have a reason that requires this page to be refreshed before the end of term, please speak to your Head of Year.

Date	Time	Student signature

Insert medical exemption here (Head of Year)
Review/end date:

NSPCC CHILD PROTECTION HELPLINE 0808 800 5000

ChildLine 0800 1111

Student out of lesson record

Date and time	Reason	Staff signature

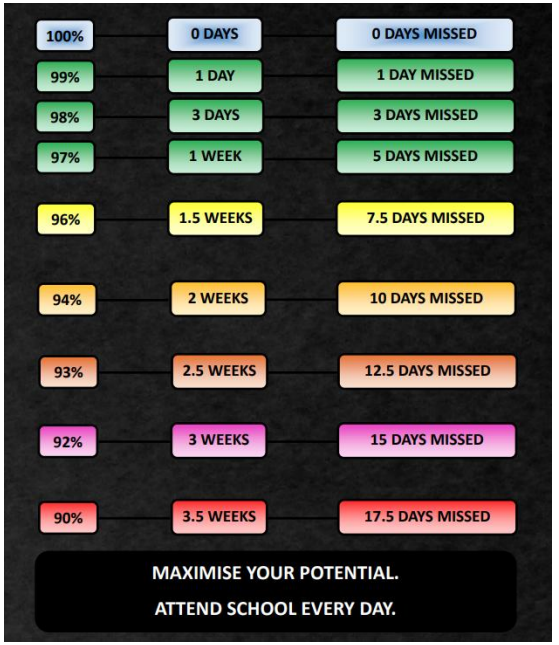
Have a problem? Worried about someone or something? Need someone to talk to? Scan the QR code and let us know.

Reporting your concerns

Self-certification / Out of lessons

Attendance Matters

Attendance Groups	
Green	Expected Attendance
Yellow	Risk of Underachievement
Amber	Serious Risk of Underachievement
Pink	Severe Risk of Underachievement (PA)
Red	Extreme Risk (PA)



Personal Attendance Record

Week	Monday	Tuesday	Wednesday	Thursday	Friday	%	Colour	↑ → ↓
1								
2								
3								
4								
5								
6								

Attendance

Home School Agreement and uniform expectations

As a student of the school I will:

- Attend school every day and on time
- Represent the school in a positive way on my way to and from school
- Wear the correct school uniform smartly at all times
- Ensure I have downloaded the ClassCharts app and actively use the platform so that I am up to date with notifications regarding my behaviour, attendance, homework and detentions
- Follow the "Maidenhill Expectations" for all students regarding their Behaviour for Learning and uphold the school's expectations to 'Be kind, Aspire, Persevere and Achieve'
- Not use my mobile phone in school
- Go to reception if I need to contact home
- Be polite and considerate to all members of the school community
- Ensure that my behaviour has a positive impact on other students' learning and progress
- Refuse to take part in bullying or anti-social behaviour, including on social media
- Take responsibility for my own learning and actively participate in lessons
- Actively seek ways to improve my work and respond effectively to feedback
- Complete all my classwork and homework to the best of my ability and on time
- Respect the environment of the school and its neighbourhood, and help to keep it clean and tidy, free from litter and graffiti
- Represent the school in a positive way in the local community and when participating in school activities or visits, and on social media
- Talk with my parent(s)/carer(s) and school staff about any concerns in school
- Pass any written correspondence to my parents'/carers' on the day they are issued
- Interact positively with any school social media platforms.

Student Signature ……

Maidenhill Uniform

- Maidenhill school blazer needed at all times
- Maidenhill school tie
- Long or short sleeved plain white shirt, **tucked in when in the school building**
- Plain black, smart, tailored trousers
- Footwear should be a shoe and not a boot, and entirely black
- White, grey or black socks with no logos
- Black or nude tights. No patterns.
- Optional
  - Maidenhill skirt
  - Maidenhill shorts
  - Simple black belt
  - Maidenhill jumper

- Jewellery must be easily removed for practical lessons. Earrings must be studs and not dangle. Necklaces should be underneath the shirt
- Make-up should be discreet
- Hair must not be of extreme style or colour. Long hair should be tied back for health and safety reasons in certain subjects

Maidenhill PE Uniform

- **NO JEWELLERY**
- Red Maidenhill PE polo shirt
- Red Maidenhill hooded jumper
- Optional Rugby shirt
- Options for the lower half:
  - Plain black shorts with less than 5cm logos
  - Black tracksuit bottoms with less than 5cm logos
  - Maidenhill leggings
  - Maidenhill skort
  - Plain black leggings with no logos

- Socks
  - White or black
  - Red needed for all fixtures
- Shoes
  - Suitable trainers
  - Optional studded boots for football/rugby

Home School Agreement and Uniform

Equipment and acceptable use of the school ICT facilities

Equipment

You should be fully equipped for every lesson. Make sure you have the correct books for each lesson. It is always a good idea to pack your school bag the night before. Remember to check your timetable first. Here is a useful checklist.

Essential requirements

- ❑ At least 2 black pens
- ❑ Green pen
- ❑ 2 pencils and 2 x 2b or 4b pencils for Art, Design and Nutrition
- ❑ Ruler
- ❑ Rubber
- ❑ Pencil sharpener
- ❑ Scientific calculator
- ❑ Whiteboard and whiteboard pen
- ❑ Headphones for music
- ❑ Reading book
- ❑ Plastic wallet and knowledge organiser

Student property

You are expected to have your clothing marked with your name and, wherever possible, all other items of property which you are expected to bring to school with you such as bags, pencil cases and PE kit named too.

Money, bus passes and other similar items of value should always be carried with you and never left in bags around the school at break and lunchtimes.

You have the opportunity, if you wish, to hand valuables to a teacher before PE and arrangements will be made for safe keeping. The changing rooms are not always locked during lessons. If you do not do this, the school cannot guarantee full security for your property.

Network rules

Never share your password with anyone – not even your best friend – if you suspect that someone knows it, change it or see an ICT technician as soon as possible
Never share your user area with anyone – email files to a friend or home as an attachment, or use Office 365 "One Drive"
Always log off before leaving a computer
Never tamper with ICT equipment, if your PC or laptop is damaged or not working properly, please inform a member of staff immediately. DO NOT disconnect, reconnect or move or swap any cables at any time
Never give a stranger any information about you or your home
Always communicate with strangers politely – ask a teacher to check before sending
Don't suffer bullying – report and give a printout of any email or other material that offends you to a teacher
Avoid the spreading of computer viruses – from the internet or home. Keep your home virus checking software up to date
Do not attempt to download or install software – use only the software provided
Always give credit for information obtained from the internet
Do not eat or drink close to electronic equipment or in any computer room
Use your printing credits with care – extra print credits in any one week can only be obtained through the permission of a teacher whose work you need to print
The use of the internet at school must be in support of learning. The use of all chat systems is strictly forbidden. Inappropriate use will result in access being withdrawn. A log of all internet access and activity is monitored throughout the day by the network staff so misuse of the system can be quickly identified and dealt with.

To access email from home, log on to rmunify.com. School emails should only be used to communicate with staff/students about school related matters. You can also speak with staff via the message function on ClassCharts.

Visit the website 'thinkyouknow' for essential and excellent advice on using the internet safely outside of school.

Behaviour for Learning

At Maidenhill School we believe that students have the right to learn, and teachers have the right to teach.

When you make good choices and follow the rules, you will be rewarded.

Rewards

You can collect positive reward points in lessons and for completing quality homework. Rewards can be spent in the reward shop at the end of each term on vouchers, chocolate, stationery and much more! We have end of term rewards and end of year rewards in the form of our activities week, all to recognise the positivity and hard work you show each and every day.

If you make poor choices and do not follow the rules, then a clear set of consequences will follow.

Consequences

C2 – This is a verbal warning

C3 – Issued with a BFL detention of 40mins

C3r – This is when you are sent out of a lesson, and you must move to the referral room. You will be issued with a 55mins detention. Those students that are removed from lesson five times in a term, will then receive a 1 day internal isolation in the refocus room for every subsequent C3r. This will be reset at the start of the next term

C4 – Isolation in the refocus room

C4e – Educated off site at an alternative provision

C5 – Fixed term suspension

Be kind, Aspire, Persevere, Achieve

C5 Exclusions
If a student receives a C5 they will be excluded from school for a fixed period of time.

Incidents for which a students may be excluded include:

- In possession, under the influence of or dealing in illegal drugs. This also extends to alcohol and other toxic substances
- Serious physical or verbal aggression towards others
- Serious rudeness, defiance, threatening behaviour or inappropriate language towards a member of the school staff
- Anti-social behaviour such as theft or damage to property
- A build-up of incidents which are unacceptable and contravene school standards
- Repeated disruption and defiance which has disturbed the learning of other students
- Persistent poor behaviour

If a student persistently behaves in an unacceptable manner, this could lead to a permanent exclusion.

In exceptional circumstances, it is appropriate for the Headteacher to permanently exclude a student for a first offence. These might include such things as:

- Serious actual or threatened violence against another individual
- Sexual abuse or assault
- Supplying an illegal drug
- Carrying an offensive weapon

The school can take no responsibility for valuable items brought into school by students (so students are advised not to bring in expensive items).

The following items are not allowed to be brought into school:

- Alcohol and drugs
- Knives and other weapons
- Fireworks
- Cigarettes/e-cigarettes, vapes, tobacco, matches and lighters
- Tippex or other correcting fluids
- Aerosols
- Illegal substances
- Energy/fizzy drinks

Smoking is not permitted in school or on the way to and from school. Students found to be smoking/vaping or in possession of smoking/vaping equipment will receive a significant sanction.

Behaviour for Learning

Bullying

What is bullying?

Bullying is when one person or a group of people deliberately hurt, threaten or frighten someone over a period of time. It can be physical; like punching or kicking, or emotional like teasing or calling names.

Bullying includes repeated:

- Hitting
- Insults
- Cruel nicknames
- Making threats
- Isolating someone
- Damaging, taking or hiding property
- Writing or telling lies about someone
- Sending cruel text messages, video messages or emails
- Spreading rumours
- Being unfriendly and turning others against someone
- Posting inappropriate comments on websites and social media

Types

- Physical
- Cyber
- Verbal
- Emotional
- Prejudice based

If you are being bullied, do not suffer in silence:

- Be firm – look the bully in the eye and tell them to stop
- Get away from the situation as quickly as possible
- Tell an adult, peer or friend what has happened, straight away
- If you are scared to tell someone, get a friend to go with you
- Keep on speaking up until someone listens
- Don't blame yourself for what has happened

When you are talking about bullying, be clear about:

- When it started
- What has happened to you
- How often it has happened
- Who was involved
- Who saw what was happening
- Where and when it happened
- What you have already done about it

If you are being bullied, you can expect that:

- You will be listened to and taken seriously
- Action will be taken to help stop the bullying
- You will be involved in the process of deciding what action to take to stop the bullying and any worries that you may have will be listened to and respected
- You will be given the opportunity to talk about the way that the bullying has made you feel and to find strategies to deal with these feelings and to understand and cope with bullying behaviour
- If you are ever in fear of your physical safety, staff will take immediate action to keep you safe

ALL REPORTED INCIDENTS WILL BE TAKEN SERIOUSLY, INVESTIGATED AND APPROPRIATE ACTION TAKEN

Tutor time – Maths Task 1

Question 1 Factorise 55 + 35x	**Question 2** Factorise 12 - 8x	**Question 3** Simplify $a^2 \times b \times b^4 \times b$	**Question 4** Simplify $a^3 \times b \times a^3 \times b$
Question 5 Work out 64.7 - 8.74 =	**Question 6** Work out 8.2 × 1.9 =	**Question 7** Work out $\frac{3}{4} + \frac{1}{2} =$	**Question 8** Work out $\frac{1}{2} - \frac{2}{10} =$
Question 9 Find the nth term: 12, 22, 32, 42,...	**Question 10** Find the nth term: 13, 20, 27, 34,...	**Question 11** Work out 9.1 ÷ 0.7 =	**Question 12** Work out 8 ÷ 0.4 =
Question 13 Solve 4(5x - 3) = 28	**Question 14** Solve 6x + 6 = -6	**Question 15** Divide £90 in the ratio 3 : 7	**Question 16** Divide £48 in the ratio 3 : 5
Question 17 Express 95% as a fraction in its lowest form	**Question 18** Express $\frac{11}{25}$ as a percentage	**Question 19** Find the gradient of the line y = -3x - 2	**Question 20** Find the gradient of the line y = -4x + 5

SKILLS CHECK

Score

Tutor time – Maths Task 1

Tutor time – Maths Task 2

Question 1 Factorise 22 + 10x	**Question 2** Factorise 15x + 10	**Question 3** Simplify $a^4 \times b \times b \times a^4$	**Question 4** Simplify $a^3 \times b \times a^4 \times b$
Question 5 Work out 81.8 + 0.8 =	**Question 6** Work out 13.2 × 3.3 =	**Question 7** Work out $\frac{3}{4} + \frac{2}{3} =$	**Question 8** Work out $\frac{1}{2} - \frac{1}{5} =$
Question 9 Find the nth term: 1, 5, 9, 13,...	**Question 10** Find the nth term: 9, 17, 25, 33,...	**Question 11** Work out 18 ÷ 0.9 =	**Question 12** Work out 3.6 ÷ 0.3 =
Question 13 Solve 8x - 9 = -1	**Question 14** Solve 3(3x - 5) = 21	**Question 15** Divide £64 in the ratio 5 : 11	**Question 16** Divide £40 in the ratio 3 : 5
Question 17 Express 90% as a fraction in its lowest form	**Question 18** Express $\frac{7}{20}$ as a percentage	**Question 19** Find the gradient of the line y = 4x - 3	**Question 20** Find the gradient of the line y = -2x + 3

SKILLS CHECK

Score

Tutor time – Maths Task 2

Tutor time – Maths Task 3

Question 1 Factorise 25x - 35	**Question 2** Factorise 18x + 6	**Question 3** Simplify $a^2 \times b \times a^2 \times b$	**Question 4** Simplify $b^3 \times a \times a^2 \times b$
Question 5 Work out 79.2 ÷ 4 =	**Question 6** Work out 37 × 9 =	**Question 7** Work out $\frac{7}{8} + \frac{3}{4} =$	**Question 8** Work out $\frac{2}{3} - \frac{1}{6} =$
Question 9 Find the nth term: 11, 21, 31, 41,...	**Question 10** Find the nth term: 7, 12, 17, 22,...	**Question 11** Work out 2.2 ÷ 0.2 =	**Question 12** Work out 11 ÷ 1 =
Question 13 Solve 4x + 4 = 2x + 10	**Question 14** Solve 2(8x + 5) = -22	**Question 15** Divide £65 in the ratio 11 : 2	**Question 16** Divide £32 in the ratio 1 : 3
Question 17 Express 61% as a fraction in its lowest form	**Question 18** Express $\frac{49}{100}$ as a percentage	**Question 19** Find the gradient of the line y = 0.5x + 5	**Question 20** Find the gradient of the line y = -2x - 3

SKILLS CHECK

Score

Tutor time – Maths Task 3

Tutor time – Maths – Extra practice

Question 1 Factorise 12x - 66	**Question 2** Factorise 55x + 65	**Question 3** Simplify $b^2 \times b \times a^2 \times a$	**Question 4** Simplify $b^4 \times a \times b^4 \times b$
Question 5 Work out 43.5 - 0.91 =	**Question 6** Work out 29 × 8.6 =	**Question 7** Work out $\frac{1}{3} + \frac{1}{2} =$	**Question 8** Work out $\frac{3}{4} - \frac{1}{2} =$
Question 9 Find the nth term: 9, 21, 33, 45,...	**Question 10** Find the nth term: 7, 19, 31, 43,...	**Question 11** Work out 5 ÷ 1 =	**Question 12** Work out 3.9 ÷ 0.3 =
Question 13 Solve 5x - 3 = -3	**Question 14** Solve 8x + 5 = 4x - 11	**Question 15** Divide £88 in the ratio 1 : 7	**Question 16** Divide £176 in the ratio 5 : 11
Question 17 Express 19% as a fraction in its lowest form	**Question 18** Express $\frac{1}{5}$ as a percentage	**Question 19** Find the gradient of the line y = -4x + 4	**Question 20** Find the gradient of the line y = 3x + 10

SKILLS CHECK

Score

Tutor time – Maths – Extra Practice

Tutor time – Maths – Extra practice

Question 1 Factorise 35x + 55	**Question 2** Factorise 30 + 66x	**Question 3** Simplify $a^3 \times b \times b^2 \times b$	**Question 4** Simplify $a \times b \times b^4 \times b$
Question 5 Work out 7.69 - 7.15 =	**Question 6** Work out 5.6 × 4.1 =	**Question 7** Work out $\frac{3}{10} + \frac{2}{3} =$	**Question 8** Work out $\frac{7}{9} - \frac{1}{2} =$
Question 9 Find the nth term: 9, 18, 27, 36,...	**Question 10** Find the nth term: 18, 30, 42, 54,...	**Question 11** Work out 4 ÷ 0.5 =	**Question 12** Work out 2.2 ÷ 0.2 =
Question 13 Solve 11x - 5 = -5	**Question 14** Solve 4x - 4 = 3x + 2	**Question 15** Divide £12 in the ratio 3 : 1	**Question 16** Divide £60 in the ratio 1 : 5
Question 17 Express 85% as a fraction in its lowest form	**Question 18** Express $\frac{13}{20}$ as a percentage	**Question 19** Find the gradient of the line y = x - 5	**Question 20** Find the gradient of the line y = x + 10

SKILLS CHECK

Score

Tutor time – Maths – Extra practice

Tutor time – Maths – Extra practice

Question 1 Factorise 25x - 55	**Question 2** Factorise 20x + 28	**Question 3** Simplify $a^2 \times a \times a^4 \times b$	**Question 4** Simplify $a^2 \times a \times b^4 \times a$
Question 5 Work out 85.7 + 55 =	**Question 6** Work out 96.9 ÷ 3 =	**Question 7** Work out $\frac{4}{9} + \frac{1}{7} =$	**Question 8** Work out $\frac{1}{2} - \frac{1}{4} =$
Question 9 Find the nth term: 17, 29, 41, 53,...	**Question 10** Find the nth term: 0, 3, 6, 9,...	**Question 11** Work out 5.1 ÷ 0.3 =	**Question 12** Work out 1.8 ÷ 0.2 =
Question 13 Solve 15x - 13 = -13	**Question 14** Solve 5x - 2 = -9.5	**Question 15** Divide £108 in the ratio 2 : 7	**Question 16** Divide £64 in the ratio 3 : 5
Question 17 Express 70% as a fraction in its lowest form	**Question 18** Express $\frac{11}{20}$ as a percentage	**Question 19** Find the gradient of the line y = 4x + 1	**Question 20** Find the gradient of the line y = -3x + 10

SKILLS CHECK

Score

Tutor time – Maths – Extra practice

Tutor time – Maths workings out

Task 1

Correct the paragraph for:

- spelling
- punctuation
- capital letters
- verb tense agreement

last term our class done a charity event we maked posters selled cakes and speaked to parents about it everyone said it were a great idea but organising it was stressfull and some students didnt take it serious

Corrected version:

Challenge

List the verbs you corrected:

Tutor time – English

Task 2

Replace the informal phrases with **ambitious, academic alternatives**.

Word	Ambitious Alternatives
Did a charity event	
Made posters	
Did not take it seriously	
Everyone said it was a great idea	

Challenge:

Write a sentences using *one* of your new academic phrases:

Tutor time – English

Task 3

Read the text, then answer in full sentences.

Sofia scrolled through her phone at break, watching videos about environmental activism. She wanted to speak up about the amount of litter in school but worried people would laugh. When she saw a younger student picking up rubbish alone, she paused, put her phone away, and walked over to help without saying a word.

Questions

a) What is the *main theme* of this paragraph?

b) What can you infer about Sofia's feelings? Explain using evidence.

c) Why is it significant that she put her phone away?

Tutor time – English

Your Knowledge Organiser for each subject can be found in the following order:

1. English
2. Mathematics
3. Science
4. Art, Design, Nutrition and Photography (on rotation)
5. Computing
6. Drama
7. French
8. Geography
9. History
10. Music
11. Physical Education
12. Religious Studies

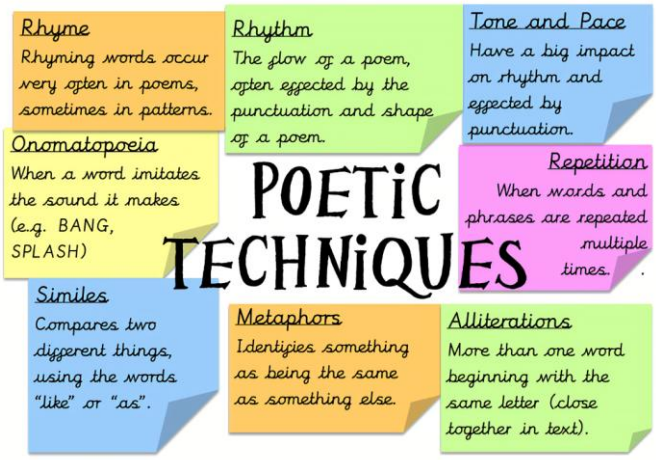
Expectations

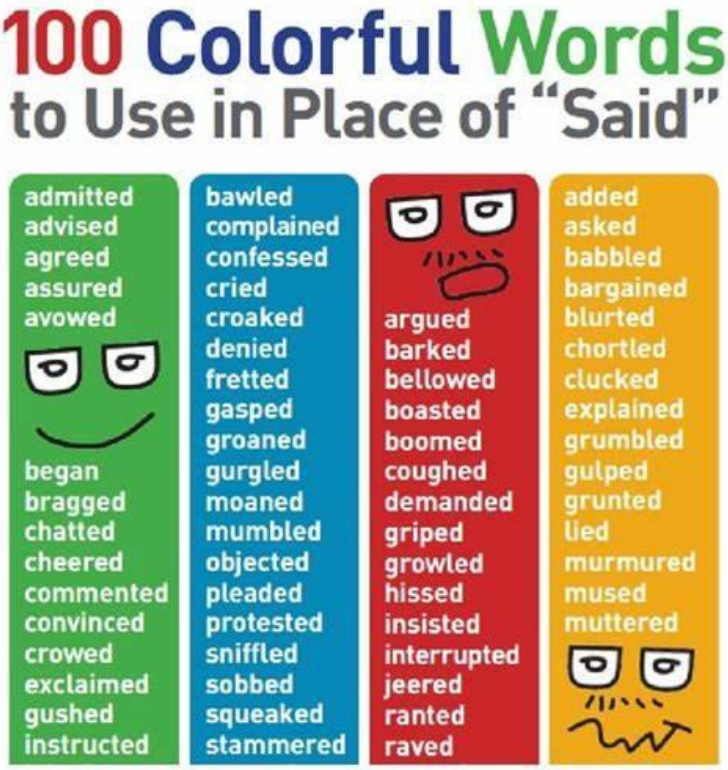
You are responsible for looking after your Knowledge Organisers.

You should:

- ✓ *Memorise and build upon the information in each Knowledge Organiser.*
- ✓ *Keep them neat and tidy.*
- ✓ *Bring them to school each day.*
- ✓ *Refer to them in lessons and your homework tasks.*

Contents Page





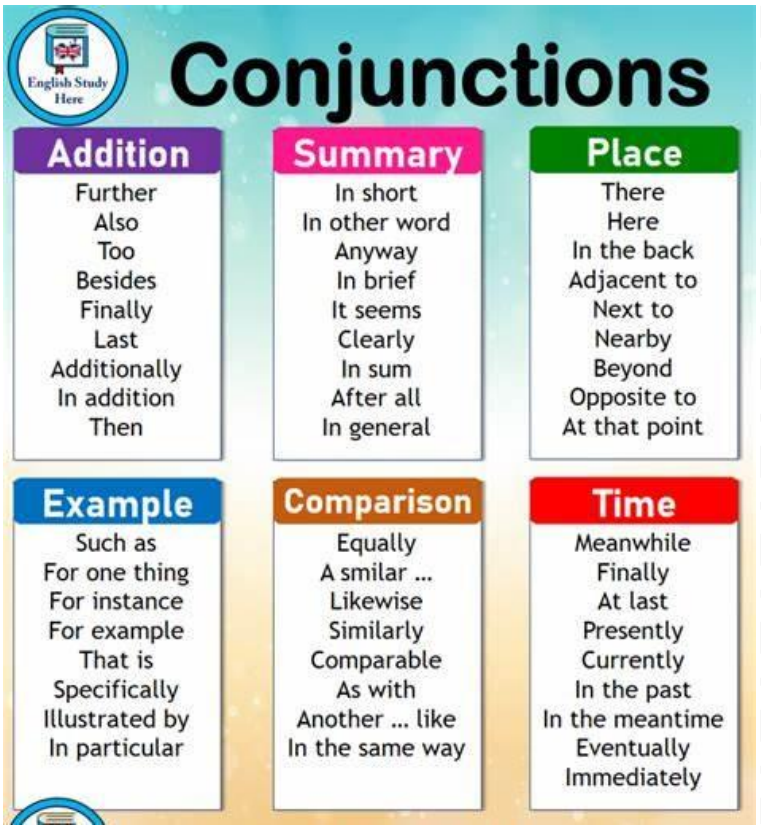
LITERARY DEVICE	DEFINITION	EXAMPLE
Simile	A comparison using "like" or "as"	Her eyes were like shining stars
Metaphor	A comparison without using "like" or "as"	Life is a journey
Personification	Giving human qualities to non-human things	The wind whispered through the trees
Hyperbole	An exaggeration for emphasis	I've told you a million times
Alliteration	Repetition of the same sound at the beginning of words	Peter Piper picked a peck of pickled peppers
Onomatopoeia	Words that sound like what they mean	Buzz, hiss, sizzle
Irony	A contrast between what is expected and what actually happens	A fire station burning down
Foreshadowing	Hinting at what will happen later in the story	The ominous music in a horror movie
Symbolism	Using objects or actions to represent ideas or qualities	A dove as a symbol of peace
Imagery	Descriptive language that creates a picture in the reader's mind	The sun set over the ocean, painting the sky with shades of orange and pink

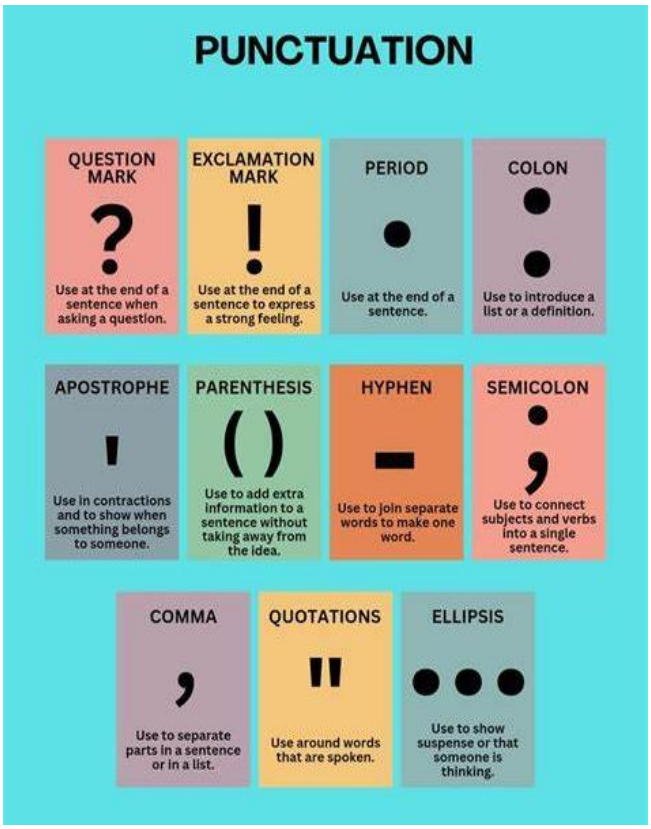
Common Techniques

D	DIRECT ADDRESS
A	ALLLITERATION
F	FACT
O	OPINION
R	RHETORIAL QUESTION
R	REPETITION
E	EMOTIVE LANGUAGE
S	STATISTICS
T	THREE (LIST OF)
I	IMPERATIVE

Transactional Writing

- Letters
- Reviews
- Reports
- Articles





Verbs to sharpen your analysis

THIS SHOWS	THIS SUGGESTS	THIS HIGHLIGHTS	THIS INTERESTS
Demonstrates	Implies	Emphasises	Fascinates
Reveals	Infers	Stresses	Amuses
Exposes	Hints at	Reinforces	Satisfies
Discloses	Signifies	Spotlights	Terrifies
Uncovers	Connotes	Underlines	Enthrals
Encapsulates	Denotes	Accentuates	Enthuses
Proves	Insinuates	Underscores	Stimulates
Validates	Intimates	Foreshadows	Galvanises
Exhibits	Advocates	Exaggerates	Animates
Establishes	Poses	Reiterates	Rouses
Denotes	Conjures	Magnifies	Stirs
Displays	Symbolises	Zeroes in on	Placates
Flaunts	Points towards	Promotes	Provokes
Showcases	Indicates	Publicises	Deceives
Presents	Alludes to	Pinpoints	Astonishes

1.1 Persuasive Techniques- DAFORRESTI

Direct address
Alliteration
Facts
Opinions
Rhetorical question
Repetition
Emotive Language
Statistics
Three (list of)
Imperatives

1.2 What is travel writing?

Travel writing is when you write about places, people, and things in other places - also writing about how to travel, when to travel, and advice on travelling; all with the reader in mind. It is about relaying your travel experiences to others so that they may follow them or at the very least not make the same mistakes you did. It is writing about things in your own back yard that are exotic to everyone else: a local farmer's market, historic site, restaurant or a museum.

1.3 Forms of Travel Writing

Article: A piece of writing informing others, including a headline, who, what, when, where, why and how

Leaflet: A printed sheet of information or advertisement for a location.

Review: An honest critique and description of a location to make a recommendation to your audience.

Letter: A text exploring and sharing information to a chosen audience about a particular location.

Speech: A text written to persuade an audience to travel.

Blog: An online text or diary that records the experiences of the traveller that is regularly updated and written in an informal or conversational style.

1.4 Conjunctions/Discourse Markers

Position Firstly, Secondly ,Thirdly, Next, Meanwhile, Subsequently, Finally, To summarise, In conclusion.

Emphasis Importantly, Notably, Significantly, In particular.

Addition Furthermore, Additionally, In addition, As well as.

Contrast/Compare Although, Whereas, Alternatively, Likewise, Similarly, Equally.

Maths Unit 3 Graphs, Tables and Charts

What do I need to be able to do?

By the end of this unit you should be able to:

- Design and complete an ungrouped frequency table.
- Read and interpret grouped tables (discrete and continuous data)

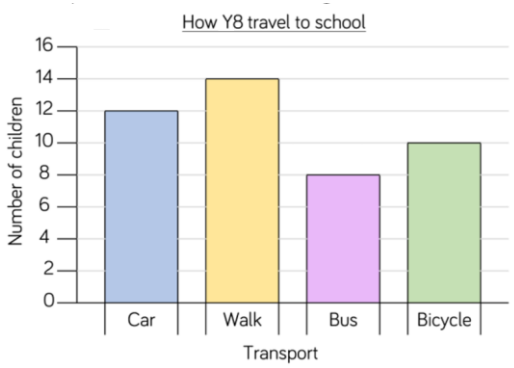
Keywords

Quantitative: numerical data
Qualitative: descriptive information, colours, genders, names, emotions etc

Enrichment Opportunities

How big are classes 5,6 & 7?
https://nrich.maths.org/2399

Bar and line charts (425)



Use addition/ subtraction methods to extract information from bar charts.

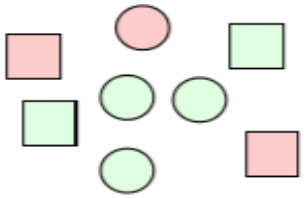
e.g. Difference between the number of students who walked and took the bus.
Walk frequency – bus frequency

Representing data in two-way tables (422-423)

Two-way tables represent discrete information in a visual way that allows you to make conclusions, find probability or find totals of sub groups

There are 2 green squares

There are 5 green shapes



	Squares	Circles	Total
Green	2	3	5
Red	2	1	3
Total	4	4	**8**

There are 8 items in total

Using your two-way table

To find a fraction
e.g. What fraction of the items are red? **3 red items** but **8 items in total** $= \frac{3}{8}$

Interleaving: Use your fraction, decimal percentage equivalence knowledge

Ungrouped Data (402)

The table shows the number of siblings students have. The answers were **3, 1, 2, 2, 0, 3, 4, 1, 1, 2, 0, 2**

The number of times an event happened

2 people had 0 siblings. This means there are 0 siblings to be counted here

Number of siblings	Frequency	
0	2	**0**
1	3	**3**
2	4	2 + 2 + 2 + 2 OR 2 x 4 = **8**
3	2	3 + 3 OR 3 x 2 = **6**
4	1	**4**

Best represented by discrete data. (Not always a number)

OVERALL there are 0 + 3 + 8 + 6 + 4 Siblings = 21 siblings

Grouped Data (403)

If we have a large spread of data it is better to group it.

Discrete Data The groups do not overlap

Cost of TV (£)	Tally	Frequency
101 - 150	𝍸 | |	7
151 - 200	𝍸 𝍸 |	11
201 - 250	𝍸	5
251 - 300	| | |	3

Continuous Data To make sure all values are included inequalities represent the subgroups

x Weight(g)	Frequency
$40 < x \leq 50$	1
$50 < x \leq 60$	3
$60 < x \leq 70$	5

e.g. this group includes every weight bigger that 60Kg, up to and including 70Kg.

Maths Graphs, Tables and Charts Unit 3

Maths Unit 3 Graphs, Tables and Charts

What do I need to be able to do?

By the end of this unit you should be able to:

- Draw and interpret scatter graphs
- Describe correlation and relationships.
- Identify different types of non-linear relationships.
- Draw Pie charts

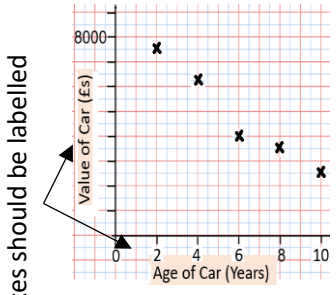
Keywords

Variable: a quantity that may change within the context of the problem.
Relationship: the link between two variables (items). E.g. Between sunny days and ice cream sales
Correlation: the mathematical definition for the type of relationship..
Origin: where two axes meet on a graph.
Line of best fit: a straight line on a graph that represents the data on a scatter graph.
Outlier: a point that lies outside the trend of graph.
.

Draw and interpret a scatter graph. (453)

Age of Car (Years)	2	4	6	8	10
Value of Car (£s)	7500	6250	4000	3500	2500

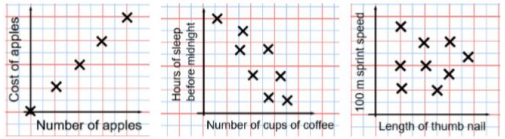
- This data may not be given in size order
- The data forms information pairs for the scatter graph
- Not all data has a relationship



All axes should be labelled

The axis should fit all the values on and be equally spread out

Linear Correlation (453,454)



Positive Correlation **Negative Correlation** **No Correlation**

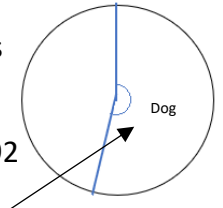
As one variable increases so does the other variable	As one variable increases the other variable decreases	There is no relationship between the two variables

Draw Pie Charts (427-429)

Type of pet	Dog	Cat	Hamster
Frequency	32	25	3

$\frac{32}{60}$ "32 out of 60 people had a dog"

This fraction of the 360 degrees represents dogs

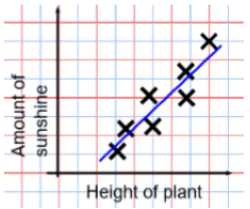


$\frac{32}{60}$ X 360 = 192

Use a protractor to draw
This is 192°

The line of best fit (454)

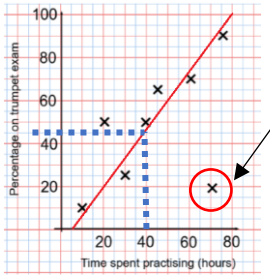
The Line of best fit is used to make estimates about the information in your scatter graph



Using a line of best fit (454)

Interpolation is using the line of best fit to estimate values inside our data point.

e.g. 40 hours revising predicts a percentage of 45.



This point is an "**outlier**"
It is an outlier because it doesn't fit this model and stands apart from the data

Enrichment Opportunities

Charting success
https://nrich.maths.org/7735

Maths Graphs, Tables and Charts Unit 3

Photosynthetic reaction

Photosynthesis is a chemical reaction in which energy is transferred from the environment as light from the Sun to the leaves of a plant. This is an **endothermic** reaction.

Chlorophyll, the green pigment in **chloroplasts** in the leaves, absorbs the light energy. Leaves are well-adapted to increase the rate of photosynthesis when needed.

Rate of photosynthesis

A **limiting factor** is anything that limits the rate of a reaction when it is in short supply.

The limiting factors for photosynthesis are

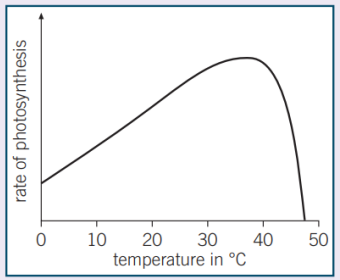
- temperature
- carbon dioxide concentration
- light intensity
- amount of chlorophyll.

Less chlorophyll in the leaves reduces the rate of photosynthesis. More chlorophyll may be produced by plants in well-lit areas to increase the photosynthesis rate.

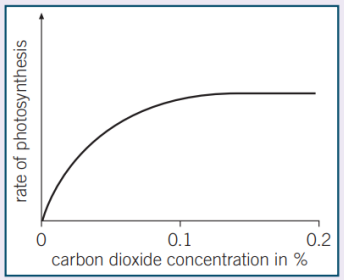
carbon dioxide + water $\xrightarrow{\text{light}}$ **glucose** + oxygen

$6CO_2 + 6H_2O \xrightarrow{\text{light}} C_6H_{12}O_6 + 6O_2$

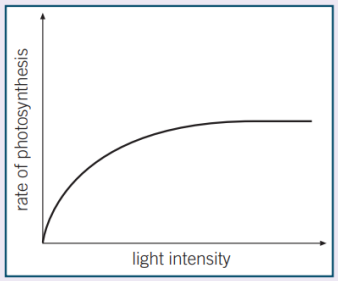
Limiting factors and photosynthesis rate (HT only)



- At low temperatures the rate of photosynthesis is low because the reactant molecules have less kinetic energy.
- Photosynthesis is an enzyme-controlled reaction, so at high temperatures the enzymes are denatured and the rate quickly decreases.



- Carbon dioxide is used up in photosynthesis, so increasing carbon dioxide concentration increases the rate of photosynthesis.
- At a certain point, another factor becomes limiting.
- Carbon dioxide is often the limiting factor for photosynthesis.



- Light energy is needed for photosynthesis, so increasing light intensity increases the rate of photosynthesis.
- At a certain point, another factor becomes limiting.
- Photosynthesis will stop if there is little or no light.

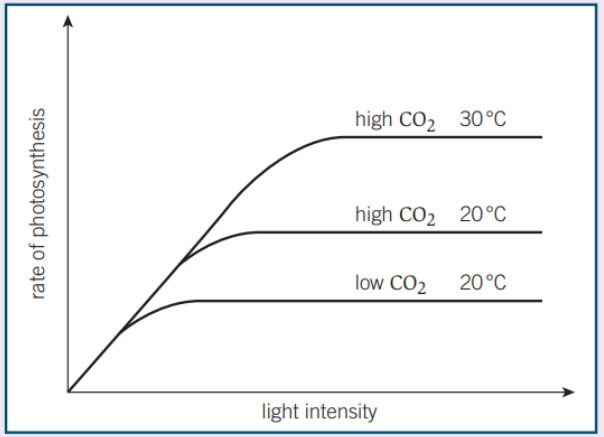
Enrichment Opportunities

Pond weed RP simulator
https://amrita.olabs.edu.in/?sub=79&brch=16&sim=126&cnt=4
Revision
https://www.bbc.co.uk/bitesize/guides/zs4mk2p/revision/1

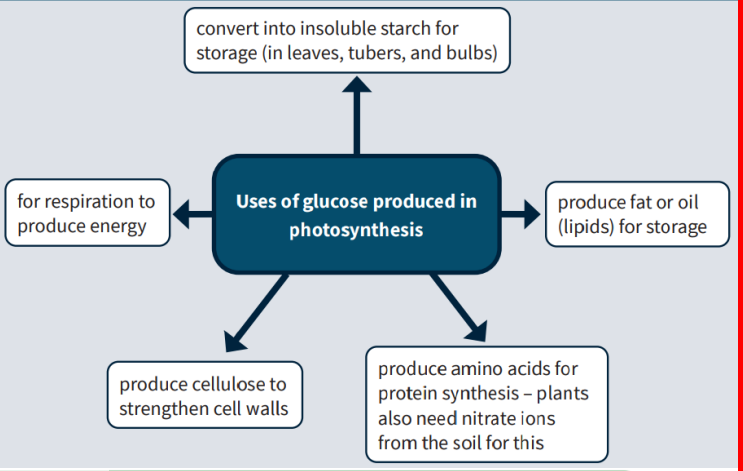
Interaction of limiting factors (HT only)

Limiting factors often interact, and any one may be limiting photosynthesis.

For example, on the graph the lowest curve has both carbon dioxide and temperature limiting photosynthesis. Temperature is limiting for the middle curve, and the highest curve shows photosynthesis rate increases when both temperature and carbon dioxide are increased until another factor becomes limiting.



Uses of glucose



Key terms

Make sure you can write a definition for these key terms.

carbon dioxide *chlorophyll* *chloroplast* *concentration* *endothermic* *glucose* *greenhouse gases* *light intensity* *inverse square law* *limiting factor* *photosynthesis* *protein synthesis*

Development of the Periodic Table

The Periodic Table has changed over time as scientists have organised it differently. Mendeleev was able to accurately predict the properties of undiscovered elements based on the gaps in the table.

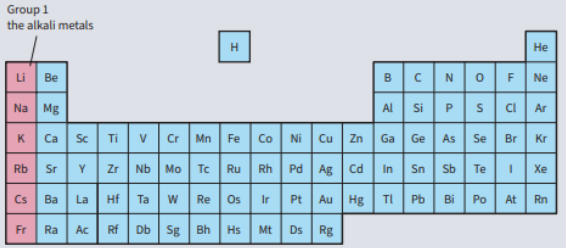
	First lists of elements	Mendeleev's Periodic Table	Modern Periodic Table
How are elements ordered?	by atomic mass	normally by atomic mass but some elements were swapped around	by atomic number
Are there gaps?	no gaps	gaps left for undiscovered elements	no gaps – all elements up to a certain atomic number have been discovered
How are elements grouped?	not grouped	grouped by chemical properties	grouped by the number of electrons in the outer shells
Metals and non-metals	no clear distinction	no clear distinction	metals to the left, non-metals to the right
Problems	some elements grouped inappropriately	incomplete, with no explanation for why some elements had to be swapped to fit in the appropriate groups	—

Group 1 elements

Group 1 elements react with oxygen, chlorine, and water, for example:

lithium + oxygen → lithium oxide
lithium + chlorine → lithium chloride
lithium + water → lithium hydroxide + hydrogen

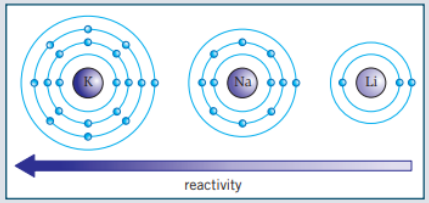
Group 1 elements are called **alkali metals** because they react with water to form an alkali (a solution of their metal hydroxide).



Group 1 properties

Group 1 elements all have one electron in their outer shell.
Reactivity increases down Group 1 because as you move down the group:

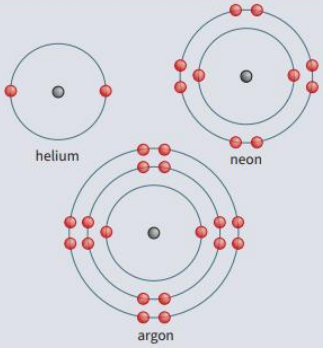
- the atoms increase in size
- the outer electron is further away from the nucleus, and there are more shells shielding the outer electron from the nucleus
- the electrostatic attraction between the nucleus and the outer electron is weaker so it is easier to lose the one outer electron
- the melting point and boiling point decreases down Group 1.



Group 0

Elements in **Group 0** are called the **noble gases**. Noble gases have the following properties:

- full outer shells with eight electrons, so do not need to lose or gain electrons
- are very unreactive (**inert**) so exist as single atoms as they do not bond to form molecules
- boiling points that increase down the group.



Group 7 elements

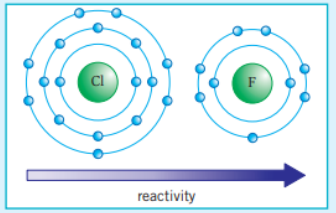
Group 7 elements are called the **halogens**. They are non-metals that exist as molecules made up of pairs of atoms.

Name	Formula	State at room temperature	Melting point and boiling point	Reactivity
fluorine	F_2	gas	increases down the group	decreases down the group
chlorine	Cl_2	gas		
bromine	Br_2	liquid		
iodine	I_2	solid		

Group 7 reactivity

Reactivity decreases down Group 7 because as you move down the group:

- the atoms increase in size
- the outer shell is further away from the nucleus, and there are more shells between the nucleus and the outer shell
- the electrostatic attraction from the nucleus to the outer shell is weaker so it is harder to gain one electron to fill the outer shell.



Group 7 displacement

More reactive Group 7 elements can take the place of less reactive ones in a compound. This is called **displacement**.
For example, fluorine displaces chlorine as it is more reactive:

fluorine + potassium chloride → potassium fluoride + chlorine

Enrichment Opportunities

Pond weed RP simulator
https://periodic-table.rsc.org/
Revision
https://www.bbc.co.uk/bitesize/topics/zcckk2p

Key terms

Make sure you can write a definition for these key terms.

alkali metals, chemical properties, displacement, groups, halogens, inert, isotopes, noble gas, organised, Periodic Table, reactivity, undiscovered, unreactive

Charge

An atom has no **charge** because it has equal numbers of positive protons and negative electrons.

When electrons are removed from an atom it becomes *positively* charged. When electrons are added to an atom it becomes *negatively* charged.

Static charge

Insulating materials can become charged when they are rubbed with another insulating material. This is because electrons are transferred from one material to the other. Materials that gain electrons become negatively charged and those that lose electrons become positively charged.

Positive charges do not usually transfer between materials.

Electric charge is measured in coulombs C.

Sparks

If two objects have a very strong electric field between them, electrons in the air molecules will be strongly attracted towards the positively charged object. If the electric field is strong enough, electrons will be pulled away from the air molecules and cause a flow of electrons between the two objects – this is a **spark**.

Drawing electric fields

A charged object creates an **electric field** around itself.

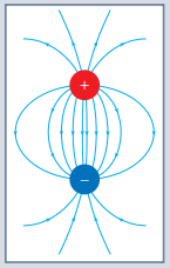
If a charged object is placed in the electric field of another charged object it experiences **electrostatic force**. This means that the two charged objects exert a non-contact force on each other:

- like charges repel each other
- opposing charges attract each other.

The electric field, and the force between two charged objects, gets stronger as the distance between the objects decreases.

Drawing electric fields

Electric fields can be represented using a diagram with field lines. These show the direction of the force that a small positive charge would experience when placed in the electric field.



When drawing electric fields, make sure:

- field lines meet the surface of charged objects at 90°
- arrows always point away from positive charges and towards negative charges.

Electric current

Electric current is when **charge** flows. The charge in an electric circuit is carried by electrons.

The unit of current is the ampere (amp, A).

1 ampere = 1 coulomb of charge flow per second

Charge (C) = current (A) x time (s)

In circuit diagrams, current flows from the positive terminal of a cell or battery to the negative terminal. This is known as conventional current.

In a single closed loop, the current has the same value at any point in the circuit.

Metals are good conductors of electricity because they contain delocalised electrons, which are free to flow through the structure.

Potential difference

Potential difference (p.d.) is a measure of how much energy is transferred between two points in a circuit. The unit of potential difference is the volt (V).

- The p.d. across a component is the work done on it by each coulomb of charge that passes through it.
- The p.d. across a power supply or battery is the energy transferred to each coulomb of charge that passes through it.

For electrical charge to flow through a circuit there must be a source of potential difference.

Potential difference (V) = energy transferred (J)/ charge (C)

Key terms

Make sure you can write a definition for these key terms.

ampere
charge
coulomb
current
electric field
electrostatic force
LDR
parallel
potential difference
resistance
series
static
thermistor

Resistance

When electrons move through a circuit, they collide with the ions and atoms of the wires and components in the circuit. This causes **resistance** to the flow of charge.

The unit of resistance is the ohm (Ω).

A long wire has more resistance than a short wire because electrons collide with more ions as they pass through a longer wire.

The resistance of an electrical component can be found by measuring the current and potential difference:

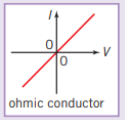
potential difference (V) = current (A) × resistance (Ω)

$V = IR$

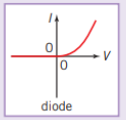
L

Current-potential difference graphs

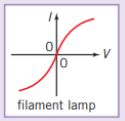
A graph of current through a component against the p.d. across it (I–V graph), is known as the component characteristic.



Current is directly proportional to the p.d. in an ohmic conductor at a constant temperature. The resistance is constant.



The current through a diode only flows in one direction – called the forward direction. There needs to be a minimum voltage before any current will flow.

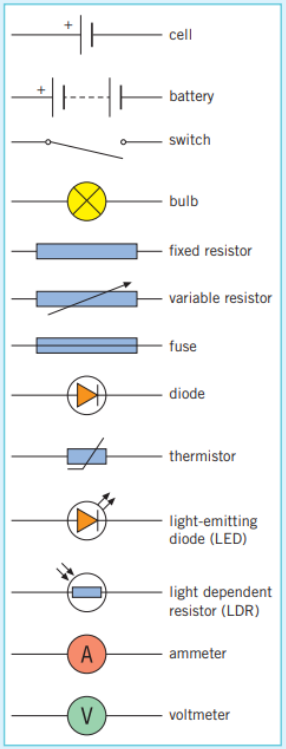


As more current flows through the filament, its temperature increases. The atoms in the wire vibrate more, and collide more often with electrons flowing through it, so resistance increases as temperature increases. The resistance of a thermistor decreases and temperature increases. The resistance of a light dependent resistor (LDR) decreases as light intensity increases.

The resistance of an ohmic conductor can be found by calculating the gradient at that point and taking the inverse:

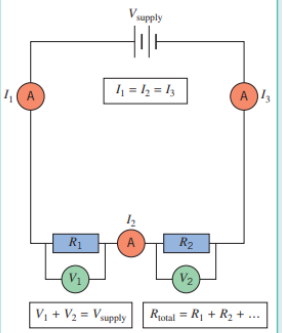
resistance = $\frac{1}{\text{gradient}}$.

Circuit components



Series circuits

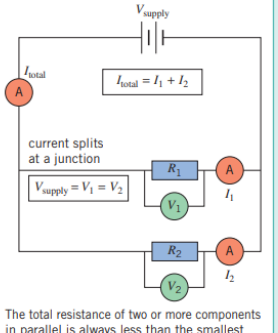
In a series circuit, the components are connected one after the other in a single loop. If one component in a series circuit stops working the whole circuit will stop working.



Components with a higher resistance will transfer a larger share of the total p.d. because $V = IR$ (and current is the same through all components).

Parallel circuits

A parallel circuit is made up of two or more loops through which current can flow. If one branch of a parallel circuit stops working, the other branches will not be affected.



The total resistance of two or more components in parallel is always less than the smallest resistance of any branch. This is because adding a loop to the circuit provides another route for the current to flow, so more current can flow in total even though the p.d. has not changed. Adding more resistors in parallel decreases the total resistance of a circuit.

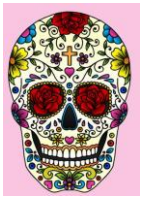
Enrichment Opportunities

Phet Circuit builder
https://phet.colorado.edu/en/simulations/circuit-construction-kit-dc
Revision
https://www.bbc.co.uk/bitesize/topics/zcg44qt

Dia de los Muertos

Day of the Dead Festival:

- **1st November** 'Dia de los Angelitos' Day of the angels, innocents souls of **children** are remembered
- **2nd November** 'Dia de los Difuntos' Day of the dead (**adults**)
- The official celebration day is the 2nd November but celebrations can start on the 31st October so it lasts 3 days in total.
- The festival is to **remember your loved ones which have passed away, be happy, joyful and laugh**.
- Dia de los muertos is **not related to Halloween**, it is an older Aztec celebration.
- The difference with Halloween is that **day of the dead** is a **happy** event and Halloween instils fear in people about death and the dead which does not **preserve their spirit** or **memory respectfully or peacefully**.



Altars

Pan de muerto/death bread: has bone shapes on the top, it is a sweet orange sugary bread

Sugar Skulls

Man Made

Man made objects have been constructed, caused or made in some way by human beings. Natural forms have occurred or grown naturally.

Many artists are inspired by man-made objects, Michael Craig-Martin, Jim Dine and Mark O'Brien are some of the artists that we will look at.

Michael Craig-Martin

Jim Dine

Mark O'Brien

Sculpture Key Words and Information

An artist who creates work that is three dimensional is called a **sculptor.**
Sculpture can be made from a range of materials that might make the work permanent or temporary, such as:

- natural materials, e.g., grasses, bark, pebbles, rushes, leaves, clay, stone, wood
- made materials, e.g., fabric, card, cardboard, clay tiles, plastic, bronze, metal, wire, glass
- reclaimed materials, e.g., made for one purpose and used again for another purpose
- visual qualities, e.g., shape, form, texture, colour, pattern
- Different materials will give different tactile qualities, e.g., hard, soft, rough, smooth, bumpy, rigid, pliable
- Different processes are used to create a range of outcomes, processes could include assembling, carving, modelling, casting or constructing

Enrichment: Watch the following series with artist Grayson Perry
https://www.channel4.com/programmes/graysons-art-club

Forming & Shaping Techniques

Tools & Equipment

Name of tool	Picture	What the tool is used for
Router		Used to create slots, grooves and fancy edges
Hot wire strip heater		Used for forming plastic by applying heat to the material
Try Square		Marks out and checks right angles
Disc Sander		This machine smooths surfaces and removes old finishes (e.g. paint)
Twist Drill Bit		Used for drilling 1mm-20mm holes in timber, plastic and metal

Polymers

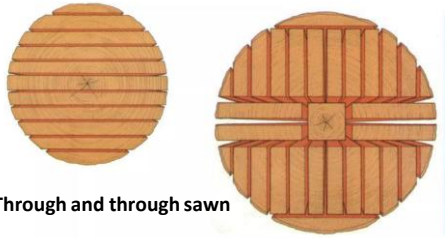
Thermosetting Polymers	Thermoforming Polymers
Urea Formaldehyde Epoxy Resin Melamine Formaldehyde Phenol Formaldehyde	Acrylic Polypropylene High-Density Polyethylene Polyvinyl Chloride (PVC)
Uses: Electrical fittings, kitchen worktops, boat hauls, adhesives	**Uses:** Signage, drinks bottles, food packaging and window frames

Lamination

Plywood

A number of thin layers or veneers of wood glued and pressed to create a strong composite

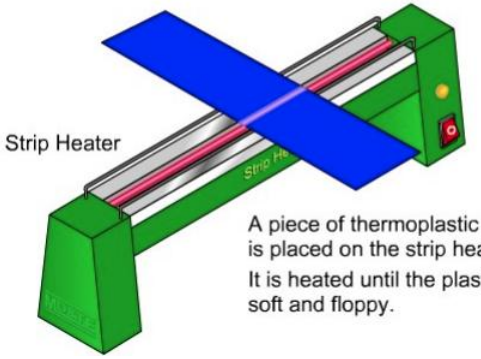
Conversion is cutting timber manageable lengths (planks)



Through and through sawn

Line Bending

Heat until soft → Bend → Hold until cool



A piece of thermoplastic sheet material is placed on the strip heater.

It is heated until the plastic becomes soft and floppy.

Health & Safety

1. Listen carefully to the teacher's instructions
2. Always clamp work before drilling/cutting
3. Wear safety glasses when using machinery
4. Carry and store sharp tools safely

Key words;

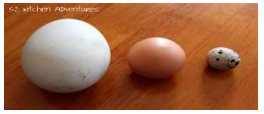
- Acrylic
- Former
- Thermoforming polymers
- Design brief
- Thermosetting polymers
- Timber conversion

Try these websites to support you

How to router timber: www.youtube.com/watch?v=pojJIMo8U2I

How to laminate plywood: https://www.youtube.com/watch?v=vVswXx2m3eI

The Science of Food



All eggs sold in Britain must be marked with a code that shows:
- Which egg producer they came from (Farm ID)
- The country of origin (UK)
- The type of method used, e.g. free range, organic, barn, cage.

Farming Methods

Caged / battery:
- Hens are kept indoors in cages. Light, food and temperature are all controlled to maximise egg laying. Fertilisers/medication are sometimes used. This is the cheapest method of egg production.

Barn:
- Hens are kept indoors but are free to roam about. The light and feed are controlled. The hens have access to some perches and can express some natural habits.

Free range / organic:
- Hens are allowed to roam in the open air; they are kept in hen houses at night. They are able to forage for natural foods and express all their natural habits. No fertilisers are used. This is the most expensive way of producing eggs.

Lion Quality Mark

Eggs displaying the Lion mark have been produced to the highest standard. Hens are tested for salmonella and hygiene is strictly controlled.

Nutrition in eggs

Eggs are a nutritious food and good value for money.

There is no recommended limit on how many eggs we should eat. Eggs offer us:

Easily digested protein needed for growth.

Essential vitamins, A,D,E, K and B groups – but no vitamin C

Minerals in iron, phosphorus and zinc

Only 80-90 kcal an egg – and are low in saturated fat.

Key Words:

1. Coagulation
2. Gelatinisation
3. Caramelisation
4. Shorten
5. Viscosity
6. Aerate
7. Raising Agent
8. High risk food
9. Emulsion
10. Peak

Eggs should be stored in the fridge (3°C) or a cool place away from strong smelling foods. Eggs should be stored blunt end upwards. They should be removed from the fridge an hour or so before use, because cold eggs do not whisk well.

Most eggs we use come from British hens, but they can also come from duck, geese and quail.

Flour
- Forms the structure of the cake
- Can have the raising agent in it sometimes

Fat
- Gives the cake a longer shelf life
- Adds colour to the cake
- Adds flavour to the cake

Sugar
- Gives flavour And sweetness

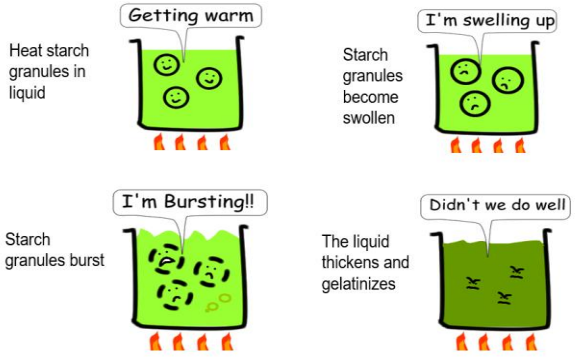
Eggs
- Adds colour and flavour to the cake

Raising agent
- Makes the cake rise

Raising Agents

Chemical	Biological	Mechanical	Physical
Bicarbonate of soda / baking powder	Yeast	Whisk or sieve	Steam

Gelatinisation: What happens during the production of a white sauce to make it thicken.



Starch gelatinizes when heated in a liquid, producing a thickened liquid

Creaming Method	Rubbing-in Method
Examples: Victoria sponge / muffins Definition: Sugar and butter creamed with a wooden spoon before other ingredients are added	Examples: Crumble, shortbread, pastry Definition: Use your hands to mix fat and flour together before adding any other ingredients
Whisking / All-in-one Method	**Melted Method**
Examples: Swiss roll, cupcakes, sponges, gateaux Definition: • All-in-one – Add all ingredients to the bowl at once and mix until smooth • Whisking – Use the whisk to aerate the mixture	Examples: Brownies, flapjacks, rocky road Definition: Melt the fats on the hob in a saucepan before mixing the eggs and baking the product

Cake making methods

Trapping air/Aerating:

The protein in the egg white stretches when beaten and traps air.

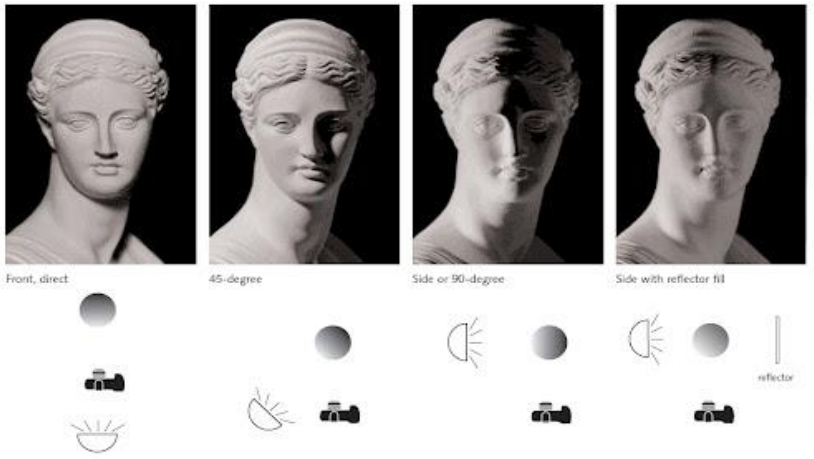
Example: sponge cake, Swiss roll and meringues

Food preparation and nutrition – Year 9

Photography

Photography is the process of capturing light with a device known as a camera and creating an image. That camera could come in various forms including phone cameras, digital cameras, and film cameras. Photo editing is the act of altering an image. You can change an image to improve its quality, style or mood. There are lots of different methods and tools to edit photos.

Many photographers use light and shadow, alongside editing techniques, to transform ordinary objects into striking images. Shadows can create mystery, drama, or atmosphere, while light can highlight detail and form. Together they can tell a story or convey a powerful mood or feeling.



THE LANGUAGE OF PHOTOGRAPHY

The Photo:
- Composition
- Vantage point
- Angle
- Light
- Framing
- Cropping
- Juxtaposition

The Camera:
- Aperture
- Shutter speed
- Focus
- Depth of Field
- ISO

The Visual:
- Line
- Tone
- Colour
- Texture
- Form
- Shape
- Pattern

Enrichment: Explore the history of photography
https://www.tate.org.uk/art/art-terms/p/photography

Data and Information

Data is raw facts and figures. Without CONTEXT it basically is meaningless

Information is data with context

Businesses want data so that they can build a profile of a customer and the kind of products and services that they may like to use as well as conduct financial transactions

Criminals could gain access to this data and potentially use it for their financial gain. By either selling it on maliciously or using it themselves.

Data Protection Act 2018 serves as legislation to keep your data safe

- Used fairly, openly, and in accordance with the law
- Used for a specific and stated reason
- Used only in a way that is necessary and sufficient for the purpose for which it was collected
- Accurate and up-to-date
- Only kept for as long as it is needed
- Protected against loss, damage, and unauthorised access

Social engineering

- Shoulder surfing
- Name Generator
- Phishing
- Blagging

Hacking is gaining unauthorised access to or control of a computer system:

- To steal data
- To disrupt services
- For financial gain
- For political reasons (espionage and activism)
- For fun (planting the flag)
- For ethical reasons

DDOS (Distribution denial of service attack) where multiple computers flood a server with requests stopping access to it.

Brute force attack

This is a form of attack that makes multiple attempts to discover something (such as a password).

Cyber Security is the means of making sure data is secure

Malware

Malware (malicious software) is software that is designed to gain access to your computer with malicious intent.

- Viruses
- Worms
- Ransomware
- Trojans
- Spyware
- Adware
- Botnet

Protections

To protect from Malware you might want to implement the following features.

- Anti-malware
- Firewall
- Password rules
- Auto-updates
- Two-factor authentication
- Biometrics
- CAPTCHA
- Staff training

Enrichment Opportunities

https://ico.org.uk/
https://joincyberdiscovery.com/
https://www.cybersecuritychallenge.org.uk/

Design Element Features

Acting

- VTAPPE FEMPIG
- Blocking – where you stand and move on stage
- Emotional journey – what emotions your character feels through the play
- Learning Lines – crucial to a good performance. Learn them by going over them a little but often using a cover and repeat method, the first letter method (above) or by running them with friends and family.

Set Design

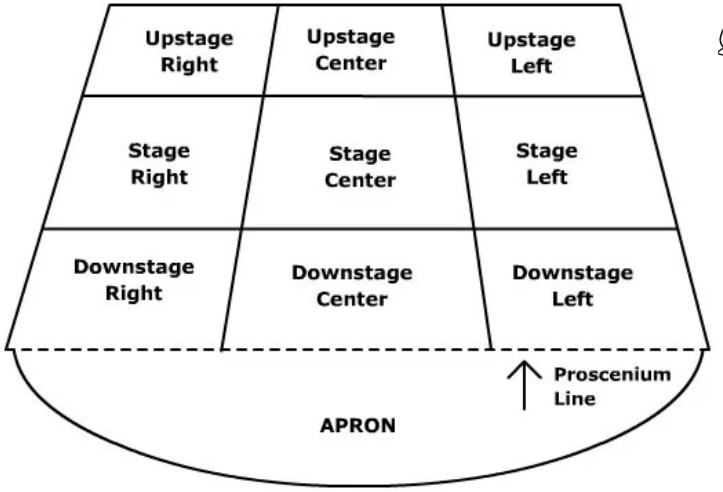
- Naturalistic or non naturalistic
- Location – how do you show where it is set?
- Mood / atmosphere – how will the audience feel?
- Colour / texture
- Sightlines – can the audience see everything?

Costume Design

- Shape / cut – what design is it?
- Material / fabric – what is it made from?
- Colour – what do you want to tell the audience?

Lighting Design

- Colour - what do you want to tell the audience?
- Coverage – how much of the stage is covered
- Intensity – how bright it is
- Edges – a clear hard edge or a hazy soft edge
- Gobo/specials – patterned cut outs or any other lights



Extension and Further Info

Learning Lines

Topic Objectives

- To develop and rehearse a script extract for performance
- To use acting, directing and design elements in a professional way
- To perform the extract to the class using all the skills from KS3

Year 9 Assessment Criteria

Performing	Analysing	Devising	Drama Roles	Drama Techniques
• Can identify and use all elements of VTTAPE FEMPIG effectively • Can confidently perform a range of characters and texts • Can perform in a range of styles including Brecht and Physical Theatre • Can perform using props and costume • Can perform using design elements	• Can analyse use of VTTAPE FEMPIG in professional theatre • Can discuss and analyse different styles of theatre including Brecht, Naturalism, Comedy, Physical Theatre • Can discuss design elements such as colour, texture etc and their effect • Can understand semiotics and symbolism	• Can create performances for a specific purpose e.g. theatre for change • Can create performances in a range of genres and styles • Can work positively in groups with a range of people • Can work independently; rehearsing, improving and developing your performances • Can develop detailed creative ideas in response to a stimulus	• Can understand backstage and design roles • Can create lighting, set and costume designs for a chosen text • Can understand roles in professional theatre • Can apply these roles to a performance project	• Can recognise multiple techniques and their purpose • Can identify and use Brecht techniques • Can use multiple techniques together for an intended purpose e.g. educate • Can use techniques confidently and effectively considering the audience

Why study a language?

Where can languages take me?

- Technology, globalisation and ease of international travel are bringing more of the world within our reach.
- Studying languages can help improve your memory and concentration.
- A confidence in your ability to communicate can also be developed when studying a language.
- Being able to adapt to a range of situations in the workplace can be made easier if you are able to speak multiple languages.
- There are financial gains to be enjoyed from learning a second language. Multilinguals can earn on average 8% more than their monolingual counterparts.
- If you were to study a language at university, you get to spend a whole year, paid for, in that country!
- People always find it impressive when you can speak another language!
- By speaking another language, you become more familiar with the culture of that country/countries. This can help to broaden your knowledge of the world and other cultures.

Statistics

- More than 300 languages are spoken in London alone.
- People with an additional language can earn 8-20% more income than others.
- 20,000 English words come from French.
- Less than 6% of the world speak English as a first language.
- 74% of the world population speak no English at all.
- Studies have shown that learning a language is one of the most effective brain workouts you can do.
- In recent years, scientists have discovered that learning a language can fend off Alzheimer's and other forms of dementia for up to five years.
- According to new research from the University of Cambridge, if there was an increase in secondary-school pupils learning one of four different languages, UK GDP could increase by billions of pounds over 30 years.

Enrichment Opportunities

[Where will languages take me? | British Council](https://www.britishcouncil.org/school-resources/languages/where-will-languages-take-me)
https://www.britishcouncil.org/school-resources/languages/where-will-languages-take-me

Jobs to do with languages

- Translators use their knowledge of languages when translating written documents, TV programmes and films into other languages.
- Language interpreters work in different settings such as hospitals and the police, to interpret spoken language and to relay important information.
- Tour guides use different languages depending on who they are showing around a place or attraction.
- It is useful for flight attendants to be multilingual so that they can offer passengers a more comfortable flight experience.
- Embassies employ people all over the world who can speak at least one other language, as this is essential when speaking to embassies in other countries.
- Ski instructors are more employable if you can speak the language of the country you'd like to work in.
- You can do any job you'd like whilst working in another country, if you can speak the language.

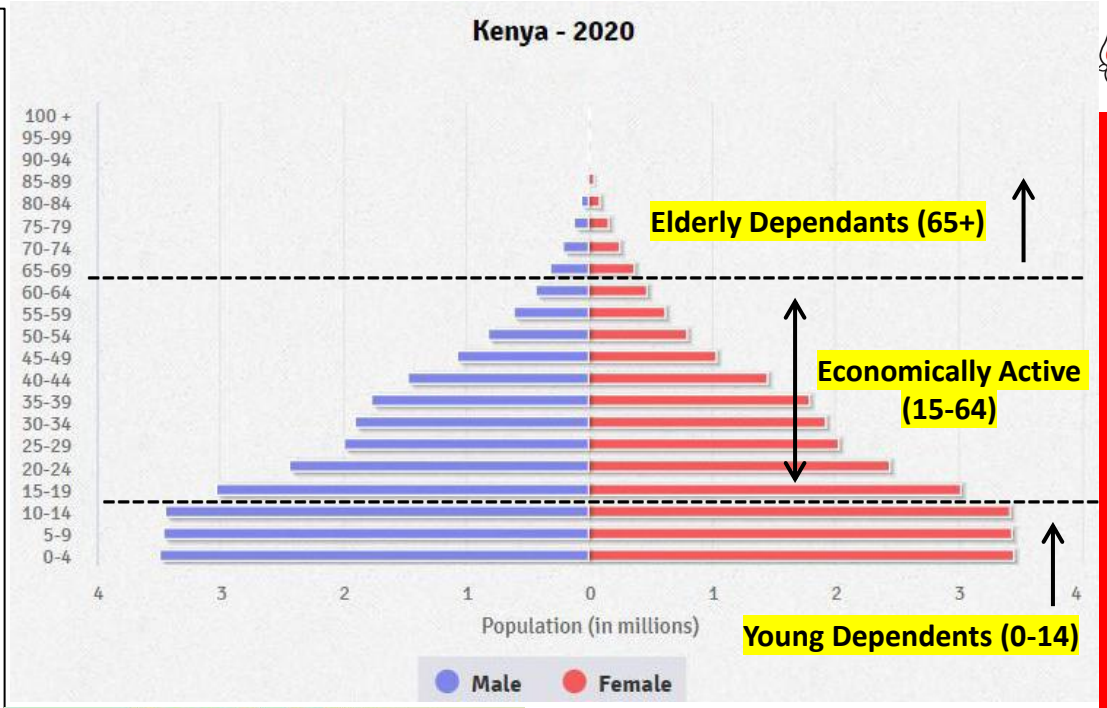
Le Franglish!

You Can't Read This Article Si T'es Pas Bilingue
(English & Français)

Being bilingual est parmi the best pleasures dans le monde entier. Think about it pour un instant. You can utiliser deux different languages en même temps in a such a way that makes ton cerveau wants to exploser from the speed par la quelle it switches from one langue to l'autre but still tu peux do it and ressentir spécial(e) at the same time, et c'est pour ça you are unique.le fact that tu peux lire this article without stopping to think est un talent très few people have. La majorité of people struggle to lire juste in one single language, but what you are doing maintenant est un signe of absolute genius. Reading a très complicated texte in two langues différentes seamlessly makes you un(e) nerd et someone qui trouve joy in languages. Reading cet article must have given your brain a nice little workout.

Key word definitions

Biome – A very large scale ecosystem with a particular climate and community of plants and animals
Cash crops – Crops that farmers grow quickly to sell, rather than to use for themselves
Colonisation – When a country takes control of another country for its own benefit
Commonwealth – An association of 53 member countries, most of which were once British colonies
Desertification – Where green land such as farmland becomes desert, usually due to global warming or human overuse
Developing – The processes of change that go on in a country, with the aim of improving people's lives
Drought – Less rainfall than usual over an extended period of time
Exports – Selling goods and services to another country. Therefore, goods leave the country
Flash flood – A sudden flood, usually caused by a very heavy burst of rain
GNI per capita – Gross National Income per person is a measurement where the country's wealth is divided by population
Great Rift Valley – Series of trenches in Africa stretching for 7000km cause by the tectonic plates moving apart
Infrastructure – The built environmental, for example bridges and roads
Maasai - ethnic group inhabiting northern, central and southern Kenya and northern Tanzania.
Megacity – A city with more than 10million people
National park/reserve – A protected area, usually for conservation
Natural increase – The difference between birth rate and death rate. More people being born so population increases
Nomadic – A person who rears animals and travels with them to find new grazing
Poverty – extremely poor, not a good/safe quality of life
Slave trade – the procuring, transporting, and selling of human beings as slaves, in particular the former trade in black Africans as slaves by European countries and North America.
Slum – Collection of very poor quality housing
Subsistence farming – farming food to eat and not to sell



Population pyramids can be used to show the proportion of people in different groups (gender and age). They can help show how developed a country is.

Africa is a continent made up of 54 countries.

Enrichment Opportunities:

Compare South Africa's literacy and GNI per capita statistics to another African country of your choice. Can you explain the differences?

3.1 Key Dates	
1848	Karl Marx released his Communist Manifesto which introduced the idea of Communism
1917	The Communist party of Russia take power overthrowing Tsar Nicholas II.
1922	Mussolini and his Fascist party take control of Italy.
1933	Hitler becomes Chancellor of Germany; he goes on to create a Fascist Dictatorship.
1939	World War II begins
1945	World War II ends

3.3 Key Terms/ Concepts	
Versailles Treaty	The peace treaty signed by Germany to surrender in WW1.
Reparations	£6,600 million Germany had to pay to the Allies.
Article 231	The War Guilt Clause.
Demilitarisation	Germany made to reduce their number of soldiers to 100,000 and remove all military from the Rhineland.
The 'Stab in the Back' Myth	The popular theory that the German Army was betrayed by their own government ('Dolchstoss') .
Wall Street Crash	The economic catastrophe in America where stocks and shares rapidly lost value.
The Great Depression	The Worldwide economic disaster caused by the Wall St Crash. Unemployment in Germany reached 6mill.
Dictatorship	A regime where people have very few rights and little say in how the country is run.

3.2 Key People	
Adolf Hitler	Leader of the Nazi party who seized control of Germany in 1933.
Joseph Goebbels	Leading member of Nazi cabinet and minister of propaganda
Benito Mussolini	The Italian leader of the Fascists and Dictator of Italy.
Vladimir Lenin	Russian leader and dictator 1917-1922
Joseph Stalin	Russian leader and dictator 1922-1953

Steps to Nazi Dictatorship

1918- Germany surrenders to the Allies in World War One
1919- Versailles Treaty signed by German government
1923- France invade The German Ruhr. Hyperinflation.
1929- Wall Street Crash in USA results in The Great Depression
1932- The Nazis become the biggest party in the Reichstag election
1933- Hitler appointed Chancellor by President Hindenburg

Source Skills

Nature: What is the source? Eg: A newspaper cutting, cartoon, report etc…

Origin: When was the source made and who by?

Purpose: Why was the source made and what is the message?

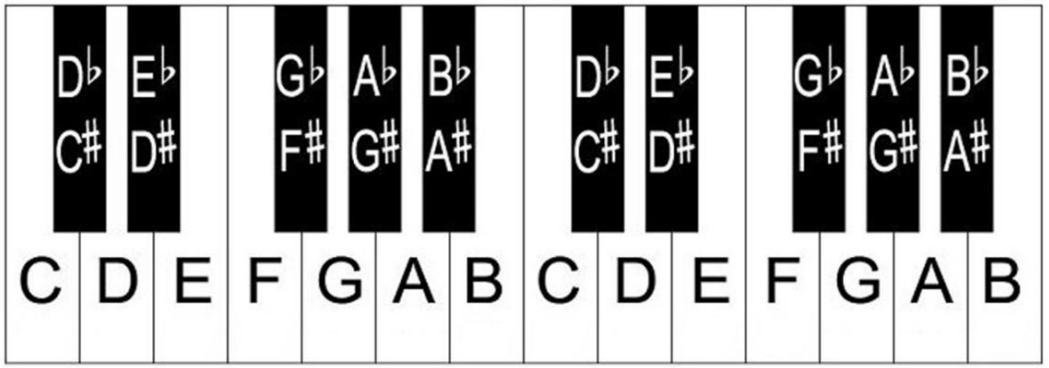
The Holocaust
The Nazi persecution and systematic mass slaughter of over 6 million European Jews in Nazi concentration camps during World War II. It started in 1941 and ended in 1945, and also included the murder of political opponents, disabled people, homosexuals and gypsies.

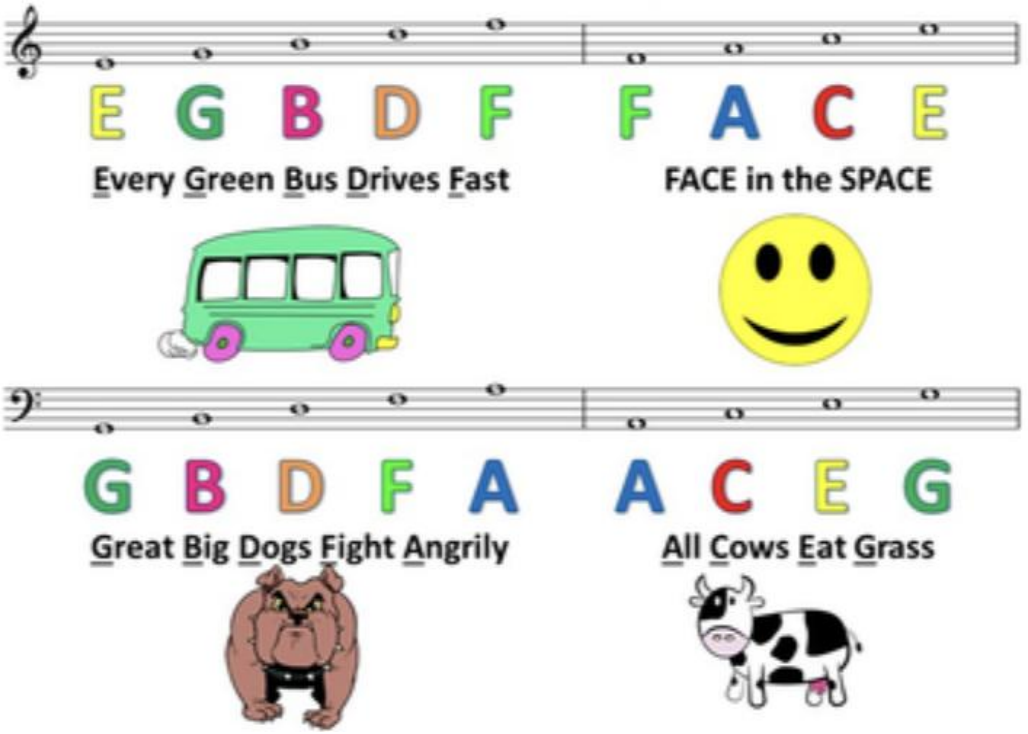
Key events	
30th Jan 1933	Hitler becomes the leader of Germany
1935	Nuremburg Laws
7th Nov 1938	Kristallnacht
1941	'Final Solution' decision

Key concepts	
Before the Holocaust	Jewish minorities have faced persecution and discrimination throughout history in Europe. Key examples include the massacre at Clifford's Tower in 1190, they were blamed for the death of Jesus and banned from England in 1290-1656
Nazi persecution of the Jews	Included being blamed for Germany losing WWI, as a scapegoat. Boycotts of Jewish shops, legal restrictions and violence
Ghettos	Where Jews were forced to live in terrible conditions before the use of concentration camps. The largest was the Warsaw Ghetto which held at least 400,000 Jews in a 1.3 square mile area
Nuremburg laws	Included the German Reich Law which denied Jews of their German Citizenship, and the Law for the Protection of German Blood and German Honour, which banned marriage and children between Germans and Jews.

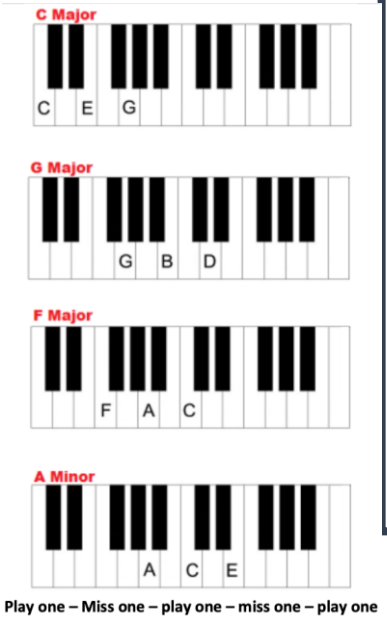
Key Terms	
Anti-Semitism	Hostility or prejudice directed against the Jewish people.
Persecution	Hostility and ill-treatment, especially because of race or political or religious beliefs
Ritualistic	Set actions performed as part of a ceremony, usually with religious importance
Blood libel	Libel means to make false and damaging claims about someone or something. Blood libel refers to the lies spread about the Jews committing ritualistic murders
Pogrom	Violent attacks directed against an ethnic minority such as Jews
Stereotype	An untrue view of someone or something – eg that all English people drink tea and have bad teeth.
Theory of evolution	Charles Darwin's theory that evolution happens by natural selection – animals who are unable to adapt will die and the strong will adapt and pass on their traits.
Aryan	An ancient race that were believed to be racially superior to other races
Synagogue	A Jewish place of worship
SS	Protection Squad, they were elite Nazi troops. They were heavily involved in running the Holocaust.
Sonderkommando	Jewish prisoners who were forced to help operate the gas chambers

Piano Keys and Notes





Keyboard Chords



Play one – Miss one – play one – miss one – play one

MAD T-SHIRT

Melody – the tune, combination of different pitches of notes

Articulation – the way it is played

Dynamics – how loud the music is

Texture – layers of sound **Thick / Thin**

Structure – the order in which the music happens

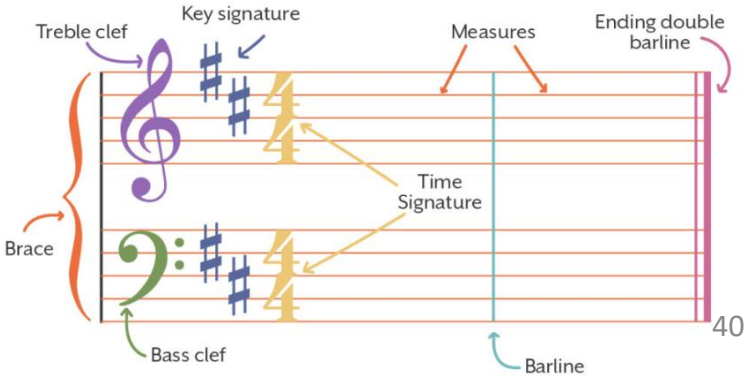
Harmony – How the notes sound together. **Chords,** notes played at the same time

Instrumentation – Ukulele, Vocals

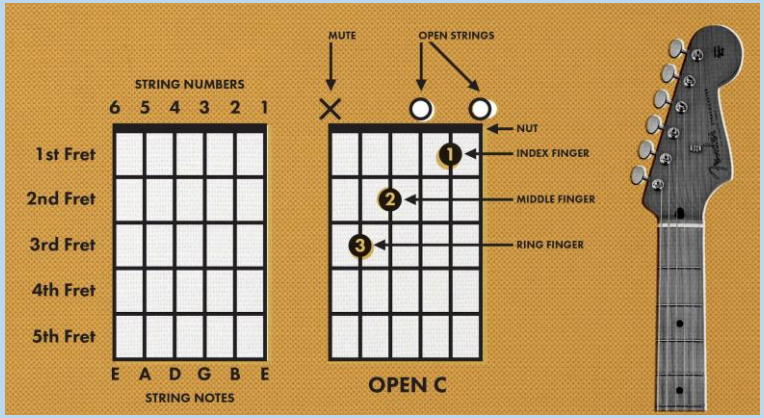
Rhythm and Tempo – combination of long and short notes, fast or slow, **bpm** – Beats Per Minute

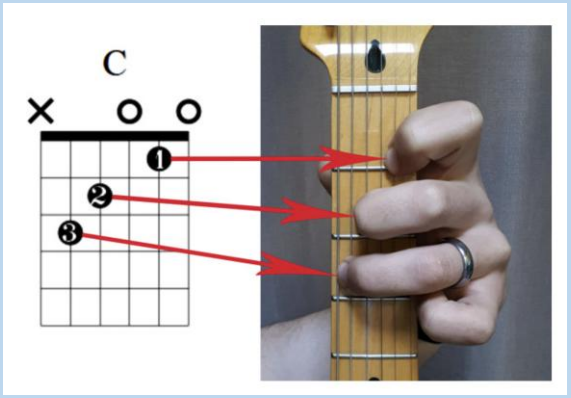
Timbre – the quality of the sound

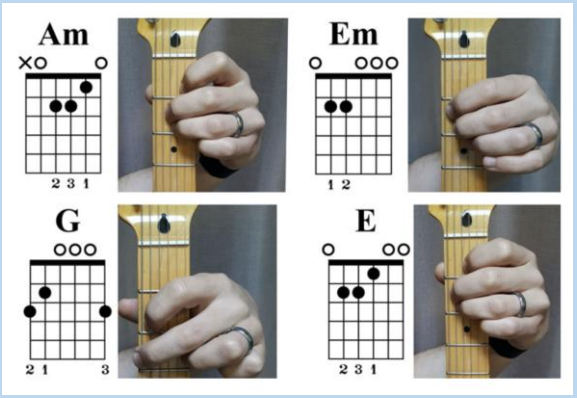
Grand Staff

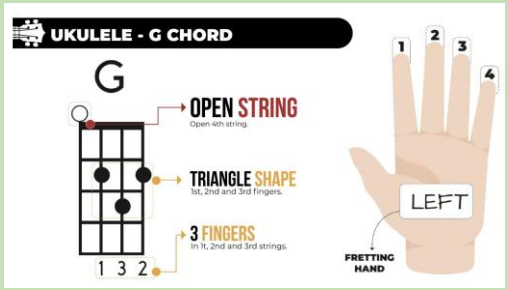


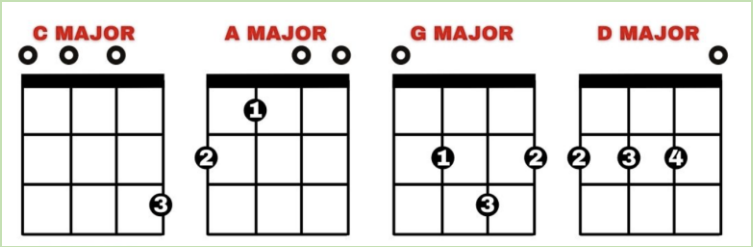
How to read Guitar Chords



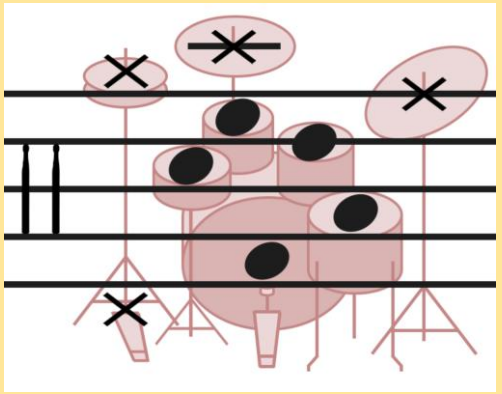


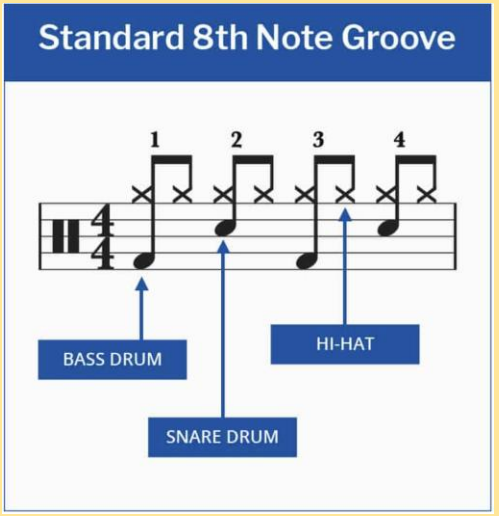






How to read Drum Tab





Time values

NOTE	NAME	LENGTH (duration)	REST
	Semibreve	4 beats	
	Minim	2 beats	
	Crotchet	1 beats	
	Quaver	½ beats	
	Semiquaver	¼ beats	
A dot after the note increases its length by half:			
	Dotted minim		
	Dotted crotchet		
Groups of quavers/semiquavers are usually beamed together:			

Dynamics

pp	*p*	*mp*	*mf*	*f*	*ff*
PIANISSIMO	PIANO	MEZZO PIANO	MEZZO FORTE	FORTE	FORTISSIMO
very soft (v.quiet)	soft (quiet)	moderately soft	moderately loud	loud	very loud
crescendo (cresc.)			diminuendo (dim.)		
gradually getting louder			gradually getting quieter		

Tempo

LARGO	LENTO/ ADAGIO	ANDANTE/ MODERATO	ALLGRETTO	ALLEGRO/ VIVACE	PRESTO
v.slow	slow	walking pace/ moderate	quite fast	quick/lively	very quick

Texture

MONOPHONIC	A single melodic line.
HOMOPHONIC	A chordal style or melody and accompaniment: moving together.
POLYPHONIC	A more complex (contrapuntal) texture with a number of different lines.

Form and structure

BINARY **A B**

Two sections: A usually ends in a related key (e.g. dominant or relative minor), but B returns to the tonic. B will contain with some change/contrast.

TERNARY **A B A**

Three sections: section B provides a contrast (e.g. new tune key change). A may return exactly or with some slight changes.

RONDO **A B A C A**

A longer form: A returns throughout the piece, with contrasting sections called 'episodes', containing new ideas and using different keys.

The structure of a pop/rock song may include:

INTRO: short opening section, usually instrumental.

VERSE: same music but different lyrics each time.

CHORUS: repeated with the same lyrics each time (refrain).

MIDDLE EIGHT: a link section, often eight bars, with different musical ideas.

BRIDGE: a link/transition between two sections.

OUTRO: an ending to finish the song (coda).

*You may also hear a pre-chorus, instrumental interlude or instrumental solo.

Immediate effects of exercise	Explanation
Getting hot	Heat is a by-product of energy production, the harder we train the hotter we get
Getting sweaty	Sweat glands produce sweat to cool you down, sweat evaporating from the surface of your skin removes some body heat
Having red skin	Blood vessels dilate close to the surface of the skin to help you lose heat making you look red
Increased depth and rate of breathing	This allows more gaseous exchange to occur more quickly. More oxygen can be delivered to the working muscles, and more carbon dioxide can be removed
Increased heart rate	This allows gases to be transported around the body. Oxygen can be delivered to the working muscles and carbon dioxide can be removed

Short-term effects of exercise	Explanation
Tiredness and fatigue	When we are exercising energy, stores are being used up this will lead to tiredness and fatigue
Light headedness or nausea	When we exercise, we lose fluids, this can lead to dehydration, Light headedness and nausea are symptoms of being dehydrated
Aching muscles	Normal response after exercise as it indicates the muscles are responding to the workout.
Cramp	Cramp is an involuntary muscular contraction. A cause of cramp is a depletion of energy stores or dehydration and a lack of electrolytes due to sweating
DOMS	DOMS can occur due to micro tears in the muscles from vigorous activity

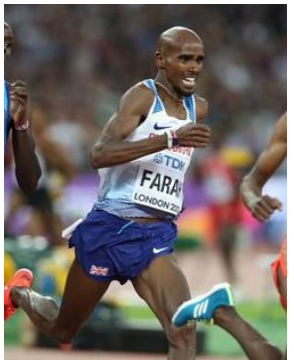
Long-term effects of exercise	Explanation
Change in body shape	A change in body shape can improve performance. An increase in muscle mass will assist in strength and power sports such as sprinting and rugby. A reduction of body fat will assist a long-distance runner
Improved stamina	Improved stamina will allow performers to last longer in an activity without getting tired. For example, performing to a high standard for 90 minutes in football
Increase in size of the heart (cardiac hypertrophy)	An increase in the size of the heart will allow more blood pumped per beat (stroke volume) when exercising. This will allow more oxygen to be delivered to the working muscles
Lower resting heart rate (bradycardia)	Because the heart can pump more blood per beat it will not have to work as hard at rest therefore resting heart rate will be lower

Strength allows us to provide a force applied by a muscle group to overcome a resistance

Muscular endurance allows repeated contractions and avoid fatigue

Suppleness/flexibility allows a greater range of movement at a joint

Speed allows us to perform movements quickly



Cardiovascular endurance allows oxygen to be supplied to the working muscle so you can perform for a long time without getting tired

1.1 Key Vocabulary

A priori – A statement which is knowable without any reference to any experience. E.g. mathematics 5+7=12

A Posteriori – A state which is knowable only after experience. E.g. that food is hot

Class consciousness – A term used by Marx to mean the working class becoming aware they are being oppressed

Design (or teleological) argument – The argument that the world looks designed and so has a designer - God

Empiricism – The theory that knowledge is gained through our five senses

False consciousness – A term used by Marx to describe a way of thinking that stops the working class from seeing how they are being oppressed

Fallacy of composition – An argument that wrongly claims that what is true of something's arts must also be true of the whole thing

First cause argument – The argument that everything in the universe needs a cause and so the universe also needs a cause, which is God

First certainty – 'I think; therefore I am': Descartes' realisation that the fact he thinks shows that his mind must exist.

Logical fallacy – A statement that is logically flawed

Opium of the people – A phrase used by Marx comparing religion to opium, an addictive painkilling and vision-creating drug

Rationalism – The theory that knowledge is gained through reason

Realm of Appearances – Plato's name for the world in which we live

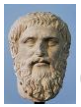
Real of Forms – Plato's name for a perfect realm where our souls previously lived

Ruling class – According to Marx, the minority of rich and powerful people, such as factory owners

The problem of evil – The argument that evil and sufferings shows that an all-loving, all-powerful and all-knowing God cannot exist

1.2 The Greats: Timeline

Socrates (469-399 BCE)



Plato (427-347? BCE)

Aristotle (384-322 BCE)

Epicurus (341-270 BCE)

Saint Thomas Aquinas (1225–1274)

Rene Descartes (1596-1650)

David Hume (1711-1777)

Immanuel Kant (1724-1804)

William Paley (1743-1805)

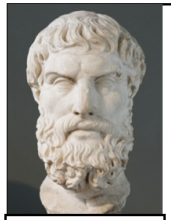
Sigmund Freud (1856-1939)

Karl Marx (1818-1883)

Revision suggestions

1) Create a quiz from the key vocabulary.
2) To help you remember the key philosophers and their theories in 1.3 create two flash cards for each philosophers on one card write the name of the philosophers and on the other card in your own words summarise their theory. You can then use these cards to play snap or match the names up to the correct theory.

1.3 Key philosophers and their theories



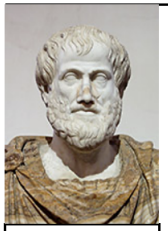
Epicurus (341-270 BCE)

Epicurus taught that although the gods exist, they have no involvement in human affairs. He saw religion as a source of fear that should be banished from people's' minds if they were to live peaceful lives. He famously said; ***'If God is unable to prevent evil, then he is not all-powerful. If God is not willing to prevent evil, then he is not all-good. If God is both willing and able to prevent evil, then why does evil exist?' this became known as the*** Epicurus' trilemma and had been used by many atheists to prove that God does not exist.

Saint Thomas Aquinas (1225–1274)

Aquinas believed that the existence of God could be proven by his 'Five Ways':

1) **Motion –** movement in the world has a cause. The 'ultimate mover' must be God.
2) **Cause –** every effect has a cause. Therefore, God must be the first cause of existence for everything else to follow.
3) **Contingency –** everything is impermanent. Nothing can exist without depending on something else. The world is dependent on something for its existence. That must be God.
4) **Perfection –** There are higher and lesser degrees of perfection. God must be the highest perfection.
5) **Order –** order is present in the world. There must be an intelligent designer to this order.

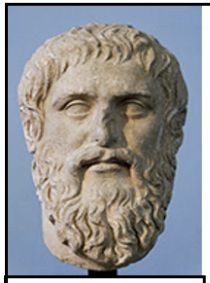


Aristotle (384-322 BCE)

Aristotle is a severe critic of traditional religion, believing it to be false, yet he also holds that traditional religion and its institutions are necessary if any city, including the ideal city he describes in the Politics, is to exist and flourish. He believed that religion had long proven helpful in regulating social behaviour, something that will be particularly important to a tyrant who cannot necessarily count on the freely chosen support of his subjects. ***"A tyrant must put on the appearance of uncommon devotion to religion. Subjects are less apprehensive of illegal treatment from a ruler whom they consider god-fearing and pious."***

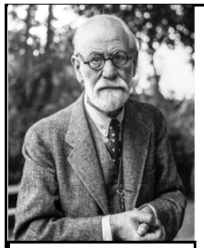
Rene Descartes (1596-1650)

Throughout his life Descartes was a devout Christian. He believed that because there was a clear idea of perfect being (God) in his mind; God must exist. He also believed that because he had an idea in his mind about a perfect being and he himself was not perfect; There must be a God. The very fact that he is not perfect means he would not bear his own existence. Similarly, his parents, who are also imperfect beings, could not be the cause of his existence since they could not have created the idea of perfection within him. That leaves only a perfect being, God, that would have had to exist to create and be constantly recreating him. He famously said ***'God alone is the author of all the motions in the world'***



Plato (427-347? BCE)

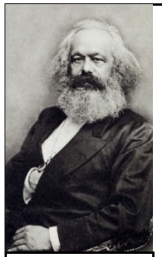
Plato believed that there was an all-knowing, benevolent God. Who providentially cares for and governs everything in the world. He believed that humans have an immortal human soul and that God is the source of all good, being the very Form of Goodness. He claims that religious faith is both against and above reason. He proclaims, ***"when we believe, we desire to believe nothing further."***



Sigmund Freud (1856-1939)

Freud described religions as 'mass delusions' and claimed it to be childish wishful thinking. He said that religion was an illusion and all in the mind. Through his work with various patients, he tried to give a natural explanation for why people believe in God. He claimed that the reason is that religion satisfies three wishes or desires that all people have. Freud's theory is known as his wish-fulfilment hypothesis. According to Freud the three wishes we all have are;

1) *The desire for a father*
2) *The desire for fairness*
3) *The desire for immortality*



Karl Marx (1818-1883)

Marx described religion as the 'opium of the people'. Opium is addictive, painkilling frug that can cause hallucinations. By using the metaphor of opium, Marx was claiming that the working class become addicted to religious ideas as a way of numbing the pain of their earthly existence. Religion offers them a pleasant illusion of an afterlife and blinds them to their oppression. He accused the ruling class of using religion to control and manipulate the working class by feeding them the idea that God favors and will reward those in poverty. Marx believed that there was biblical evidence to support his theory such as the teaching of Jesus; ***'it is easier for a camel to go through the eye of a needle than for a rich person to enter the Kingdom of God!'***

William Paley (1743-1805)

Aquinas argued in his fifth way that natural things in the world appear to have been designed and this shows their must be an intelligent designer. This is known as the Design (or teleological) argument. Paley, inspired by this compared the world to an intricately designed watch. He noted that all the complex parts of a watch fit together in an orderly way so that is can achieve its purpose of telling the time. This is not simply an accident that has happened by chance; it is because a watch has a watchmaker. Just as a watch needs a watchmaker, he argued , then something even more complex, orderly and purposeful like the world must have a world maker.

Notes

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Notes

Notes

Date	KO*	WB*	Case*	Date	KO*	WB*	Case*
5/1	INSET			26/1			
6/1				27/1			
7/1				28/1			
8/1				29/1			
9/1				30/1			
12/1				2/2			
13/1				3/2			
14/1				4/2			
15/1				5/2			
16/1				6/2			
19/1				9/2			
20/1				10/2			
21/1				11/2			
22/1				12/2			
23/1				13/2			

*Knowledge Organiser * Whiteboard * Pencil Case

RUBBER

PENCIL

WHITEBOARD PEN

GREEN PEN

BLACK PEN

You should also have:

- Reading book
- Calculator
- Headphones
- Protractor
- Sharpener
- Compass
- (no scissors)

You should also have when needed:

- Ingredients - PE kit - Completed homework

RULER

You can borrow core items without penalty between 8.30-8.45am before passing your Head of Year