Name: Form:

"We are what we repeatedly do. Excellence, then, is not an act, but a habit."

Aristotle

Aristotle was a Greek philosopher during the Classical period in Ancient Greece. His writings covered a range of subjects such as physics, biology, zoology, metaphysics, logic ethics, poetry, theatre, music, psychology and linguistics. His ideas became the framework for Christian Scholasticism and medieval Islamic philosophy.

YEAR 11

KNOWLEDGE ORGANISER:

Spring Term 2024

Bluecoat Wollaton
believe in yourself, in others, in God

CONTENTS PAGE:

Instructions for using your Knowledge Organiser

Every school day you should be studying at least **1** section of your Knowledge Organiser (KO) for homework.

The timetable on the next page tells you which subjects you should be studying on which days (it doesn't matter if you have that subject on that day or not, you should follow the timetable).

You are to use your exercise book to show the work you have done. Each evening you should start a new page and put the date clearly at the top.

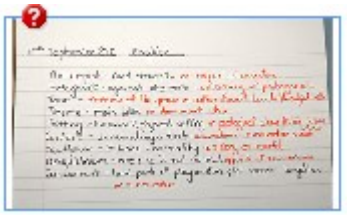
You need to bring your KO and exercise book with you **EVERYDAY** to the academy.

Your parents should tick off your homework every evening using the grid in your KO on page 4. Parents should also sign off your reading using the reading log on page 5, this will be checked in your library lesson.

Your KO and exercise book will be checked regularly in form time, failure to show homework for **ALL FIVE** days of the week will result in an after school detention that day.

You will also be tested in your lessons on knowledge from the organisers.

Self-testing



You can use your KOs and book in a number of different ways but you **should not just copy** from the Knowledge Organiser into your book. Use the ***'How to self-test with the Knowledge Organiser'*** booklet to help you. It can also be found here: http://www.bluecoatwollaton.co.uk/learning/knowledge-organisers/

Below are some possible tasks you could do in your workbooks, **no matter which task you do you should always check and correct your work in a different coloured pen.**

- Ask someone to write questions for you
- Write your own challenging questions and then leave it overnight to answer them the next day
- Create mindmaps
- Create flashcards
- Put the key words into new sentences
- Look, cover, write and check
- Mnemonics
- Draw a comic strip of a timeline
- Use the 'clock' template to divide the information into smaller sections. Then test yourself on different sections
- Give yourself spelling tests
- Definition tests
- Draw diagrams of processes
- Draw images and annotate/label them with extra information
- Create fact files

Presentation

You should take pride in how you present your work:

- Each page should be clearly dated at the top left hand side with Subject 1 written in the middle.
- Half way down the page a line should divide it in two with Subject 2 written above the dividing line.
- Each half of the page should be neatly filled with evidence of self-testing. There should be an appropriate amount of work.
- Failure to show pride in your presentation or wasting space on your page with large writing or starting a number of lines down will result in a **negative point.**

Year 11 Knowledge Organiser Schedule: Spring Term

You are expected to study the subject(s) shown on your timetable each day.

Each day use a page of your exercise booklet to evidence your work.

Timetable for weeks beginning;		**Subject 1**	**Subject 2**
08/01/2024	Monday	English	A
15/01/2024	Tuesday	Maths	**B**
22/01/2024	Wednesday	Science	RE
29/01/2024	Thursday	English	Maths
05/02/2024	Friday	Science	C

For weeks beginning;		**Subject 1**	**Subject 2**
19/02/2024	Monday	English	A
26/02/2024	Tuesday	Maths	**B**
04/03/2024	Wednesday	Science	**RE**
11/03/2024	Thursday	English	Maths
18/03/2024	Friday	Science	C
25/03/2024			

To know which of your options subjects you should study look for your class code (you can find this on your main academy timetable) in the table below. Once you identify your subjects write them onto your homework timetable above. E.g. if you are in **11A/Hi1** you would write **History** in the box with the **A.**

Option A	Options B	Options C
11A/Gg1 - Geography	11B/Cc1 - Childcare	11C/Ar1– Art
11A/Hi1 - History	11B/Cm1 - Creative Media	11C/Hi1 - History
11/Hi2 - History	11B/Dt1 - Design & Technology	11C/ So1 - Sociology
11A/Sp1 - Spanish	11B/Dr1 - Drama	11C/Gg1 - Geography
11A/Co1- Computer Science	11B/So1 - Sociology	11C/Hf1 - Food
	11B/Sp1 - Spanish	11C/Cc1 - Childcare
	11B/Sp2 - Spanish	11C/ Cm1 - Creative Media
	11B/St1— BTEC Sport	

Reading Log

Use this reading log to record the books you read, how long you have spent reading, and Bedrock lessons.

Week starting	Mon	Tues	Weds	Thurs	Fri	Sat	Sun	Total no. of minutes read	Bedrock lesson complete?	Parent/Carer Signature
08/01/2024										
15/01/2024										
22/01/2024										
29/01/2024										
05/02/2024										
19/02/2024										
26/02/2024										
04/03/2024										
11/03/2024										
18/03/2024										
25/03/2024										

'The more that you read, the more things you will know.
The more that you learn, the more places you'll go.'

How do I self-quiz?

How to use...Flashcards

1. On one side of the flash card, write the word or question.
2. On the other side, write the definition for the word, or answer to the question.
3. Once you have completed your set of cards, put them in a pile. Then for each card, see if you can remember the definition or answer to the question. Tick or cross when you get it right or wrong.
4. When you get the card right, place it in the 'correct' pile. When you get it wrong, place it in the 'wrong' pile. Repeat until all cards are in the 'correct' pile.

You can also use the Leitner Method: **https://www.youtube.com/watch?v=C20EvKtdJwQ**

How to use… Look, Cover, Write, Check and Correct

1. Write your key words into the 'Look, Cover' column and then cover it.
2. Write out the meaning, definition or spelling in the 'Write' column.
3. Put a 'tick' or 'cross' in the 'Check' column depending on if you got the answer right.
4. If you got the answer incorrect, write the correct answer in the 'Correct' column.

Look , Cover	Write	Check	Correct
Noun	A person, place or	✓	
Algorithm	Algorithim	X	Algorithm

How to use… Mind Maps

1. Write out your topic or idea in the centre. E.g. The First World War.
2. Off of the main bubble, write out important categories to organise your ideas. E.g. causes of WWI and events in WWI
3. Then add your knowledge off of these branches. You might even be able to make connections between them.
4. Once made, then redraw as many of the connections as possible from memory. Correct any errors.

How to use… Explaining a process/ idea further

Your teacher might ask you to explain a key idea, process or event from your learning. This could be the water cycle (Geography), photosynthesis (Science) or something else. In your answer, try to use the words **because, but**, and **so.** These will help you to:

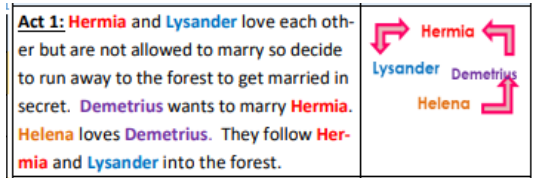
1. **Because:** helps to explain a reason, cause or why something works.
2. **But:** helps to explain a limitation or problem.
3. **So:** helps to explain what happens next in a sequence, process or event.

Check your sentences to see if your explanations or right or wrong. Correct any errors.

How to… Summarise a process/idea

Rather than expand or explain a process, your teacher might ask you to summarise it into its key parts. E.g. summarising the plot 'A Midsummer Night's Dream' in English.

1. Read through the relevant part of your knowledge organiser as directed by your teacher.
2. Write out the (up to) 5 most important parts in your KO book, leaving a two lines in-between.
3. For each part, add **one** main idea.
4. E.g. here, the 4 key characters are picked out, and the direction of love is shown through the arrows. Check and correct any errors.



How to use… Subject Specific Tasks or Questions

Your teacher might choose to set a task that is not outlined here, and which is specific to that topic or their subject.

In this case, your teacher will outline specifically what it is you need to do, and how. This will still include you checking and correcting any errors.

Year 11-English Literature-An Inspector Calls

BWA

Section 1: Key Vocabulary

Tier 3	Definition	Example/image
Allegory	A story, poem, or picture that can be interpreted to reveal a hidden meaning, typically a moral or political one	An Inspector Calls teaches us the allegorical message of social responsibility.
Microcosm	A smaller version of a real society.	The Birling family are a microcosm for many of the selfish bourgeoisie
Dramatic Irony	A technique where the audience have more knowledge than the characters in a text.	When Mr Birling says the Titanic is 'unsinkable' before it sets sail, we understand that this is ironic and untrue
Didactic	A text intended to teach a moral lesson.	An Inspector Calls teaches us the didactic message of social responsibility.
Foreshadowing	An advance sign or warning of what is to come in the future	An Inspector Calls foreshadows that Eric will be revealed as the father in Act 3.
Tier 2	**Definition**	**Example/image**
Capitalism	An economic and political system in which a country's trade and industry are controlled by private owners for profit	Mr Birling represents capitalist business owners who care more about profits than people.
Socialism	A society where the means of production are owned and regulated by the community as a whole	The Inspector brings the socialist ideology into the household, explaining we should look out for one another to user in a fairer society.
Patriarchy	A society where men hold power	Mr Birling shows his patriarchal control over Sheila.
Bourgeoisie	The middle classes-especially those with materialistic values.	The Birling family are part of the bourgeoisie.

Section 2: Key Knowledge

Social Responsibility

An Inspector Calls was first performed in the UK just after the end of World War Two, in 1946. It was a time of great change in Britain and many writers were concerned with the welfare of the poor. Priestley wanted to address this issue. He also felt that if people were more considerate of one another, it would improve quality of life for all. *Priestley wanted his audience to be responsible for their own behaviour and responsible for the welfare of others.*

Age

Priestley uses age to show how he believed that there was hope in the younger generation's ability to learn and change. The older characters' opinions and behaviours are stubbornly fixed. Mr Birling refuses to learn and Mrs Birling cannot see the obvious about herself and her children. Eric and Sheila however are younger - they accept their mistakes and offer the chance for a brighter future.

Gender

Gender perceptions had changed after World War Two. Women had had to fill in for men and society began to realise they were just as capable. As a result of this, many women enjoyed a newfound freedom that working and earning money allowed them.

Not all men saw this change in attitude as a good thing and stayed stuck in the past. Priestley explores the impact of these new gender roles through the independence of Eva Smith and the sexist attitudes of Mr Birling.

Class

The war helped bring the two classes closer together and rationing meant that people of all classes were eating and even dressing the same. Priestley wanted to highlight that inequality between the classes still existed and that the upper-classes (bourgeoisie) looked down upon the working-class (proletariat) in post-war Britain.

Section 3: Key Connections

The Inspector is Priestley's mouthpiece in the play. He advocates for a socialist and moral society.
'We do not live alone. We are all members of one body'
'They will learn it in fire and blood and anguish.'
- biblical allusions foreshadows the wars to follow which will rip apart archaic hierarchal structures which had controlled the Victorian and Edwardian eras.

Whilst initially naïve and spoilt , Sheila represents the capacity that the younger generation have to create change in society. Despite being overlooked in the play, Sheila is often a mouthpiece of reason and eventually socialism.
'He's giving us the rope so we'll hang ourselves'

Eva Smith is a microcosm for the working classes. Her treatment by the Birling family represents the harsh treatment and prejudice that exists within our own society.

'Girls of that class'- Mrs Birling's prejudice toward the proletariat blinds her to the actions of her own children. She believes all working class women lack a moral compass – which again is ironic.

Mr Birling symbolises the greed and materialism of the wealthy middle classes. As a business owner, he also represents the consequences of Capitalism.

'unsinkable, absolutely unsinkable'

'I speak as a hard-headed man of business'

'Look inspector I'd give thousands,'

Dramatic irony presents Birling as unintelligent and a figure Priestley criticises. His arrogance is clear. He also refuses to learn a lesson by the end,

Year 11 – Power and Conflict poetry– Knowledge Organiser

BWA

Section 1: Key Vocabulary

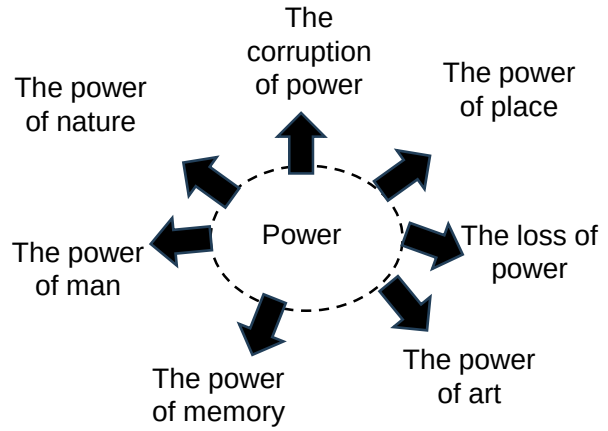
Tier 3	Definition	Example/image
Stanza	A group of lines in a poem.	*The poets organise their stanzas in different ways. Eg: Blake uses four line stanzas (quatrains)*
Meter	The rhythm (pattern of beats) in a poem.	*A poet experiments with meter to add meaning to their poems.*
Enjambment	The continuation of a sentence across lines.	*We see enjambment in 'Remains' to highlight the ongoing memory of conflict.*
Caesura	The deliberate use of punctuation before the end of a line.	*Shelley uses caesura to create a long pause in Ozymandias.*
Allusion	An implied or indirect reference to a person, event, or thing or to a part of another text.	*Duffy alludes to the bible when she writes 'all flesh is grass.'*
Tier 2	**Definition**	**Example/image**
Patriotic	A strong love for your country.	*The speaker in Bayonet Charge questions their own feelings of patriotism.*
Corrupt	The abuse of a position of power.	*Blake accuses the 'blackening church' of being corrupt in 'London'.*
Desensitised	To no longer feel strong emotions because you have been exposed to something often.	*The soldiers in 'Remains' have clearly become desensitised to war.*
Transient	Temporary and fleeting.	*Ozymandias' power is transient.*
Sublime	Greatness beyond measure.	*Wordsworth highlights the sublime power of nature in The Prelude.*

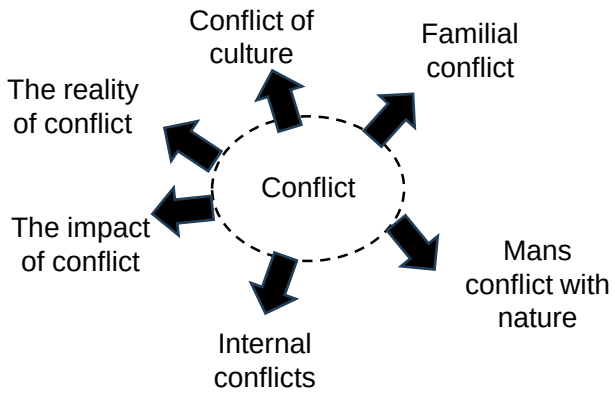
Section 2: Key Knowledge

London	An observer details the corruption and poverty they see and encourage rebellion.
Ozymandias	The statue is a metaphor for the temporary nature of human power.
My Last Duchess	A powerful Duke boasts of his power teaching us the danger of hubris in society.
Charge of the Light Brigade	Tennyson criticises those in power during conflict but encourages us to remember the honour of those who fought.
The Emigree	The speaker reminisces over their homeland and feels marginalised in their new country.
Tissue	This poem discusses how fragile human power is.
Checking Out Me History	The speaker is critical of our education system and the way it discards the voices of many cultures.
Kamikaze	The speaker aborts his mission and is shunned, showing the lasting impact of war.
Storm on the Island	Nature's power is demonstrated in this poem but we could also see it as a metaphor for wider conflict.
The Prelude	A poem about the almighty power of nature and its lasting impact.
War Photographer	The poem highlights the ways we have become desensitised to war.
Remains	The speaker struggles to process the trauma of war and suffers from PTSD.
Poppies	A mother mourns the loss of her son to conflict.
Bayonet Charge	The soldier begins to question the reason he went to war, forcing us to question the idea of patriotism.
Exposure	Owen highlights the monotony of war and also the real enemy: nature.

Section 3: Key Connections

Whilst the name of the anthology of poems is 'Power and Conflict' we need to dig down and think specifically about what aspect of these themes each poem is about.





Y11 – English Language Paper 2 – Knowledge Organiser

BWA

Section 1: Key Vocabulary and Questions

Tier 3	Definition	Example/image
Symbolism	An image used to represent something greater	*A poppy is a symbol used to remember the sacrifice of fallen soldiers.*
Anecdote	A short personal story	*It may begin 'when I was younger, I was told….'*
Rhetoric	The skill of using language effectively to persuade	*In election campaigns, politicians will carefully craft speeches using rhetorical devices*
Extended Metaphor	A metaphor (comparison) which continues over multiple lines.	*Crime is a disease in our community, contaminating young minds and spreading its bacteria through our communities.*
Anaphora	Repetition at the beginning of the line.	*We must listen. We must stop global temperatures rising. We must work together.*

Question	Task	Recommended rubric or structure
Question 1	True or False	*Read line numbers carefully and shade in true statements*
Question 2	Comparing both sources, based on inferences.	*Define, Imply, Impact* *Statement, Quote, Inference*
Question 3	Analysing the language in one source	*Define, Imply, Impact* *Literally, Metaphorically, symbolically*
Question 4	Comparing viewpoint/ perspectives (feelings)	*Point, evidence, analysis, compare, point, evidence, analysis*
Question 5	Writing: speech, newspaper, letter, leaflet (non-fiction persuasion)	*Drop, logos, pathos, counter-argument, ethos.*

Section 2: Key Knowledge

Ethos is how we portray **ourselves** in an argument: it is the image persuaders present of themselves, to those they attempt to persuade. '*You should believe in me because..*'

Logos is a Greek term meaning 'word' and refers to using **logic and reasoning** as your appeal. Logos is the clarity of the message itself, the credible arguments used and the supporting evidence e.g. **facts,** rather than emotion.

Pathos is the **emotional influence** of the speaker on the audience. Its goal is to make the audience feel something. Whether this is fear, joy, or patriotism, appealing to people's emotions is a really powerful way to get them onside.

How can we use ethos, logos and pathos in structuring an essay?

Introduction	Drop paragraph
Paragraph 1	• Point 1 – clear topic sentence • 'Logos': tone/devices – simple sentence, rhetorical question
Paragraph 2	• Point 2 – check link to previous paragraph • Develop ideas fully and explain points – think about appeal to reader: 'pathos' – link back to beginning. Use of repetition and pronouns for impact.
Paragraph 3	• Point 3 – check link to previous paragraph • Could add a counter-argument here if appropriate, or build on previous point. Use listing for effect/anaphora to build to conclusion.
Conclusion	• Big-picture ideas – man v man, man v society, man v nature, man v self • 'Ethos': think about the issues involved in the topic and what values are important. • Link back to beginning?

Section 3: Key Connections

'Education is not just about which school you go to, or what qualifications you gain; it is also about what you learn from your experiences outside of school.'

Write a speech for your school or college Leavers' Day to explain what you think makes a good education.

For example: you may connect to the world through…

Geography/socio-economic status- how this still impacts schools.

Historical ideas- grammar schools, lack of education leading to lack of work

Gender-historical lack of access to education for women

Gender-around the world lack of access to education for women

Good education is about opportunity to overcome the barriers discussed.

With a good education it shouldn't matter where you're from, your race, gender, social status.
A good education gives you equal footing in society.

Mathematics—Year 11 Spring Term 1—Algebra Essentials

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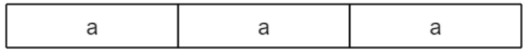
Section A: Key vocabulary

Tier 3	Definition
Non-linear (adj)	The difference between terms increases or decreases in different amounts
Arithmetic	A sequence where the difference between the terms is
Geometric	A sequence where each term is found by multiplying
Coefficient (n)	A multiplicative factor in front of a variable
Equation (n)	A mathematical statement where two things are equal
Tier 2	**Definition**
Variable (n)	A letter in place of a value we don't know yet
Sequence (n)	Items or numbers put in a pre-decided order
Term (n)	Either a single number or variable, or numbers and variables multiplied together
Linear (adj)	The difference between terms increases or decreases by the same value each time
Difference (v)	The gap between two terms; the result of subtraction
Function (n)	A relationship that instructs how to get from an input
Operation (v)	A mathematical process e.g. addition + or division ÷
Inverse (v)	The operation that undoes what was done by the previous operation (The opposite operation). Subtraction is the inverse of addition
Expression (n)	A maths sentence containing numbers, algebraic variables or a combination of the two. It may also contain operations (addition, subtraction, multiplication, division) but not an equals sign
Evaluate (v)	Work out; find the value of
Equality (v)	When two expressions have the same value
Solve (v)	To find the value of the unknown variable

Section B: Important Ideas / Concepts/ Questions

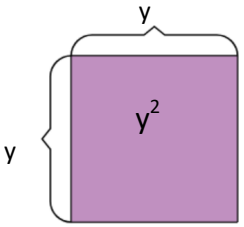
Essential Knowledge

$a+a+a \equiv 3a$



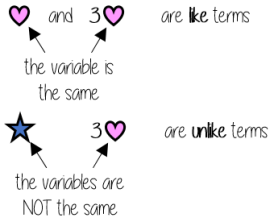
$4\times d \equiv 4d$

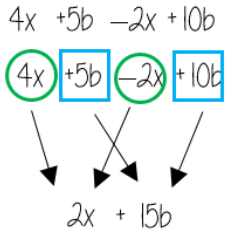
$y\times y \equiv y^2$



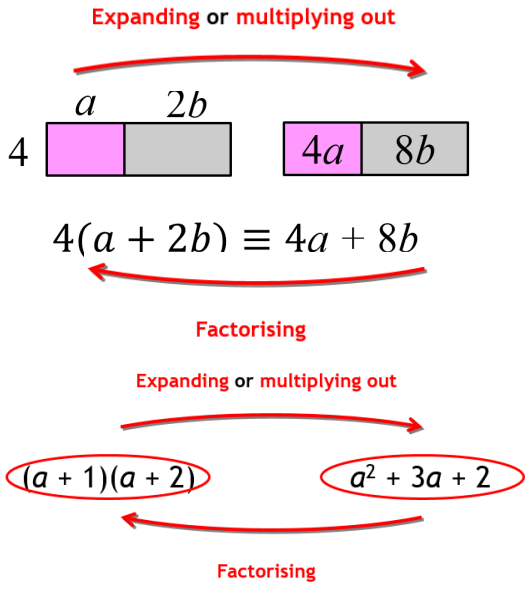
Like terms

$7\times e\times f \equiv 7ef$





Expanding and Factorising



Section C: Subject Specific Support

Common Misconceptions

$2x + 3x^2 + 4x \equiv 6x + 3x^2$

Although they both have the x variable, **x^2** and **x** are **un-like** terms so can not be collected.

$$(2a^2)^3 \equiv 8a^6$$

The coefficient of 2 is also being multiplied by itself 3 times so becomes 8.

Topic	Videos
Writing expressions	151—153
What is an expression, equation, identify, formula?	154
Substitution	155
Collecting Like Terms	156—157
Special Sequences	261, 263, 264
Spatial Sequences	196, 197
Finding the Nth term	198
Quadratic Sequences (Extension)	247, 248, 249
Forming/Solving Equations	176—186

Concepts you have seen before:

Collecting like terms, solving equations, substitution, linear sequences.

Mathematics — Year 11 Spring Term 2— Non-calculator Methods

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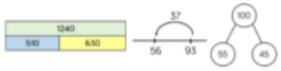
Section A: Key vocabulary

Tier 3 Vocab-ulary	Definition
Truncate (v)	To shorten, to shorten a number (no rounding), to shorten a shape (remove a part of the shape)
Round (v)	Making a number simpler, but keeping its place value close the what it originally was
Dividend (n)	The original amount to be di-vided
Divisor (n)	What you are dividing by
Tier 2 Vocab-ulary	**Definition**
Credit (n)	Money that goes into a bank account
Debit (n)	Money that leaves a bank ac-count
Overestimate (n)	Gives a solution higher than the actual value
Underesti-mate (n)	Gives a solution lower than the actual value
Balance (n)	The amount of money in a bank account
Product (n)	The result of multiplication
Sum (n)	The result of addition
Difference (n)	The result of subtraction

Concepts you have seen before: Addition, subtraction, multipli-cation and division. Fractions, decimals and percentages.

Section B: Important Ideas / Concepts/ Questions

Addition/ Subtraction



Modelling methods for addition/ subtraction
- Bar models
- Number lines
- Part/ Whole diagrams

Addition is commutative

6 + 3 = 3 + 6

The order of addition does not change the result

Subtraction the order has to stay the same

360 – 147 = 360 – 100 – 40 – 7

- Number lines help for addition and subtraction
- Working in 10's first aids mental addition/ subtraction
- Show your relationships by writing fact families

Formal written methods

	H	T	O
	1	8	7
+	5	4	2

	H	T	O
	4	2	7
–	2	4	9

Remember the place value of each column
You may need to move 10 ones to the ones column to be able to subtract

Division methods

3584 ÷ 7 = 512

Short division

$$7\overline{)3\,{}^{3}5\;8\;{}^{1}4} \quad 5\;1\;2$$

Complex division

÷ 24 = ÷ 6 ÷ 4

Break up the divisor using factors

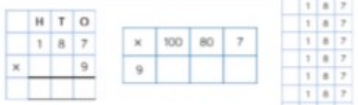
Division with decimals

The placeholder in division methods is essential – the decimal lines up on the dividend and the quotient

24 ÷ 0.02 → 24 ÷ 0.2 → 240 ÷ 2

All give the same solution as represent the same proportion
Multiply the values in proportion until the divisor becomes an integer

Multiplication methods



Long multiplication (column)

Grid method

Repeated addition

Less effective method especially for bigger multiplication

Multiplication with decimals

Perform multiplications as integers
eg 0.2 x 0.3 → 2 x 3

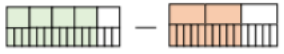
Make **adjustments** to your answer to match the question 0.2 x 10 = 2
0.3 x 10 = 3
Therefore 6 ÷ 100 = 0.06

Section C: Applications of number

Four operations with fractions

Addition and Subtraction

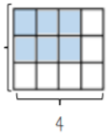
$\frac{4}{5} - \frac{2}{3}$



$\frac{12}{15} - \frac{10}{15} = \frac{2}{15}$

Multiplication

$\frac{3}{4} \times \frac{2}{3}$



$= \frac{6}{12} = \frac{1}{2}$

Division

$\frac{2}{5} \div \frac{3}{4}$

$\frac{2}{5} \times \frac{4}{3}$

Multiplying by a reciprocal gives the same outcome

$= \frac{8}{15}$

Rounding

2.46192 (to 2dp) - is this closer to 246 or 247

246 | 247

2.46|192

This shows the number is closer 246

Significant Figures

370 to 1 significant figure is 400
37 to 1 significant figure is 40
3.7 to 1 significant figure is 4
0.37 to 1 significant figure is 0.4
0.00000037 to 1 significant figure is 0.0000004

SF: Round to the first nonzero number

Limits of accuracy

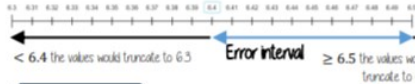
A width w has been rounded to 6.4cm correct to 1dp

< 6.35 the values would round to 6.3 | Error interval | ≥ 6.45 the values would round to 6.5

The error interval: $6.35 \leq w < 6.45$

Any value within these limits would round to 6.4 to 1dp

A width w has been truncated to 6.4cm correct to 1dp



< 6.4 the values would truncate to 6.3 | Error interval | ≥ 6.5 the values would truncate to

$6.4 \leq w < 6.5$

Any value within these limits would **truncate** to 6.4 to 1dp

Estimation

Round to 1 significant figure to estimate

$21.4 \times 3.1 \approx 20 \times 3 \approx 60$

The equal sign changes to show it is an estimation

This is an **underestimate** because both values were rounded down

It is good to check all calculations with an estimate in all aspects of maths – it helps you identify calculation errors

Exact Values

Leave in terms of π

$= \frac{120}{360} \times 36\pi$

$= \frac{1}{3} \times 36\pi = 12\pi$

Leave as a surd

$\tan 30 = \frac{1}{\sqrt{3}}$

Subject: Biology. Year 11 Spring Term 1—Inheritance

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Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Gene (n)	A section of DNA that codes for a protein.
Genome (n)	The entire set of genetic material of an organism.
Asexual reproduction (n)	Reproduction requiring only one parent, produces clones.
Sexual reproduction (n)	Reproduction requiring two parents, produces variation.
Meiosis (n)	Cell division which produces gametes.
Allele (n)	Different forms of a gene e.g. the alleles for the eye colour gene are blue, green, brown etc.
Dominant allele (n)	Version of a gene whose characteristic is always expressed if present.
Recessive allele (n)	Version of a gene whose characteristic is only expressed if two copies are present.
Homozygous (n)	Organisms with two copies of the same allele.
Heterozygous (n)	Organisms who have different alleles of the same gene.
Tier 2 Vocabulary	**Definition**
Variation (n)	Differences e.g. within a species.
Inherit (n)	Passed on from parents.
Predict (n)	State what you think will happen.

Section B: Genetics

Genetic Crosses

For every gene for each characteristic, we have two copies of the gene—one you inherited from your mother and one you inherited from your father.

A genetic cross, using a Punnett square involves predicting the outcome of parents alleles combining during fertilisation.

It's easier to show you in an example :
R = Right handed (dominant allele)
r= left handed (recessive allele)

So,
RR = Right handed
Rr = Right handed
rr = left handed
What is the probability of a right handed heterozygous mum (Rr) and a right handed heterozygous father (Rr) having a left handed baby?

	R	r
R	RR	Rr
r	Rr	rr

25% or 1 in 4 chance of having a left handed baby (Make sure you always draw a circle around the off-spring you have been asked to predict).

Section C: Diagrams

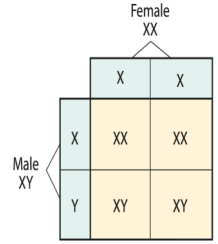
Inheritance of Sex

Male gametes (sperm) can either have X or Y Chromosomes.

Females gametes (eggs) can only have X Chromosomes.

Genotype of males is XY

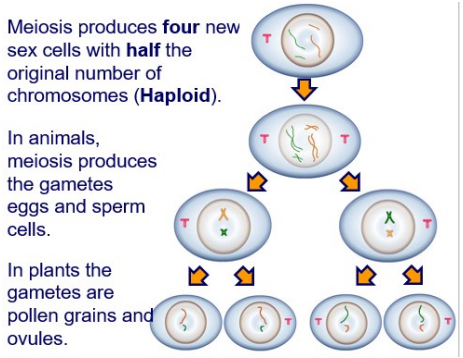
Genotype of females is XX



Sexual and Asexual Reproduction

Sexual reproduction	Asexual Reproduction
- Requires **2 parents**	- Requires **1 parent**
- Genetically **different** offspring produced	- Genetically **identical** offspring produced
- Produces variation	- No genetic variation
- Speeds up evolution	- Slows down evolution
- Slow process	- Fast process

Meiosis



Concepts you have seen before:

Year 8 Inheritance

Biology. Spring Term 2—Natural Selection and Evolution

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Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Mutation (n)	A change to the sequence of DNA.
Evolution (n)	The gradual change of a species
Natural selection (n)	A process by which species best suited to their environment will survive and reproduce, passing on their advantageous characteristics to off-
Fossil (n)	Remains of a plant or animal, often mineralised or changed to rock.
Extinct (adj)	Species which have no surviving organisms left in the world.
Classification (n)	The process of sorting living
Artificial classification (n)	Grouping of organisms based on observable characteristics.
Natural classification (n)	Grouping of organisms based on evolutionary relationships (common
Phylogeny (n)	The study of evolutionary links e.g.

Tier 2 Vocabulary	Definition
Advantageous (adj)	Beneficial/favourable.
Deletion (n)	Something has been removed.
Variation (n)	Extent to which things are
Survival (n)	One left alive when others have
Preserve (v)	Keep from decaying.

Section B: Natural selection and Evolution

Evolution is brought about through natural selection. Natural selection involves 4 stages— **VCSI**

Variation— organisms within a species show variation due to chance mutations in their genes.

Competition—there is competition within a species e.g. for food or shelter.

Survival of the fittest—those organisms that have the best/most advantageous mutations will survive.

Inheritance—the best adapted organisms will pass on their advantageous genes to their off-spring. This process will be repeated over many generations and may eventually lead to new species being formed.
E.g. giraffes

Variation—*some "early "giraffes had a gene mutation which gave them a long neck, some giraffes had a shorter neck.*

Competition—*giraffes competed for food on trees.*

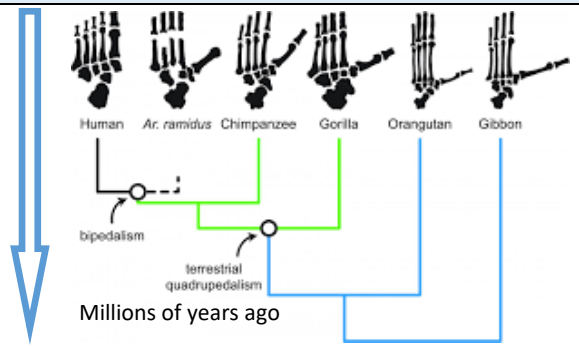
Survival of the fittest—*the giraffes with long necks survived as they could reach more food on higher branches of the tree.*

Inheritance—*the gene for "long neck" was passed on to off-spring in the next generation and subsequent generations, resulting in the modern day giraffe.*

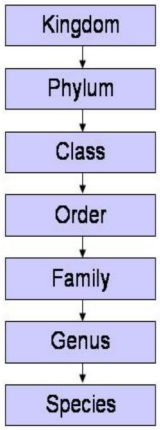
<u>You should be able to apply VCSI to the evolution of any organism e.g. peppered moths, MRSA (antibiotic resistant bacteria) etc.</u>

Section C: Diagrams

Evidence for Evolution and Classification



Fossil records have shown how organisms have changed and evolved over time. The **phylogenetic tree** above shows how apes have evolved. Humans and chimpanzees are more similar to each other than humans and gibbons. This is because humans and chimps share a more recent common ancestor than humans and gibbons (where you see the branches).



Classification is organising living organisms into groups depending on their structure and characteristics. This system was developed in the eighteenth century by **Carl Linnaeus.**

In the **binomial system** every organism is given a two-part Latin name. The 1st part is the **genus** and 2nd part the **species** it

Concepts you have seen before:

Year 8 Inheritance, Year 10 B1

Subject: Chemistry. Year 11 Spring Term - C7: Organic Chemistry

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Section A: Key vocabulary

Tier 3 Vocabulary	Definition
functional group	an atom or group of atoms that give organic compounds their characteristic reactions
homologous series	a group of related organic compounds that have the same functional group
alkane	saturated hydrocarbon with the general formula C_nH2_{n+2}, for example, methane, ethane, and propane
alkene	unsaturated hydrocarbon which contains a carbon–carbon double bond.
cracking	the reaction used in the oil industry to break down large hydrocarbons into smaller, more useful ones
general formula	a formula that represents the common structure of all compounds in a single class of chemicals. For example, the general formula of all alkanes is C_nH_{2n+2}
hydrocarbon	a compound containing only hydrogen and carbon

Tier 2 Vocabulary	Definition
Gradient	The measure of change of a value.
Property	an attribute, quality, or characteristic of something.
Supply	the total amount of a given product a supplier offers to consumers
Demand	consumer's desire to purchase a particular good or service

Section B:

Reaction Profile Diagrams

Alkanes and Hydrocarbons

Alkanes are a type of hydrocarbon. They are all **saturated** (carbons are all joined together by single bonds)

The **general formula** of an alkane is $\mathbf{C_nH_{2n+2}}$

The first four alkanes

Number of carbon atoms	Name of alkane	Formula
1	Methane	CH_4
2	Ethane	C_2H_6
3	Propane	C_3H_8
4	Butane	C_4H_{10}

Alkenes

Alkenes are unsaturated hydrocarbons (2 of the carbons joined by a double bond).

The general formula of an alkene is $\mathbf{C_nH_{2n}}$

Alkenes undergo addition reactions with diatomic molecules such as hydrogen and halogens.

The first four alkene

Number of carbon atoms	Name of alkene	Formula
2	Ethene	C_2H_4
3	Propene	C_3H_6
4	Butene	C_4H_8
5	Pentene	C_5H_{10}

Section C:

Combustion

Complete combustion of a hydrocarbon fuel happens when there is a good supply of air. Carbon and hydrogen atoms in the fuel react with oxygen, and carbon dioxide and water are produced.

Balancing an equation for the complete combustion of a hydrocarbon always follows the same steps, these are as follows:

1 – Write down the fuel (hydrocarbon) and oxygen (O_2) as your reactants.

2 – Write down water (H_2O) and carbon dioxide (CO_2) as your products.

3 – Throughout your balancing, keep the amount of the fuel as 1 (no number needed)

4 – The number of carbons in the fuel will always be the number of carbon dioxide molecules.

5 – The number of hydrogens in the fuel divided by 2 will always be the number of water molecules.

6 – Count the individual oxygen atoms in all the molecules of the products you have balanced. This number divided by 2 will be the amount of O2 molecules required.

7 – If the number of oxygens is a fraction (e.g. 3/2) multiply the amount of all substances by 2.

E.g. $2C_2H_6 + 7O_2 \rightarrow 4CO_2 + 6H_2O$

Incomplete combustion of a hydrocarbon fuel occurs when there is a poor supply of oxygen. Water is still produced from the hydrogen atoms. Instead of carbon dioxide, you might get carbon monoxide or particulate carbon, known commonly as soot, or a

Cracking

Cracking is a reaction in which larger saturated hydrocarbon molecules are broken down into smaller, more useful hydrocarbon molecules, some of which are unsaturated. In cracking:

- the original starting hydrocarbons are alkanes

- the products of cracking include alkanes and alkenes, members of a different homologous series

E.g. hexane → butane + ethane $C_6H_{14} \rightarrow C_4H_{10} + C_2H_4$

Subject: Chemistry. Year 11 Chemical Analysis

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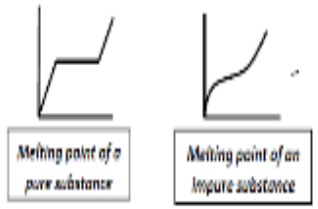
Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Pure substance	A single element or compound not mixed with any other substance.
Formulation	A mixture that has been designed as a useful product. Many formulations are complex mixtures in which each chemical has a particular purpose.
Pure	A substance that has nothing added to it.
Chromatography	A technique used to separate mixtures.
Stationary phase	The material the sample travels on but which doesn't move itself e.g. paper
Mobile phase	The solvent which moves the sample. The more soluble the sample is in the solvent, the further it moves.
Solvent front	The maximum point on the chromatography paper that the mobile phase reaches – usually marked on afterwards using a pencil.
Retention Factor	The ratio of how far a substance moves compared to the distance to the solvent front. For the same substance this number will always be the same.

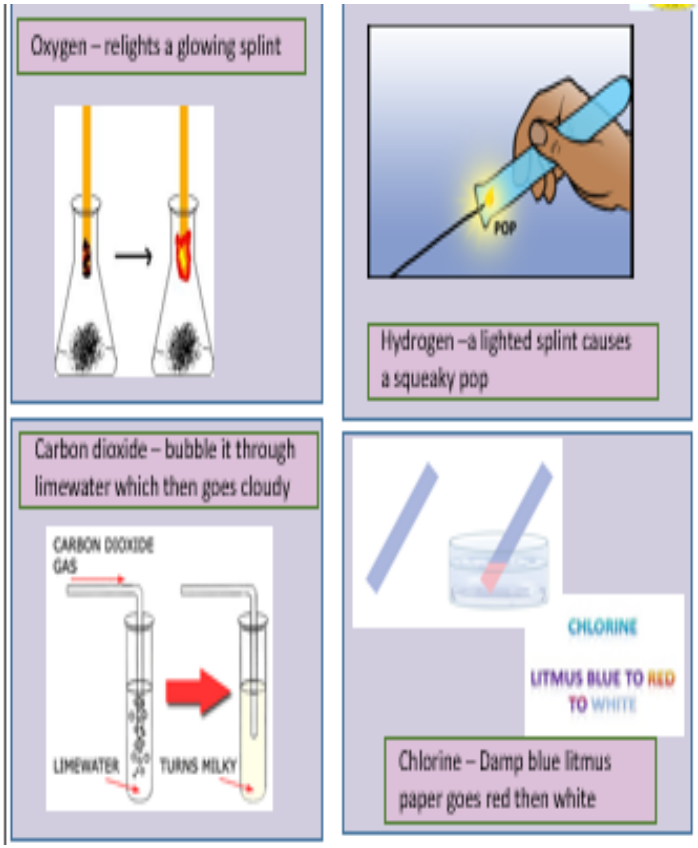
Section B:

Graphs and analysis

Pure substances melt and boil at specific temperatures. Heating graphs can be used to distinguish pure substances from impure.



Examples of Formulations: Fuels, cleaning agents, paints, medicines and fertilisers

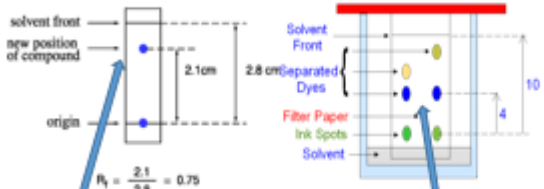


Section C:

Required practical—Chromatography

A technique that can be used to **separate** mixtures and the identify substances.

R_f = Distance moved by the substance / Distance moved by the solvent



Pure substance - only one spot above origin

Mixture – more than one spot above origin

Required Practical

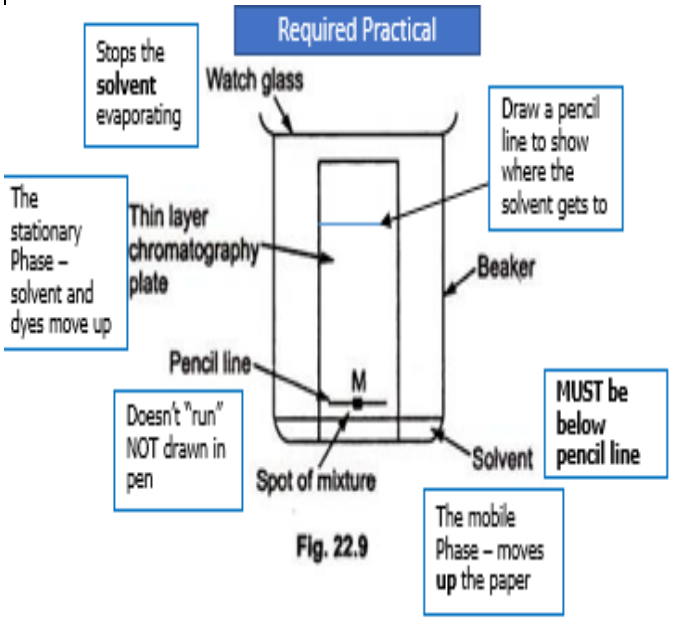


Fig. 22.9

Subject: Physics. Year 11 Spring Term. P6 Waves

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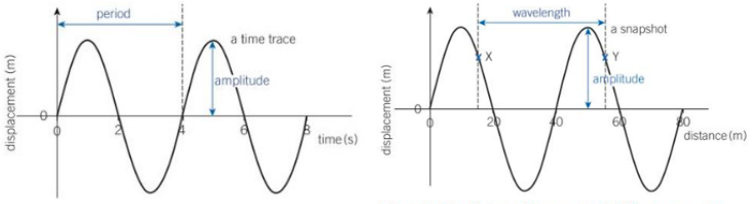
Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Infrared radiation	Electromagnetic waves between visible light and microwaves in the electromagnetic spectrum
Longitudinal Waves	Waves in which the vibrations are parallel to the direction of energy transfer
Real Image	An image formed by a lens that can be projected on a screen
Reflection	The change of direction of a light ray or wave at a boundary when the ray or wave stays in the incident medium
Refraction	The change of direction of a light ray when it passes across a boundary between two transparent substances
Transverse Wave	A wave where the vibration is perpendicular to the direction of energy transfer
Tier 2 Vocabulary	**Definition**
Frequency	The number of wave crests passing a fixed point every second
Normal	Straight line through a surface or boundary perpendicular to the surface or boundary

Section B: Waves

Transverse Waves

Transverse waves: These graphs **are not the same**. On the *left* the x scale is **time** so you can work out the **time period** for one wave**.** On the *right* the x scale is **distance**, so you can find **wavelength. Amplitude** is always from the middle (0 displacement).



You can *measure* **wavelength** with a *ruler* in the tank but you need to freeze them with a stroboscope or camera.

Frequency can be *counted* but you may need to film it with a timer and slow it down.

Use: **V = fλ**

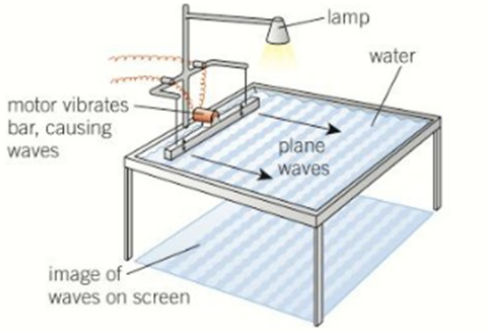
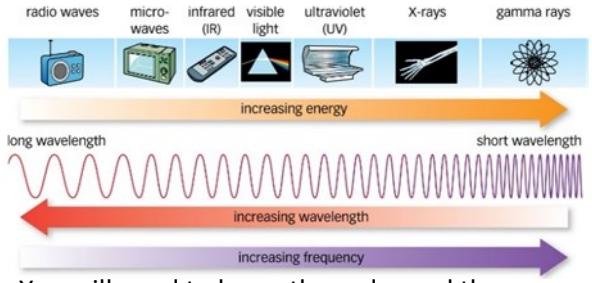


Figure 3 *You can use a ripple tank to measure the velocity of waves that you make.*

Electromagnetic Spectrum

Section C: Diagrams



You will need to know the order and the direction of the trends e.g. gamma rays are the *shortest* wavelength, *highest* frequency and *most* energetic.

A mnemonic to help memorise the order is:

Ronald

MacDonald

Is

Very

Unlikely

Waves

Wave	Type	Medium	Velocity m/s
sound	longitudinal	mechanical	Air =340 Water = 1500 Steel = 6000
Light (all EM waves)	transverse	None (vacuum)	300,000,000 ($3x10^8$)
Ripples	transverse	mechanical	0.2- 0.3

Concepts you have seen before:

Year 9 Waves and Radiation

Subject: Physics. Year 11 Spring Term. P7 Magnetism

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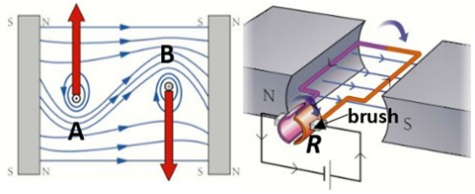
Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Dynamo	A direct-current generator
Electromagnet	An insulated wire wrapped round an iron bar that becomes magnetic when there is
Electromagnetic Induction	The process of inducing a potential difference in a wire by moving the wire so it cuts across the lines of force of a
Fleming's left hand rule	A rule that gives the direction of the force on a current-carrying wire in a magnetic field according to the directions of the current and the
Induced Magnetism	Magnetisation of an unmagnetised magnetic material by placing it in a magnetic field
Tier 2 Vocabulary	**Definition**
Generator Effect	The production of a potential difference using a magnetic field

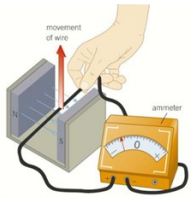
Section B: Important Information

DC Motors



The two **catapult fields** are in **opposite directions** because the current is **towards us** on one side (**A)** and **away from us** on the other (**B**). This can be checked by using **Fleming's left hand rule**. The **split ring commutator** (**R**) allows the DC current to go **in the same direction** relative to the field, ***despite the coil flipping over*** because the **electrical contact** with the **coil ends flips over too** at the brushes. So the current always goes the same way **through the field** and the motor always **spins the same way**.

Electromagnetic Induction

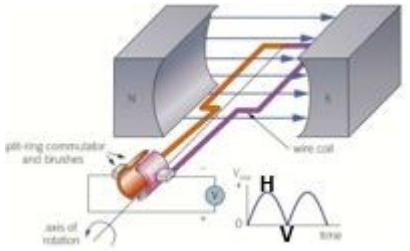


If a **conductor** cuts **through field lines** because either the wire is moving or the magnet is moving (there is ***relative motion between*** the wire and magnet) there will be an **induced potential difference** as the magnetic field moves the electrons in the wire. This is how wireless charging for phones and cars works.

The current induced in the wire produces its own **induced magnetic field** which will produce a force in the **opposite direction** to the original movement. The size of the induced p.d. is **increased** by:
Moving the wire **faster**
Using a **stronger** (*not bigger!*) magnet
Increasing the **number of coils** of wire

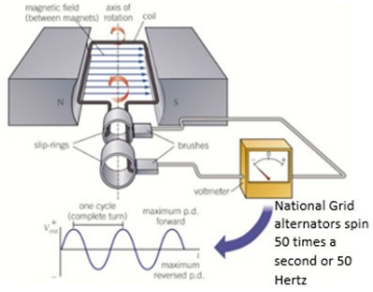
Section C: Diagrams

DC Generator (dynamo)



A **dynamo** has exactly the same parts as a DC motor. You **input kinetic** energy **(spin it**) to get electrical energy. The direct p.d. produces a **direct current (DC)**. The current is **greatest** when the coil cuts through the field lines at **90°** (the **coil is horizontal** as in the diagram, this is point **H** on the graph). Current is **zero** when the coil spins parallel to the field lines (**vertical coil, V** on graph).

AC Generator (alternator)



An **alternator** has a pair of **slip rings** to allow the **brush** ends of the wire to stay in **contact with the coil** so the **current changes direction** in the wire each time the **coil flips over**. This creates an **alternating p.d.** which drives an **alternating current (AC).**

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Section A: Key Vocabulary

Tier 3 vocabulary	Definition
Salam (n)	Peace
Dar as Salam (n)	The house of Peace
"Salaam Alaikum"	"Peace be with you" (Muslim greeting)
Ahmadiyya (n)	A group of Muslims that are completely against war
Ah Rahim (n)	God is merciful
Vicegerents (n)	A person responsible for enforcing justice on earth on Allah's behalf
Situation Ethics (n)	A theory where the situation is taken into account first, before deciding on the rules of right and wrong (most loving action).
Tier 2 vocabulary	**Definition**
Justice (n)	The proper administration of the law, everybody being treated fairly.
amicable (n)	Showing a polite and friendly desire to avoid disagreement.
Reconciliation (n)	Bringing two people back together after separation
Peace (n)	A state or period in which there is no war or a war has ended.
United Nations (n)	An international organisation of countries set up in 1945, to promote international peace, security, and cooperation.
Aggressor (n)	A person or country that attacks another first.

Section B: Peace & Peace-making

Muslim attitudes towards peace

- Since the word 'Islam' is derived from the word meaning 'peace' in Arabic, Islam itself is a religion which its followers believe brings a peaceful life.

'You who believe! Enter into peace wholeheartedly; and follow not the footsteps of the Evil One' (Surah 2:208)

- "Salaam alaikum" - "May peace be with you" - Muslim equivalent of "Hello".

- One of the attributes of God described in the Qur'an is 'peace and security'.

Peace is important for Muslims because:

- The Qur'an calls Islam 'Dar as Salaam'.

- Islam teaches that true peace both within and between people comes from accepting Islam and its ways.

- Peace should take a central place in a Muslim's life. Muslims should always look for an amicable solution to any conflict.

The role of Muslims in peacekeeping

Muslims are encouraged to seek justice as a way of making peace. If a society and its laws are unjust then they may campaign against them which causes conflict.

The Ahmadiyya group motto is 'Love for all, hatred for none'. It began in Pakistan and has now moved to

Section C: Causes of conflict and responses

Causes of war

Religion	here may be two religious groups that want to be dominant. - A country may be largely one religion but the country as a whole is a different religion. - There are differences within a religion and one religious group attacks another for having different beliefs.
Politics, history and culture	Nationalism - one ethnic group should have its own country because of differing cultures. - Ethnic cleansing - the belief that minority groups should be removed from a country (e.g. genocide in Rwanda) - Tensions between ethnic groups - Different political groups trying to gain power
Resources	- Access to oil reserves in a country - Access to water (e.g. Sudan) - Economic problems in one country can lead to economic refugees looking for food and work elsewhere and this can lead to conflict.

Muslim responses to the causes of war:

- Most Muslims believe that Muslims must fight if they are attacked as instructed in the Qur'an and so the war is just. The Prophet fought in wars for self-defense; therefore, so should Muslims.

- Muslims must be clear about the causes of the conflict. They cannot be classed as the aggressor and so would not be involved in a war to take resources from another, to force others to become Muslim, to change the political leadership or a country or to change the culture.

Atheist and Humanist responses to the causes of war:

- Make United Nations stronger so that it can end wars with a peacekeeping force. Many Humanists are pacifists and so wouldn't fight in war.

- Many Humanists believe that as religion is the root core of many conflicts that we should eradicate religion.

- Some atheists would agree that they should fight in a just war.

Situation ethics and war:

- Muslims and Humanists often apply this ethical theory to war. They look at the causes and effects of a war and make a decision based on what will produce the most loving outcome. (e.g. if a country had been invaded and its people wiped out, they may decide the best solution is to declare war on the invader.

Concepts you have seen before:

Justice, forgiveness, peace, vicegerents, reconciliation, nature of Allah

Section A: Key Vocabulary

Tier 3 vocabulary	Definition
Pacifism (n)	The belief that fighting or violence is never the correct response to conflict
Jihad (n)	To struggle
Lesser Jihad (n)	Holy war or the struggle to defend
Greater Jihad (n)	Personal struggle to follow the teaching of Islam and resist evil
Passive resistance (n)	Non-violent opposition to authority
Just war (n)	A war that is fought for the right reasons and in the right way
Holy War (n)	A war that is fought because of religious differences
Harb al-Muqadis (n)	Holy war in Islam
Tier 2 vocabulary	**Definition**
Just (n)	Fair
Genocide (n)	The deliberate killing of a large group of people from a particular nation or ethnic group.
Last resort	After all other methods have been tried
Proportionate methods (n)	Using weapons of the same factor as those used against you
Crusade (n)	A war for a religious or moral purpose

Section B: Pacifism

Muslims and Pacifism

- Lesser Jihad is the struggle with forces to remove evil from society. The meaning of the Arabic term jihad is struggle. This means that there is no concept of pacifism or 'turning the other cheek' in Islam.

But there is a tradition of passive resistance based on the story of Moses and Aaron, where they refuse to fight the Israelites who rebelled against God (Surah 5:28)

There is also support from the Qur'an opposing the use of violence, "***If anyone kills a person – unless in retribution for murder or spreading corruption in the land – it is as if he kills all mankind.***"

Arab Springs 2011
Democratic movements in Middle Eastern countries were based on pacifism and passive resistance. Muslims protesting against the lack of democracy in their countries did so in a non-violent way (e.g. demonstrations in Tahrir Square in Cairo which led to the overthrow of President Mubarak of Egypt.)

Humanism and Pacifism

- Humanists are opposed to war.

- They helped to set up the United Nations.

- Human life is a lot more valuable if you do not believe in life after death.

- Wars are hugely destructive, ruining lives, wasting resources and degrading the environment.

Concepts you have seen before:

Justice, Ethics, Shari'ah law, Life and nature of the Prophet Muhammad

Section C: Just War Theory and Holy War

A Just War is a war that is fought for the right reasons and in the right way. Although war is never good, it is agreed that in some cases wars are unavoidable. The theory is linked with St Thomas Aquinas.

C	Cause	The cause of the war is just e.g. self defence or remove an injustice (genocide).
L	Last	It is a last resort – all other non-violent methods of ending the conflict have been tried and failed.
A	Authority	Fought by the authority of the United Nations.
P	Peace	Fought with the intentions of restoring peace.
S	Success	Reasonable chance of success
A	Avoid	Methods used avoid killing civilians (any methods that deliberately target civilians to instil fear are
P	Proportion-ate	Proportional methods are used e.g. not use nuclear weapons on a country that invaded a small

Islam and Just War (Lesser Jihad)

Muslims follow slightly different ideas about what makes a war just. They consider:

- Must be fought for a just cause

- It must be fought to bring about the end goal of good

- It must be a last resort

- Innocent people should not be targeted or killed ***"Do not kill any child, any woman, or any elderly or sick person" Hadith***

Harb al-Muqadis (Holy War in Islam)

Harb al-Maqadis is a 'Holy War' or a war that is fought because of religious differences. Prophet Muhammad and his followers were involved in a number of Holy Wars, including the Battle of Badr, the Battle of Uhud and the Conquest of Makkah.

According to Shari'ah, a Holy War can be fought:

History—Life in Elizabethan England (Elizabethan England) —Spring Two

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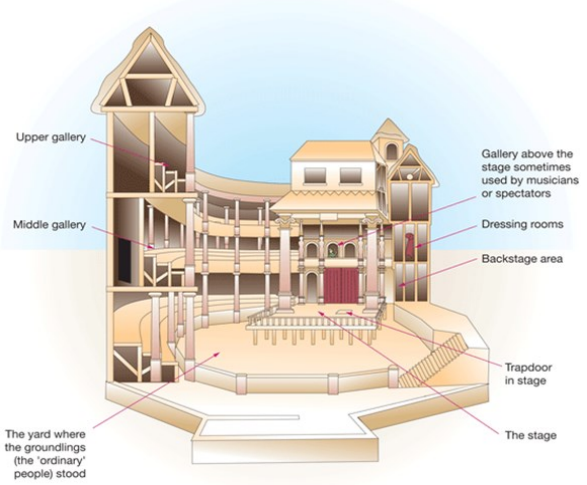
Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Great Chain of Being	The social structure: God is at the top, then his angels. Humans are beneath and split into nobility, gentry, and peasants.
Nobility	The most powerful and wealthiest in society. They held titles inherited from father to son.
Gentry	Often wealthy landowners holding important positions like a Justice of the Peace. Might be richer than some nobles but below them in society.
Peasantry	The poorest members in society, often working as farm labourers (workers); often struggled for work.
Patron	Someone who funds, or pays for, the work of an artist or performing group.
Golden Age	Elizabethan England was often seen as a great time - a golden age.
Gloriana	The public image showing Elizabeth as a 'glorious' queen, achieved through plays, festivals and pamphlets.
Rack renting	Demanding an excessive amount of rent from a tenant or for a property.
Deserving poor	People who were poor through no fault of their own; the old, sick, wounded, or people who tried to find work but were not able to.
Undeserving poor	Dishonest poor people who tried to trick others out of their money.
Idle poor	Poor people who were seen as 'idle' or lazy, and therefore it was their fault they were poor.
Tier 2 vocabulary	**Definition**
Poverty	Being extremely poor.
Monastery	Buildings lived in by monks under religious vows.
Inflation	A currency becoming worth less, shown through quickly rising prices.
Vagrant	Vagrants, or vagabonds, are people without a settled home or work who wanders and lives by begging.
Circumnavigate	To travel all the way around something e.g. the globe / the world.
Enclosure	An area of land surrounded by a barrier e.g. fields surrounded by stone walls or bushes.

Section B: Key Ideas

Features of Elizabethan Theatre



Common types of vagabond:

Counterfeit Crank: They would bite on soap so that they frothed at the mouth and pretend to have a fit to guilt people into giving them money.

Baretop Trickster: A woman who would trick men into following them, e.g. by buying them a meal. The man would then be beaten and robbed by her accomplices/helpers.

Clapper Dudgeon: They would injure themselves and tie dirty bandages around the wound so people would feel sympathy and give them money.

Tom O'Bedlam: He would pretend to be crazy to get money. He would bark like a dog for hours, follow people, or stick a chicken's head in his ear. People gave him money either through sympathy, or just to get rid of him!

Words and themes you have seen before: Puritans, threats, rebellions, propaganda, religious tension, Religious Settlement, Catholics, Protestants, prodigy houses, Kenilworth Castle.

Section C: Timeline of Kenilworth

	Bess of Hardwick born
	Henry VIII closed all the monasteries.
	Henry VIII debased coins.
	Bess' second husband died.
	Bess' third husband died.
	Bess of Hardwick became nobility when she mar-
	The first permanent theatre, called the Red Lion,
	The **Vagabonds Act** meant that actors would be
	Drake's circumnavigation (voyage or journey) around the world.
	The 'Act for Setting the Poor on Work' placed the responsibility for finding work in the hands of local
	William Shakespeare's first play, *Henry VI*, was
	The Rose Theatre opened.
	England was hit by bad harvests, contributing to
	The Earl of Essex is sent to Ireland to stop the Earl
	The Globe Theatre opened on the Southbank of the
	The Elizabethan Poor Law was introduced, which said that the wealthy should be taxed to pay for the care and support of the vulnerable, including the
	The death of Queen Elizabeth I.

History—Medicine

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Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Bloodletting (n)	A Medieval medical treatment of removing some blood from a patient by opening a vein or using leeches to suck it out.
Four Humours (n)	The four liquids that Medieval doctors believed were in your body. The liquids were: blood, yellow bile, black bile and phlegm.
Barber-surgeon (n)	A Medieval barber who also did surgery and dentistry.
Cauterisation (n)	Using a heated iron to stop bleeding and seal a wound.
Privy (n)	A toilet in a small shed outside a house or building.
Cesspit (n)	A pit for getting rid of liquid waste and sewage, normally from a **privy.**
Gong farmer (n)	A person who cleaned out **privies** or **cesspits** in Medieval times.
Lay people (n)	Ordinary people who were not monks or priests.
Tier 2 vocabulary	**Definition**
Diagnosis (n)	Identifying a disease.
Contagious (n)	A disease that is easily spread.
Dissection (n)	The methodical cutting up of a body or plant to study its internal organs (inside).
Anaesthetics (n)	A substance that dulls or removes pain.
Anatomy (n)	The structure of the body and internal organs.
Public health (n)	Health of the population as a whole.
Monk (n)	A member of a religious community of men and have normally taken religious vows.
Monastery (n)	A building or buildings where **monks** live.
Abbey (n)	A building or buildings where **monks** OR nuns live.
Epidemic (n)	Spread of disease to a large number of people.
Anaesthetics (n)	Used in surgical operations to prevent pain being felt
Epidemic (n)	A widespread occurrence of an infectious disease in a community at a particular time
Antiseptic (ad)	Preventing the growth of disease causing microorganisms.

Section 2: Key Ideas/People

Pasteur Germ Theory 1861

End of 4 humours miasma theory spontaneous generation

Development of pasteurisation

Sterilisation

Aseptic surgery

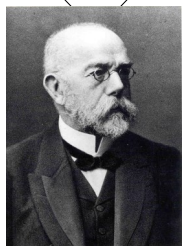
Less deaths from surgical infection

Koch discovery of different bacterium causing different diseases

His methods of staining and photographing bacteria enabled other scientists to identify

Also this led to more vaccines being developed.

This same process would be used to discover magic bullets leading to chemotherapy in the 20th century



Section 3: Chronology

1451	Printing press was invented
1545/1561	Vesalius published his book.
1545/1588	Pare published his book improving treatment of wounds.
1628	William Harvey published his book on the circulation of the heart
1665	Great Plague
1724	Guy's hospital was founded
1746	London's Lock Hospital for venereal diseases opened.
By 1800	London's hospitals were handling 20,000 patients a year
1768	John Hunter was admitted to the Company of Surgeons
1721	Smallpox inoculation became popular
1796	Edward Jenner created the vaccination for Smallpox
1839	The government launched an inquiry to find out what living conditions and health of the poor.
1843	The Chadwick report was published.
1848	The Public Health Act which gave local governments the power to clean up their own areas.
1850	Queen Victoria had a baby using Nitrous oxide
1853	Compulsory vaccinations were introduced.
1860s	Joseph Lister brought Germ theory to England.
August 1865	Lister carried out his first operation using an antiseptic approach.
1866	The Cattle Plague
1876	Robert Koch published is work on anthrax microbes

History—First World War

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Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Kaiser Wilhelm II (n)	The ruler of Germany during World War One. Inherited power in Germany from his father who oversaw the unification in 1871.
Triple Entente (n)	An alliance formed in 1907 between Britain, France and Russia.
Triple Alliance (n)	An alliance formed in 1894 between Germany, Italy and Austria Hungary.
Dreadnought (n)	A new design of boat created in 1906.
ANZAC (n)	Australian and Newlands troops.
Depth-Charge (n)	A bomb dropped into the water that exploded at a certain depth to destroy U-Boats.
Schlieffen Plan (n)	The plan created in **1905** by Von Schlieffen to invade France then Russia to **avoid a war on two fronts.**
Q-Ship (n)	Heavily armed warship disguised as a supply ship that lured U-boats into making attacks before firing on them.
No man's land (n)	An area of land between two countries or armies that is not controlled by anyone.
Slav Nationalism (n)	The 'Slavs' were spread across Europe, this was the idea that all Slavs should be united as one.
The July Crisis (n)	The final steps that led to the outbreak of World War One.
Tier 2 vocabulary	**Definition**
Blockade (n)	Prevent access to an area.
Stalemate (n)	A point were neither side are winning.
Over the top (n)	The order given to soldiers in the trenches to charge over the top of them towards the enemy.
Poison Gas (n)	First poison gas attack was in April 1915 by the Germans. They released chlorine gas in No Man's Land which wafted into the British trenches.
Reconnaissance (n)	The observation of an area to spot an enemy.
Convoy (v)	Supply ships sailing close together in large groups protected by warships.
War of Attrition (n)	To wear down the enemy's strength until resistance was no longer possible. Idea created in 1916 by the German commander Falkenhayn.
Morocco (n)	Often called the 'gate way' to Africa from Europe, located in Northern Africa.
Balkans (n)	An area of Islands with many Slavic people living there. Wars in 1912-1913 and was once part of the Ottoman Empire.

Section B: Important Ideas / Concepts/ Questions

Historians argue that there are short and long term causes to the First World War. The **long term** causes took a long period of time and caused increasing tension within Europe. The **short term** causes are seen as a 'spark' that started World War One.

M

Militarism- the building up of armies. From 1906 Germany and Britain were in direct competition to build up their navy the fastest. This caused tension as Britain believed they had the best navy and need to maintain this to protect their empire. As Germany didn't have a large empire Britain felt a German navy wasn't necessary. By 1914 Britain had built 29 'dreadnoughts' were as Germany had built 17.

A

Alliance System- the building of friendships between countries. There were **two alliances** in Europe; the **Triple Entente** with Britain, France and Russia which were formed in **1907** and **Triple Alliance** with Germany, Austria– Hungary and Italy formed in **1882**.

I

Imperialism– the building up of empire/ taking over countries. This caused war through event such as the 1st (1905) and 2nd **Moroccan crisis (1911)** and the **Bosnian/Balkan crisis (1908**).

N

Nationalism - the love of your own country. This caused tension within Europe as people believed their country were superior to other countries. This especially caused a problem with **Slavism in the Balkans area**. Arguably nationalism led to the **assassination of Arch Duke Franz Ferdinand**.

Section C: Subject Specific	
1839	Treaty of London signed securing Belgian neutrality
Sept 1914	Battle of the Marne: Battle which took place in September 1914 by the river Marne in France. France were pushing Germany back. Argued to be a turning point in the war.
Oct 1914	The Race to the Sea: An attempt to 'out flank' (get around the end off) the French troops; took place on 12th October. German troops moved towards the sea and British and French troops attempted to stop them.
Nov 1914	Trench warfare began
April 1915	First poison gas attack
Feb 1915	Gallipoli Campaign started
Feb1916	Battle of Verdun: The German attempt in February 1916 to capture the French forts in Verdun.
May 1916	Battle of Jutland: Major sea battle in First World War between Germany and Britain.
July 1916	Battle of the Somme: Battle in July 1916 aimed to relieve pressure for the French at Verdun.
April 1917	America enters the First World War
July 1917	Battle of Passchendaele: Battle in July 1917 also known as the Third Battle of Ypres. "Battle of Mud".
1916- 1917	The blockade of Germany begins
March 1918	Germany launch the Spring Offensive
Aug1918	The Allies launch the Hundred Days Offensive

History—Germany: Democracy to Dictatorship Part 3 —Term 2 /Half-Term 3

Section 1: Key Vocabulary	
Tier 3	**Definition**
Article 48 (n)	An emergency law which allows the president to suspend the constitution and pass laws without asking the Reichstag.
Free Corps (n)	A right-wing group of ex-soldiers who threw a rebellion in 1920 to overthrow the left-wing government.
Reparations (v)	A fine the German government was forced to pay due to its involvement in the First World War. Germany was ordered to pay £6.6 Billion to the winning nations.
Spartacist League (n)	German communists who wanted a revolution like the one that had happened in Russia in 1917.
Reichstag (n)	The main elected German parliament.
Weimar Republic (n)	The name given to Germany's democratic system between 1913 and 1933.
Diktat (n)	Nickname given by many Germans to the hated Treaty of Versailles; translated as 'dictated [forced] peace.'
Red Rising (n)	Left-Wing voters revolt in March 1920, the the Ruhr region of Germany.
Einsatzgruppen	A branch of the SS who were mobile death squads responsible for murder of those that the Nazis thought were racial or political enemies.
Flüsterwitze (n)	These were 'whisper jokes'; jokes you would whisper quietly about the Nazis so you did not get caught.
Gestapo (n)	Part of the SS and Nazi Germany's secret police force, created by Herman Goering in 1933 and controlled by Himmler.
Ghetto (n)	An area where members of a particular racial group are forced (or sometimes choose) to live.
Schutzstaffel (n)	Also known as the SS, they became one of the main methods of terror in Nazi Germany. Their jobs included suppressing political enemies and persecuting Jews.
Tier 2	**Definition**
Abdicate (v)	To give up the throne of a country.
Chancellor (n)	In Germany, the chief minister or Prime Minister of the Government.
Constitution (v)	Set of rules by which a country is governed by.
Socialism (v)	A system of government which supports democracy and greater government involvement in the economy and society.
Trade Unions (n)	Association of workers formed to protect their interests.
Democratic Republic (n)	A system of running a country in which all adults have the right to vote for the government they want.
Unify (v)	To become united, or one.
Hyperinflation (v)	Sudden, dramatic rise in prices.

Section B: People and Places

The Final Solution: This was the plan, decided at the Wannsee Conference, in which the quickest and cheapest way to kill all remaining Jews in Europe. The decision to exterminate the Jewish population using poison gas became known as the 'Final Solution to the Jewish problem'. An estimated 6 million Jews were killed.

Jewish Resistance:

Swing Youth—Openly resisted the Nazis and stating their dislike of Nazi ideas and policies by listening to jazz music and having Jewish friends.

White Rose Group—They urged Germans to get rid of Hitler by handing out anti-Nazi leaflets, putting up posters and writing graffiti.

Edelweiss Pirates— They beat up Nazi officials and helped Nazis who deserted (abandoned) the army.

Heinrich Himmler: All police forces were put under the control of Himmler, the Head of the SS. He personally reported to Hitler and was a loyal Nazi who

Joseph Goebbels: Joined the Nazi Party in 1924. Did not fully support Hitler at first, but was later put in

Chamber of Culture Set up by the Nazis and led by Goebbels, all musicians, writers, artists and actors had to be members of this group. Anyone who refused could not work. The Chamber ruled that the same messages had to

Section 3: Chronology

1871	German states **unify** to become Germany.
1881	Kaiser Wilhelm II becomes leader of Germany.
9 Nov 1918	Kaiser Wilhelm II abdicates and secretly leaves Germany never to return.
6 Jan 1919	Left-wing Spartacists protest against the new Weimar Government.
1922	Germany ordered to pay £6.6. billion over the next 66 years.
Jan 1923	**France and Belgium invade** German land called the Ruhr when they don't pay reparations.
1923	**Hyperinflation.** A loaf of bread is worth 201 billion marks.
1924	German currency changes to **Rentenmark then Reichsmark**.
March 1933	Following being elected in February 1933, the **Enabling Act** was passed allowing Hitler to pass laws without the need of the Reichstag's approval.
April 1933	Secret police called the **Gestapo** are formed and the first concentration camp at **Dachau** is opened.
May 1933	All **trade unions are banned**. Leaders are arrested.
July 1933	All **political parties are banned** with the exception of the Nazi Party. Passed 'Law Against the Formation of New Parties' which stated that anyone trying to set up or run a party would go to prison for three years.
June 1934	**Night of the Long Knives:** Hitler purges the party of all those who might overthrow him.
Aug 1934	President Hindenburg dies, Hitler takes over his role and makes the army swear an oath of loyalty to him and not Germany. Hitler gives himself the title of Der Fuhrer.
1935	**Nuremburg Laws:** This set of laws banned Jews from being able to vote and from marrying non-Jews.
1938	**Kristallnacht:** The 'Night of the Broken Glass', in November 1938, when Jews, their shops and businesses were attacked throughout Germany.
Jan 1942	**Wannsee Conference**: the plan for the 'final solution' which intended to exterminate Europe's Jews.
1944	**July Bomb Plot**: This was an attempt in July 1944 by a group of Germans to kill Hitler ,take over Germany, and end the Second World War.
May 1945	Germany surrenders to the Allies. This is end of the Second World War in Europe.

Subject: Geography Paper 2: Human Geography Section C: Challenge of resource management

Section A: Key vocabulary

Tier 3	Definition
Agribusiness (n)	Large scale commercial farming
Energy mix (n)	The range of energy resources in a region or country
Local food sourcing (n)	A method of good production and distribution that is local
Resource management (n)	The control and monitoring of resources so that they do not become depleted or exhausted
Tier 2	**Definition**
Deficit (n)	Having a shortage or not enough
Carbon footprint (n)	A measurement of all the greenhouse gases we individually produce
Food miles (n)	The distance covered supplying food to consumers
Fossil fuels (n)	A natural fuel formed in the geological past from the remains of living organisms
Malnourishment (n)	Lack of nutrition; not having enough to eat
Organic produce (n)	Food produced using natural farming methods, which does not use chemical fertilisers or feed additives
Surplus (n)	Having too much of something; an excess
Water scarcity(n)	Lack of sufficient or safe water
Water footprint (n)	The amount of water used by each person everyday
Water transfer (n)	Moving water across long distances to places with water shortages

Section B: Significance and inequalities of resources

All resources are key for human wellbeing. They lead to social and economic benefits which all increase the standard of living.

Food

Significance:

- Calories provide energy
- Availability depends on climate, soil and level of technology
- Malnourishment can lead to disease and death (more than 1 billion people are malnourished and 2 billion undernourished)
- Obesity is an issue in some areas

Inequalities:

- UK consume 3200 calories per person per day; Somalia consume 1580 calories per person per day
- Areas of greatest population growth have highest levels of undernourishment
- Demand depends on changing diets and increasing population
- Supply depends on climate, soil and level of technology

Water

Significance:

- Used for survival, washing, food production, industry
- Without clean, safe water, people can be stuck in a cycle of poverty

Inequalities:

- Fresh water is unequally distributed
- Global average is 1240 litres per day; Bangladesh is 896 litres per day; USA is 2483 litres per day
- Water scarcity can be physical or economic
- 1 in 5 people live in areas of water scarcity and 1 in 3 have no access to clean drinking water

Energy

Significance:

- Traditionally, energy comes from oil, coal and wood but there are now many sources
- Used for production, heating, transport and water supply

Inequalities:

- Richest billion people use 50% of the energy; poorest use 4%
- Some countries do not have their own sources of energy

Section C: Overview of UK resources

Food

- Food in the UK used to be seasonally and locally sourced. We now have globally sourced foods all year round
- Higher disposable income and increased demand for a greater choice has led to 47% of food being imported (2013). Food is grown more cheaply elsewhere.

Positives: jobs and wages for people in LICs, higher taxes, increased quality of life

Negatives: less land for locals, high water use and exposure to chemicals

- Organic food has been produced since the 1990s due to increase in demand. This is worth £2billion to economy every year.
- Increased carbon footprints due to production and transportation of food. 17% of UK carbon footprint is food
- The main aim of agribusinesses is large profits. These have large environmental impacts due to use of pesticides and fertilisers

Water

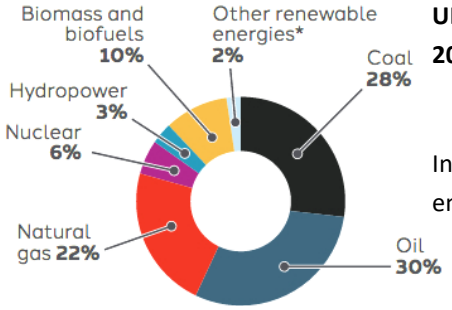
- Changes in demand for water due to increasing wealth, sanitation, population, industry.
- 70% increase in use in UK homes since 1970
- Water quality is managed by legislation, education campaigns, water treatment plants
- Supply and demand: highest population is in south east (area of defecit) and highest rainfall is in north and west (water surplus)
- 80% of southern England relies on groundwater; 50% of country are impacted by water quality
- Government proposed water grid to transfer water between areas of surplus and deficit. This would provide people with reliable water supply, however it is costly, CO_2 is released in pumping water, displaces local communities and involves constructing dams.

Subject: Geography Paper 2: Human Geography Section C: Resource Management—Energy

Section A: Key vocabulary

Tier 3	Definition
Biomass (n)	Renewable organic materials that can be burned to produce energy, e.g. wood, crops, waste
Energy gap (n)	The difference between a country's rising demand for energy and its ability to produce that energy from its own resources.
Energy exploitation (n)	Developing and using energy resources to the greatest possible advantage, usually for profit.
Tier 2	**Definition**
Energy conservation (n)	Reducing energy consumption through using less energy and becoming more efficient in using existing energy sources.
Energy security (n)	Uninterrupted availability of energy sources at an affordable price.
Geothermal energy (n)	Energy generated by heat stored deep in the Earth.
Hydro electric power (n)	Electricity generated by turbines that are driven by moving water.
Nuclear power (n)	Nuclear energy uses fuel made from mined and processed uranium to make steam and generate electricity.
Renewable energy sources (n)	A resource which is not diminished when it is used; it recurs and cannot be exhausted (for example wind and tidal energy).
Solar energy (n)	The Sun's energy exploited by solar panels, collectors or cells to heat water or air or to generate electricity.
Sustainable development (n)	Development that meets the needs of the present without limiting the ability of future generations to meet their own needs.
Sustainable energy supply (n)	Energy that can potentially be used well into the future without harming future generations
Wind energy (n)	Electrical energy obtained from harnessing the wind with windmills or wind turbines.

Section B: Energy in the UK



UK energy mix 2020

In 1970, 91% of energy was from

- UK investing in renewable energy e.g. solar energy and subsidies given by the government. Natural gas has been a recent focus
- Oil and gas was discovered in the North Sea in 1980. This has been exploited so reserves are now decreasing.
- EU regulations on CO2 emissions has also led to decrease in use of fossil fuels
- 12% less energy used in homes since 1970 and 60% less in industry, due to energy efficiency, public awareness and increasing costs

Issues with the exploitation of resources

- Cheaper to import coal into the UK than to mine it
- Nuclear sites being decommissioned and all current plants will close by 2023 – issues of contamination and disposal of nuclear waste
- Economic issues – costs, jobs, set up costs, research, reliability
- Environmental costs – ecosystems, waste, noise, aesthetics, emissions, pollution, radiation leaks

Global energy patterns

- Major consumers are also major producers, usually energy secure HICs
- Low consumers consume the least, mostly energy insecure LICs
- Lowest risk of energy security: Canada, Russia, Middle East, Indonesia, Australia
- Highest risk of energy security: Africa, Asia, South America

Reasons for increasing energy consumption: development, rising population, technology

Section C: Global energy supply

Factors affecting energy supply:

- Climate
- Geology
- Environmental conditions
- Costs of exploitation and consumption
- Technology
- Political factors

Impacts of energy insecurity:

- Exploration of environmentally sensitive areas, e.g. cold environments, tropical rainforest
- Agribusinesses us e vast amounts of energy which increases food prices
- Similar to food production, factories and industry also require a lot of energy which increases energy prices
- Potential for conflict where demand exceeds supply, e.g. conflict between countries over reserves or transporting across borders.

Extracting fossil fuels: Alaska oil and gas

Petroleum was found in Prudhoe Bay in 1968. The Trans-Alaskan pipeline pumps oil 1287km through rough terrain and mountains then transported by tanker to mainland USA.

Advantages	Disadvantages
• Employs 110,000 people • Brings $14 billion to the state's economy yearly • Guarantees oil for the USA without relying on foreign exports	• Risk of breakage to the pipe caused by cold or earthquakes • Pipeline prevents caribou migrating • Cost $8billion to construct • Indigenous Inuit people were displaces and receive little economic benefit

Moving towards a sustainable resource future:

- Decrease individual energy use and carbon footprints
- Designing sustainable homes, workplace and transport
- Reduce demand
- Using technology to increase efficiency of fossil fuels

Local renewable energy scheme in Nepal (LIC)

Small landlocked, mountainous country; has no significant deposits of fuel. Needs to supply energy to 28 million people but power cuts lasting 10 hours a day are common.

Government have implemented a micro-hydro plant scheme, which diverts water from streams and rivers through turbines. This is low cost, improves quality of life and provides water to new industries (metal and furniture workshops, poultry farms).

Spanish— Los trabajos y el futuro - Year 11

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Section A: Key terms

Tier 3 Vocab Recap:

Plural—Preterite tense—Modal verb—Direct Object Pronoun Irregular verb—Conditional tense—Imperfect tense - Stem Changing verbs – Reflexive verbs—Absolute superlative—The passive

Tier 3 Vocabulary	Definition
The subjunctive tense (n)	The **subjunctive** is a specific verb form. It usually expresses something that you wish for, or a hypothetical, rather than actual, situation.

Tier 2 Key Questions	
¿Tienes un trabajo a tiempo parcial?	Do you have a part time job?
¿Qué haces para ganar dinero?	What do you do to earn money?
¿Qué te gustaría hacer en el futuro?	What would you like to do in the future?
¿Te gustaría ir a la universidad?	Would you like to go to university?

Tier 1 Key Nouns	
Un médico (a doctor)	Un abogado (a lawyer)
Un enfermero (a nurse)	Un soldado (a soldier)
Un bombero (a firefighter)	Un camarero (waiter)
Un albañil (a builder)	Un canante (a singer)
Un ingeniero (an engineer)	Un policía (a police officer)
Un profesor (a teacher)	Un peluquero (a hairdresser)
Un diseñador (a designer)	Un contable (an accountant)
Una azafata (a flight attendant)	Un dependiente (a shop assistant)

Section B: Key Grammatical Points

Subjunctive Phrases

The **subjunctive** is a specific verb form. It usually expresses something that you wish for, or a hypothetical rather than actual situation:
Cuando **sea** mayor — When I am older
Cuando **tenga** 18 años — When I am 18 years old
Si **tuviera** el dinero —If I had the money
Si **pudiera** — If I were able to
Si fuera —If I were
Ójala que sea — Hopefully it will be
Espero que **sea**—I hope that it will be
These phrases are really high level phrases and can really improve marks in GCSE exam. You just need to learn them by heart.

The Conditional Tense Recap

The conditional tense is used to refer to something you would do, if I could.
To form the conditional you need to keep the infinitive form of the verb and simply add on the endings below (not that they are the same endings as the imperfect tense!)

		-AR –ER –IR verbs
Yo	(I)	**-ía**
You	(Tú)	**-ías**
He/She	(Él/Ella)	**-ía**
We	(Nos)	**-íamos**
You pl	(Vosotros)	**-íais**
They	(Ellos/Ellas)	**-ían**

There are some irregular verbs to watch out for:

hacer	-	haría	(I would do)
poner	-	pondría	(I would put)
tener	-	tendría	(I would have)
decir	-	diría	(I would say)

Concepts you have seen before: The conditional tense, jobs and key verbs linked to discussing work.

Section C: EATTACO vocabulary

Tenses /verbs

Verbos útiles	Useful verbs
Soy	I am
Es	He/She/It is
Trabajo como	I work as
Tengo que	I have to
Ayudar	To help
Cocinar	To cook
Conocer	To meet
Contestar	To answer
Cortar	To cut
Cuidar	To look after/care
Empezar	To start
Enseñar	To teach
Ganar	To earn
Gastar	To spend/waste
Hacer	To do
Lavar	To wash
Mandar	To send
Mejorar	To improve
Pasear	To walk
Planchar	To iron
Poner	To put
Preparar	To prepare
Reparar	To repair
Repartir	To deliver
Servir	To serve
Terminar	To finish
Vender	To sell
Viajar	To travel

Spanish— Hacia un mundo mejor - Year 11

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Section A: Key terms

Tier 3 Vocabulary Recap

Plural — Modal verb— Direct Object Pronoun

Irregular verb — Preterite tense — Future tense

Conditional tense — Imperfect tense—Stem-changing verbs

Reflexive verbs — Absolute superlative — The perfect tense

Key Questions

¿Cómo es tu casa?	What is your house like?
¿Qué se debería hacer para cuidar al medio ambiente?	What should you do to look after the environment?
¿Cuáles son los problemas globales más serios hoy en día?	What are the most serious global problems nowadays?
¿Crees que llevas una dieta sana?	Do you believe you lead a healthy lifestyle?

Tier 1 Key Nouns

el paro (unemployment)	el desempleo (unemployment)
el hambre (hunger)	la pobreza (poverty)
los sin hogar (homeless)	los sin techo (homeless)
los pobres (the poor)	los ricos (the rich)
la obesidad (obesity)	la ley (the law)
las campañas publicitarias (publicity campaigns)	las organizaciones de caridad (charity organisations)
la deforestación (deforestation)	la drogadicción (drug addiction)

Concepts you have seen before: Ideas on how to protect the environment

Section B: Key Grammatical Points

Se debería + infinitive

Se debería (+ infinitive) means 'One should…'. It is an important verb when talking about the environment. It is the conditional form of **'se debe'** (one must).
E.g. *Se debería ahorrar agua. (One should save water.)*

The Present Subjunctive

The present subjunctive is not really used in English, but is used in Spanish still a lot. It is used in various ways:

- After **'cuando'** when referring to the future

*Cuando **sea** mayor, me gustaría comprar una casa grande.*

- When expressing points of view using:

Es + adjective + **que**

*Es importante que no **malgastemos** la energía.*

- *With negative commands*

*No **tire** basura al suelo*

- *After verbs of wishing, hope, command, request (e.g. querer)*

*Quiero que **escuches** bien.*

- After the expression 'Ojalá…'

*Ojalá **haga** sol*

To form the subjunctive, take the first person singular, take off the ending, then add these endings:

		-AR	–ER –IR verbs
Yo	(I)	hable	coma
You	(Tú)	hables	comas
He/She	(Él/Ella)	hable	coma
We	(Nos)	hablemos	comamos
You pl	(Vosotros)	habléis	comáis
They	(Ellos/Ellas)	hablen	coman

Some to watch out for/irregulars:

ser - sea tener - tenga hay - haya
hacer - haga ir - vaya decir - diga

Section C: EATTACO vocabulary

Verbs	
ahorrar	to save
apagar	to turn off
apoyar	to support
cambiar	to change
construir	to construct
consumir	to consume
crear	to create
dañar	to damage
dejar	to stop
diseñar	to design
emborracharse	to get drunk
evitar	to avoid
fumar	to smoke
malgastar	to waste
preocuparse	to worry
recaudar	to raise
reciclar	to recycle
reducir	to reduce
salvar	to save
tirar	to throw
usar	to use
Qualifiers	
mucho	a lot
poco	a little
demasiado	too much
tanto	so many
tan	so
bastante	quite

Subject: Sociology Year: 11 Spring Term— Crime

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Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
The bystander effect (n)	A phenomenon from the Kitty Genovese case that suggests people are less likely to report a crime if there are several witnesses
Victim survey (n)	A survey, such as the Crime survey for England and Wales, asks a sample of people which crimes have been committed against them to try and uncover the hidden/ dark figure or crime
Hidden/ dark figure of crime (n)	The idea that crimes that are recorded by the police are only 'the tip of the iceberg' and in fact most crimes committed do not make the crime statistics.
Self report studies (n)	A survey that is given to possible criminals in an attempt to understand the real number of crimes committed in society
Institutional racism (n)	When an organisation and its policies are racist, for example the stop and search procedures of the police
Refer a friend scheme (n)	A scheme introduced by the metropolitan police in an attempt to gain a more representative and diverse police force. If police officers successfully introduced a black or Asian candidate o the force thy received a bonus of £350.
Positive discrimination (n)	A policy that favours individuals who belong to groups who have been previously discriminated against. This has been practiced in police interviews and other interviews for councils and government.
Tier 2 vocabulary	**Definition**
Detecting (v)	When a crime is seen or witnessed
Recording (v)	When a crime has been detected, reported and then recorded by the police
Reported (v)	When a crime has been witnesses or detected and the policed are informed
Socialisation (n)	How we are taught norms and values. Some sociologists suggest that women are less likely to commit crime due to socialisation in the family and workplace.
Social control (n)	How we are controlled in society. Some sociologists suggest that women commit less crime due to the fact they are controlled more in the family and the workplace.
Poverty (n)	Women are more likely to be in poverty due to lower wages and more likely to have dependent children. This may cause them to commit crime.

Section 2: Important ideas in Crime

Key concepts

Questions:

1. What are the main factors to support the idea that women are less likely to commit crime?

2. What are the main factors to support the idea that women commit as much crime as men but these crimes do not get recorded?

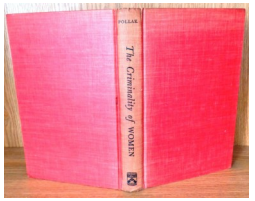
Answers:

1.socialisation in the workplace and at home. Women are taught from an early age to be quiet and sensitive whilst boys are taught to be aggressive and loud. Women are also socialised into being the main carer of children, taking responsibility for childcare thus are less likely to commit crime due to having their children with them more. Also, social control at home and in the work place for example, women are more likely to take a lower responsibility position and so therefore are more likely to be managed and watched.

2. material deprivation —women are more likely to be in poverty due to having dependent children, more likely to be in a lone parent household and lower paid jobs so therefore turn to crime. Types of crime—women are more likely to commit crimes such as theft or crimes related to prostitution which are often hidden or ignored. Chivalry theses— the idea that women use their femininity to their advantage with police and the courts as they are usually run by men. This means that they are let off with crimes or dealt with more leniently by the courts.

However… double deviancy/ demonising of women

Section 3: Case Studies and Theories



Pollak

Chivalry Thesis—the criminal justice system is 'paternalistic', this means that the courts and the police treat men more harshly than women if the same crime is committed. The criminal justice system has a stereotypical view of females as helpless and naïve. They are therefore more likely to treat them less harshly.

Gilroy

The myth of black criminality—the view that black people commit more crime than white is a myth and the statistics cannot be trusted. The police use negative stereotypes when dealing with black people. If black people do become involved in crime it is not surprising as they need to defend themselves against an unjust society.

Stuart Hall

Hall noticed the way that the crime of mugging became a moral panic in the 1970s Muggings were reported many times in the early 1970s and the exaggerated reporting became a focus for public concern. This took the attention away from the country's economic problems at the time an these 'muggings' were associated with immigrants by the media. Immigrants were therefore used as scapegoats for society's problems.

Concepts you have seen before: bystander effect, discrimination, racism, poverty, crime.

Year 11 Art—Component 1

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Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Line	the path left by a moving point. For example, a pencil or a brush dipped in paint.
Colour	the property possessed by an object of producing different sensations on the eye as a result of the
Tone/Value	This refers to the lightness or darkness of something. This could be a shade or how dark or light a
Shape	an area enclosed by a line. It could be just an outline or it could be shaded in.
Texture	This is to do with the **surface quality** of something, the way something feels or looks like it
Pattern	A design that is created by repeating lines, shapes, tones or colours
Form	a **three dimensional shape**, such as a cube, sphere or cone.
Tier 2 Vocabulary	**Definition**
Analyse	examine (something) methodically and in detail, typically in order to explain and interpret it.
Content	the message given by the piece of art. It involves the subject, the techniques used to make the piece, the colorus used, and anything that was used by the artist to make a statement and give a message.
Process	Techniques that involve a series of actions or steps taken in order to achieve a particular end. Eg print-making.
Develop	selecting ideas, visual elements, compositions and techniques from your initial work and using them
Investigation	Explore areas of visual art in great depth, through research and practical applications.
Demonstrate	Show / prove/ present your understanding.
Critical	expressing or involving an analysis of the merits and faults of a work of art . Questioning ideas and
Sources	A primary source is one that you study directly from first-hand experience. Eg and object or photograph you have taken yourself. A secondary source is material produced by others. Such as images find online or in magazines.

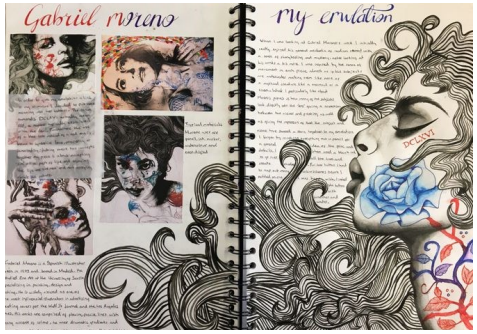
Section B: Analysing Artwork

AO1: Develop Ideas through investigations, demonstrating critical understanding of sources.

Analysing Art work	Showing your understanding of how an artist uses the formal elements to convey a meaning or message
CONTENT Looking at the subject of the work	What is your first response to seeing this work? What is it? What exactly can you see? Describe it. What do you think the work represents? Is there a title? Does that change the way you see the work? What is the theme? Landscape, portrait, journey, moment , memory, event, surreal, fantasy, abstract, message.
FORM Looking at the Formal Elements	Colour– Which colours are used? Why? How are they organised? Shape– what kinds can you see? How are they arranged in the composition? Line– what kind of lines and marks does the artist use? Describe the weight and quality. Texture– What is the surface like? What textures can you see? Scale– How big is the work? Light, delicate, layered, strong, rough, dark, peaceful, dripped, vivid, bright
PROCESS How the work has been developed and made.	What media, materials and tools have been used? What is the evidence for how it has been made? Painted, drawn, printed, stitched, constructed, collaged.
MOOD Communicating moods and feelings	How does the work make you feel? Why do you feel like this? Does the colour, texture, or thee of the work affect your mood? Quiet, contemplative, thoughtful, hopeful, peaceful, elated, joyful, reflective, shocked, sadden.

Section C: Subject Specific

Artist Research– Showing your understanding of an Artist's work or style



Presentation– Your research and study will form a double page. Keep it simple. Use a similar style/ colours as the artist.

Biographical information-Birth, death, education,style,important works, quotes.

Images of relevant artwork– 4-6 good quality images.

Social, historical and economical influences – what was happening in the world at the time this was produced? Did this influence the art?

Artistic influences– Who or what influenced their work? Did they influence anyone else?

Copied images/artist study—1 large study for each artist and smaller studies.

Analysis– use the Content, Form, Process, Mood framework to write about their artwork.

Y11 Drama—Component 3 Key Vocabulary

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Section A: Key vocabulary

Tier 3 Vocabulary Definition	
Diegetic	Sound true to the world of the character—characters on stage can hear it.
Non-diegetic	Sound the audience can hear but the characters can't.
Gobo	A small metal disc with a pattern or shape cut into it to create a specific shape. Helps create location.
Parcan	A type of theatre lantern that is used to create a general wash on stage
Profile	A type of lantern used to define specific areas of the stage
Cyclorama	A large piece of cloth hung at the back of the stage used with special lighting to create the illusion of sky, open space, or great distance at the rear of the stage setting
Rostra	A large platform used to create raised areas on a stage
Cue	The indicator of when the next lighting state should take place (usually a line from one of the performers)
Tier 2 Vocabulary Definition	
Observe (v)	watch (someone or something) carefully and attentively.
Modify (v)	make partial or minor changes to (something)
Convey (v)	communicate (a message or information)
Flair (n)	stylishness and originality.
Accentuate (v)	make more noticeable or prominent.

Section B: Physical Skills

Gestures (n)	Any movement of the body to convey meaning.
Facial expressions (n)	Using the face to convey emotions and communicate the feelings and thoughts of the character to the audience.
Stillness (n)	Not moving.
Stance (n)	The way that a character stands. Also known as 'posture'.
Contact (n)	Physical contact with another actor.
Use of space	How an actor uses the stage to communicate meaning to an audience.
Proxemics (n)	The position of people in relation to each other onstage and the meaning that this communicates.
Mannerism (n)	A peculiarity of speech or behaviour.
Pace (v)	The speed of movement.
Rhythm (n)	The 'flow' of a character's movement
Gait (n)	How a person walks.

Section C: Vocal Skills

Vocal skills (n)	The different techniques used by an actor to communicate the distinct 'voice' of a character.
Clarity (n)	Speaking clearly so that an audience can hear you.
Pace (v)	Speed of speech.
Inflection (n)	Change in pitch or loudness of the voice.
Pitch (v)	The particular level of a voice e.g. 'high' or 'low'.
Projection (n)	How well the voice 'carries' to the audience.
Articulation (n)	The clarity or distinction of speech
Rhythm (n)	Measured flow of words or phrases in verse forming patterns of sound.
Timbre (n)	The distinctive 'character' or quality of a voice (apart from its pitch or intensity such as in a nasal voice quality).
Accent (n)	A distinctive way of pronouncing a language, especially one associated with a particular country, area, or social class.
Vocal expression (n)	How an performer uses his or her voice to convey character
Vocal projection (n)	Directing the voice out of the body to be heard clearly at a distance

Concepts you have seen before: Hot Seating, Still Image, Body Language, Physical Theatre, Thought Tunnel.

Year 11 Computer Science—1.6 Ethical, legal, cultural and environmental impact—Spring 1

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Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Copyright (n)	A law relating to intellectual property.
Plagiarism (n)	Taking someone else's work and passing it off as your own.
Piracy (n)	The unauthorised use or reproduction of another's work.
Source code (n)	The original code written for a program.
License (n)	A permit to do something.
Trolling (n)	Leaving intentionally provocative or offensive messages .
Proprietary (a)	Marketed under and protected by a registered trade name.
Open source (a)	Original source code is freely available.
Tier 2 Vocabulary	**Definition**
Ethical (a)	Relating to moral principles.
Legal (a)	Relating to the law.
Cultural (a)	Relating to society.
Privacy (n)	Control over how your personal information is collected and used.
Stakeholder (n)	A person with an interest or concern in something, especially a business.
Legislation (n)	Laws that relate to a certain area.
Censorship (n)	The suppression of speech, public communication, or other information.
Surveillance (n)	The act of observing another in order to gather evidence .

Section B: Impacts of Digital technology	
Ethical issues	What would be considered right and wrong by society. Common themes include –internet safety, increase in use of technology, mental well being, stress and peer pressure, inappropriate material.
Legal issues	What's actually right and wrong in the eyes of the law (see table below).
Cultural issues	How groups of people with particular beliefs, practices or languages may be affected, e.g. ethnic groups, religions, countries.
Environmental issues	How we impact the natural world. This might be waste production, or mining to gather resources needed to make phones, or using renewable energy to charge phones, or recycling projects. Companies want to be seen to be 'green' or may have targets to achieve.
Privacy issues	Privacy is a very important issue. A person has a right to privacy, and there are strong laws alongside ethical guidance that govern how companies can use our data.

Section C: Legislation relevant to Computer Science		
The Data Protection Act 2018	Sets out how data users who store data about individuals must use that data. It is a set of 8 principles which say how personal data must be collected, used and destroyed.	
Computer Misuse Act 1990	It aims to protect computer users against willful attacks and theft of information. The Act makes it illegal to gain unauthorised access to another person's data with the intention of breaking the law further, to delete, alter or sabotage by introducing viruses .	
Copyright Designs and Patents Act 1988	Provides the creators of intellectual property with proof of ownership, and the exclusive rights to use that idea, and distribute their work. It makes it illegal to copy, modify or distribute intellectual property without permission.	
Software licences	**Open source software**	**Proprietary software**
	Open source software is freely available so others can use it. Users can access and modify the source-code and create their own versions. Strong online communities support and actively improve the software.	Proprietary software requires a license to use it and is not freely available. The source code is secured. Any attempt to modify, copy or redistribute the software is a breach of Copyright.

Concepts you have seen before: Computer Misuse Act—relating to Malware and viruses. Ethical issues surrounding Cyber bullying and

Year 11 Computer Science— 1.3.2 Network Protocols — Spring 2

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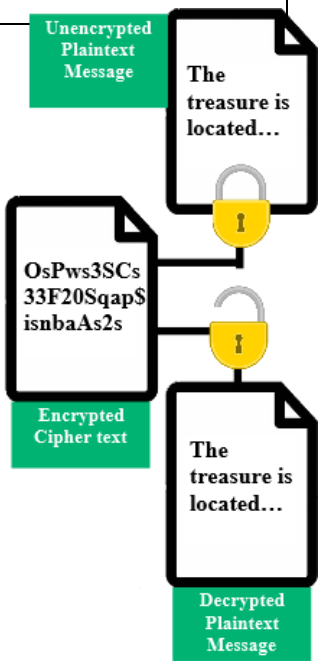
Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Standards *(n)*	The main reason for standards is to ensure that hardware and software produced by different companies can work together.
Encryption *(v)*	Encryption is a way of scrambling data so that only authorized parties can understand the information.
IP Address *(n)*	Internet protocol address assigned to a network adapter. E.g. **192.158.1.38**
MAC Address (Physical *(n)* **Address)**	Media Access Control address assigned during manufacture that never changes. E.g. **2C:54:91:88:C9:E3**
Protocol *(n)*	The rules and standards that are agreed in order to make it possible for different devices to talk to one another.
Packet *(n)*	Data sent over a network is divided into smaller segments called packets. These packets may take different routes through the internet.
Tier 2 Vocabulary	**Definition**
Wired *(n)*	A physical Ethernet or Fibre Connection used to exchange data.
Wireless *(n)*	No physical wire used to exchange data. E.g. Wi-Fi or Bluetooth.
Latency *(n)*	A measure of the time it takes for some data to get to its destination across the network. A high latency is considered to be negative.

Concepts you have seen before:

Encryption, Cyber Crime & System Security.

Section B: Network Protocols	
TCP/IP	***Transmission Control Protocol / Internet Protocol*** A set of protocols that governs the transfer of data over a network.
HTTP	***Hyper Text Transfer Protocol*** Scripting language used in the layouts of webpages.
HTTPS	***Hyper Text Transfer Protocol Secure*** A more secure version of HTTP. It encrypts data sent via this method, unlike HTTP.
FTP	***File Transfer Protocol*** Used to directly send files from one node to another over the internet. Commonly used for uploading files to webservers.
POP	***Post Office Protocol*** Used to download email from the email server and save it onto the users computer. The message is then deleted from the server.
IMAP	***Internet Message Access Protocol*** An alternative to POP, allowing more control. Users can synchronise mail across multiple devices.
SMTP	***Simple Mail Transfer Protocol*** Used to send emails between different servers on the internet.

Section C: Wired Vs Wireless		
	WiFi	**Ethernet**
Speed	Slow data transfer speed.	Faster data transfer speed.
Reliability	Suffers from interference from other devices.	Delivers a consistent speed.
Security	Data needs to be encrypted.	Data does not need to be encrypted.
Latency	Higher	Lower
Deployment	Easy to add new devices.	Cables may take longer to install.



Creative Media— Production techniques Component 3 — Spring Term

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Section A: Publishing Media Products	
Definition	
Balance (n)	Splitting up the content evenly across the page in order to distribute content evenly.
Space (n)	Using negative space in order to effectively place objects within a published media product.
Proximity (n)	The grouping of shapes or objects to create a sense of style or belonging within a product. For instance, objects that are placed close together will be seen as related.
Alignment (n)	Organising content on a page so that particular parts are next to each other either horizontally or vertically.
Repetition (n)	Putting multiple shapes or objects within a product in order to create a stylish effect.
Contrast (n)	Picking colours that have a big difference in order to stand out from the rest of the content. Often darker colours are used with lighter ones
Typography (n)	The style of writing used in a media product. For example, Verdana, Calibri and Times New Roman.
Composition (n)	How a photographer arranges visual elements within their frame
Aesthetic (n)	Strong composition with symmetry and balance. They incorporate leading lines to lead the viewer's eye. Use of colours to give their images a feeling of harmony.
Depth of field (adj)	Depth of field is the distance between the closest and farthest objects in a photo that appears acceptably sharp
Editing techniques (v)	Adding filters, colour and contrast, layering images, distorting images
Filters (n)	Pre-set configurations used to quickly adjust various aspects of an image, including brightness, contrast, saturation, and colour or hue.
Layering Image (v)	To organize the arrangement of objects — photos, text, graphics, background colour — that you've placed in a design or photo so that you can manipulate them more easily .
Distorting images (v)	Examples of this applied to an image is to scale, rotate, skew, distort, apply perspective, or warp.

Section B: Interactive Media Products	
Definition	
Interactive features, e.g. image galleries, option menus, navigation screens, levels	
User interface e.g. screen, interaction, graphics, buttons, layout, colour	
Usability/playability e.g. accessibility, navigation, controls, rules, challenge	
Accessibility	Accessibility is about making a multimedia product available to a wide range of the community through good design. A range of multimedia elements come together to improve accessibility; such as, colour scheme, size of fonts, GUI design, layout. The multimedia product, such as a website or DVD, might be able to display the content in different languages to make it available to a wider community.
Navigation	The choice of navigation method is important to enable the user to be able to use the multimedia product. This could be using different forms of input technology such as voice control, hand gesture, touch screen, keyboard, control pads, or mouse. It is also about how the multimedia product interacts with the users input to enable the user to be able to easily use the multimedia product.
Mise en scène and lighting, e.g. graphics, sprites, character models, 3D environments, interactive objects, textures, lighting schemes. It means "*placing the stage*" and entails everything happening in front of the camera.	
3D Environment	A *scene* when shot [protect] and presented in *3D*, (via real or *virtual* stereoscopic cameras) provides Spatial information in a *scene*. In order to enhance the experience of a game.
Interactive	Interactive objects are designed to behave in certain ways when they are used
Textures	Texture is *a visual element that creates a 3D illusion using various artistic tools*
Sound Design	e.g. soundtracks, sound effects, sounds triggered by game events.

Concepts seen before: Filters, Alignment, Space, Navigation, Accessibility

CNAT—R184—The use of technology in sport

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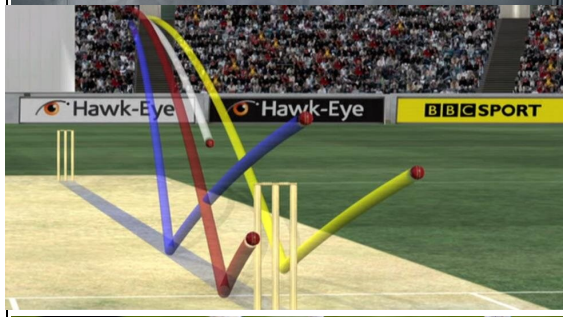
Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Technology	Equipment developed with the aid of science, which can be used to enhance participation
Punditry	Expression of expertise in a particular subject or field
Official/Referee/ Umpire (n)	The person or persons in charge of the match
Spectatorship	People who watch a match, usually at the event location
Hawk-eye	Visually track the trajectory of the ball and display its most likely path as a moving image.
TMO—television match official. VAR—video assistant referee	A person who assists the referee in determining whether points have been scored or foul play has been committed
GPS (global positioning system)	Small device to determine a persons location
Tier 2 Vocabulary	**Definition**
Describe (v)	Give a clear, straightforward description which includes all of the main points.
Explain (v)	Make your point clear by providing sufficient detail.
Contrast (n)	To make an evaluation against an alternative source.

Section B: Important ideas/concepts	
Technology to test and track fitness	Fitness watches, smartphone apps, heart rate monitors, body fat monitors and blood pressure monitor
Technology improves training	Lasers, Motion tracking software, GPS, Simulators, mechanical assistance equipment
Technology for safety	Headgear, shin pads, cryotherapy, underwater or anti gravity treadmill
Technology to improve fairness and accuracy	Hawk-eye, hot spot, VAR, TMO, DRS, Goal line technology, radio
Enhance spectatorship	TV, internet, smartphone apps, punditry, officials, stadiums,
Technology to enhance equipment	Carbon fibre, wheelchairs, prosthetic limbs/blades, aerodynamic bicycles , clothing (boots, swimsuits, body protection) equipment (F1 cars, balls)
Cost of technology	Normal treadmill £1000 whereas an anti gravity treadmill costs £27,000.
Review times in sport	VAR used 440 times, average time of 86.5 seconds per VAR review in 2018 Mens' Football World Cup in Russia

Section C: Subject specific

Can you think of 2 ways in which technology has made sport better?

Can you think of 2 ways in which technology might have had a negative effect on sport?



CNAT Sports Studies—Role of Sport in Promoting Values —Spring 2

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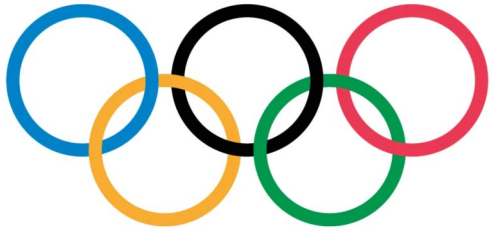
Section A: Values	
Tier 3 Vocabulary	**Definition**
National Pride (v)	Sporting teams can create pride in a nation or area. International competitions such as the World Cup or Euros in Football create unity amongst large groups of people
Tolerance (v)	Sport allows for understanding and empathy with people from other countries & cultures.
Citizenship (v)	Sport allows citizens to demonstrate values such as fairness, respect and equality.
Fair Play (v)	The promotion of being fair and honest within sport and society.
Team Spirit (v)	This encourages team members to collaborate and work together to meet a common goal.
Excellence (v)	The concept of giving maximum effort to be the best.
Inclusion (v)	The value that everyone has equal opportunity.

Section B: Use of Performance Enhancing Drugs (PEDS)	
Why are Performance Enhancing Drugs used?	Essentially, PEDS are used perform better in a sporting context. They increase muscular strength, improve speed and reactions and even reduce fatigue and give extra energy.
Why should performers NOT use Performance Enhancing Drugs?	There are several factors as to why performers should not take PEDS. These include; damaging performers reputation, it's unfair, promotes cheating, damaging to their health, acts as a negative role model, sanctions as illegal.
The Role of WADA (World Anti-Doping Agency)	WADA aims to radicate drug use in Sport. WADA carry out random Drugs tests so that performers are unaware of when they will take place.

Section C: Sports Initiatives and Campaigns	
What is a Sports Initiative?	Sports Initiatives are the first steps taken to solve barriers or issues within a sport of societal issue. It often uses Sports Values to help improve situations.
Olympic Values	The Olympic and Paralympics have their own set of values that are set to create a positive sporting experience.
The Olympic Symbol	Made up of 5 interlocking rings, the symbol represents the closeness of the 5 continents that participate I the Games



Concepts you have seen before: Participation, values, effort, desire, attitude, perceptions, development

Design Technology—Yr11 Electronics and Textiles - Summer Term

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Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Soldering (v)	Melting solder to a PCB to fix a component in place
Standard component (n)	A common part that is bought instead of made
Control system (n)	The system used in all devices to work out how it starts, works and finishes
Microcontroller (n)	A microchip that is pro-
Technical textiles (n)	Fabrics designed to be just functional
Tier 2 Vocabulary	**Definition**
Voltage (n)	A measurement of electrical pressure/ pushing force
Current (n)	The amount of electrical current (NOT the speed)
Fibres (n)	A fine hair
Yarn (n)	Made up of spun fibres to
Woven (n)	An interlaced structure that holds together

Section B: Important ideas

Fibres and fabrics (p20-23)

Natural Fibres come from plants or animals e.g. Cotton from plants used in T-shirts.

Synthetic fibres are man-made from polymers e.g. Polyester used in sportswear.

Fibres are spun into **yarns** and made into **fabrics**.

Woven fabrics are made with two yarns interlaced. The weft travels from left to right and the warp goes up and down the fabric. Used for things like curtains

Knitted fabrics are made by looping one or two yarns together. Used in making jumpers.

Non-woven fabrics have layers of fibres that are bonded and matted together eg. medical masks

Control systems (p24-25)

Made up of 3 main parts:-

INPUT—the thing that starts the system e.g. switch/ sensor.

PROCESS—the active part of the component that converts/directs/ controls the energy e.g. resistor

OUTPUT—what you want to happen as a result e.g. LED

You will need to know a few components from each category.

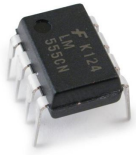
LED's have replaced light bulbs because they last longer and are more energy efficient. They don't produce heat or get hot.

Microcontrollers (p26-27)

Microcontrollers Are **Integrated Circuits (IC's)**. This means they have a smaller circuit in a small casing.

IC's can be used to simplify a circuit by reducing the amount of components that need to be bought and soldered in.

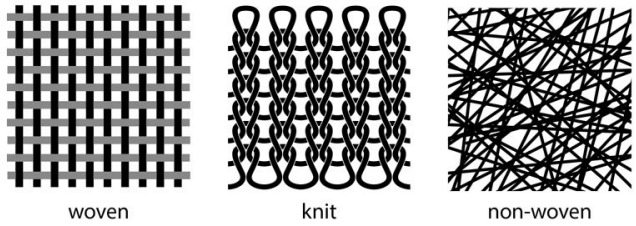
Microcontrollers can be reprogrammed over and over with the right software (e.g. PICAXE) but are more expensive than regular IC's.



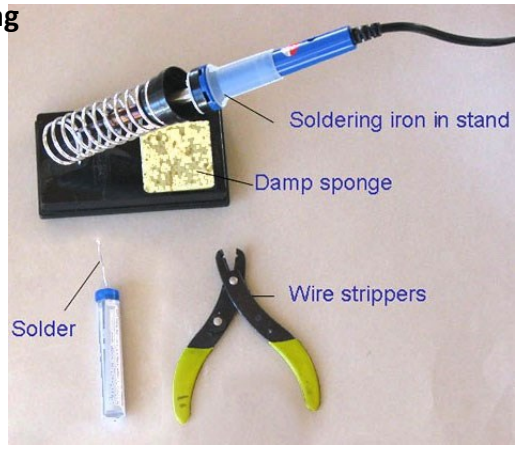
You will need to know the different tasks they can do.

Section C: Subject Specific

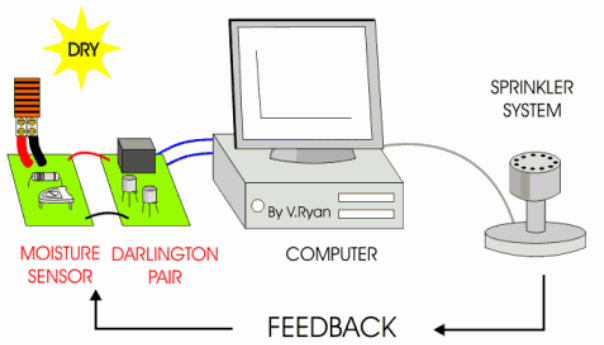
Fibres and fabrics



Soldering



Control system



Concepts you have seen before: soldering, electrical components and tools and equipment.

Year 11 Food Preparation & Nutrition: Food Processing

Section 1: Key Vocabulary

Tier 3 vocabulary	Definition
Additives:	Are added to ensure safety, increase shelf life or improve the taste, texture of appearance of food.
E numbers:	Given to an additive to show it has been approved for use in the EU.
Food labels:	Provide information and help consumers make choices.
Food processing:	Any deliberate change in a food that happens before it is available for us to eat.
HACCP	**Hazard Analysis,** **Critical Control Point** A system which looks for and prevents potential problems before they happen.
Packaging:	Used to protect the food or drink from physical damage, chemical or bacterial contamination and provide information.
Pathogenic:	Disease causing microorganisms.
Tier 2 vocabulary	**Definition**
Filling	a measured quantity of food mixture is injected or sandwiched into the centre of food.
Enrobing	ensures that products are of a uniform shape and size.
Extrusion	is a process where raw materials are forced through a cylindrical barrel in order to form, shape and sometimes cook.
Canning	aims to destroy all microorganisms and their spores through the application of heat by sterilising food in airtight containers.

Section 2: Important ideas

Food processing

Food processing is any deliberate change in a food that happens before it is available for us to eat; almost all food is processed in some way.

Commercially, the main reasons to process food are to eliminate microorganisms (which may cause disease) and to extend shelf life. Food production and processing ensures that food is edible and safe to eat.

Foods are processed for a number of reasons:

- to extend the shelf life, e.g. making strawberries into jam;
- convenience, e.g. frozen ready meals;
- health, e.g. reduced fat yogurt;
- to provide consumers with more variety and choice;
- to provide additional nutritional benefits, e.g. fortified breakfast cereals.

Food Manufacturing

Modern processing has developed over the centuries, with canning and pasteurisation advancing the microbiological safety of food. Food processing can be very simple, e.g. preparing, freezing or drying food to preserve nutrients and freshness. It can also be complex, e.g. formulating a frozen meal with the right balance of nutrients and ingredients.

There are two main stages to food processing:

primary - foods are processed after harvest or slaughter, e.g. wheat is harvested and then milled into flour;

secondary - food is made into products, e.g. flour into bread or pasta. Steps need to be taken at all stages of food supply to prevent contam-

Food additives

Additives are used to ensure safety, increase shelf life or improve the taste, texture or appearance of food. Additives need to be approved before they can be used.

Additives are given an 'E number' to show that they have been rigorously tested for safety and have been approved for use in food by the

Section 3: Preserving Food

Pasteurisation, sterilisation and irradiation.

The shelf life (how long you can store food before it spoils) of food can be extended if sufficient heat is applied to kill microorganisms and inactivate the enzymes that are present.

Pasteurisation – extends shelf life by killing most food spoilage organisms and pathogenic organisms. Products are treated with mild heat, usually to less than 100°C for 30-35 minutes.

Sterilisation – is a more severe process that destroys all microorganisms.

I**rradiation** – Food irradiation is the process of exposing food and food packaging to ionizing radiation, such as from gamma rays, x-rays, or electron beams


Freezing & dehydrating

The shelf life of food and drink can be extended by freezing and dehydrating.

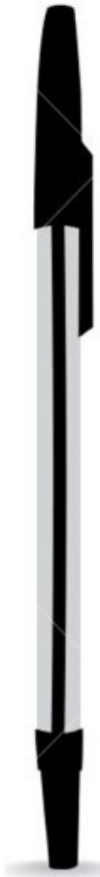
Freezing – commercial methods are based on two principles:

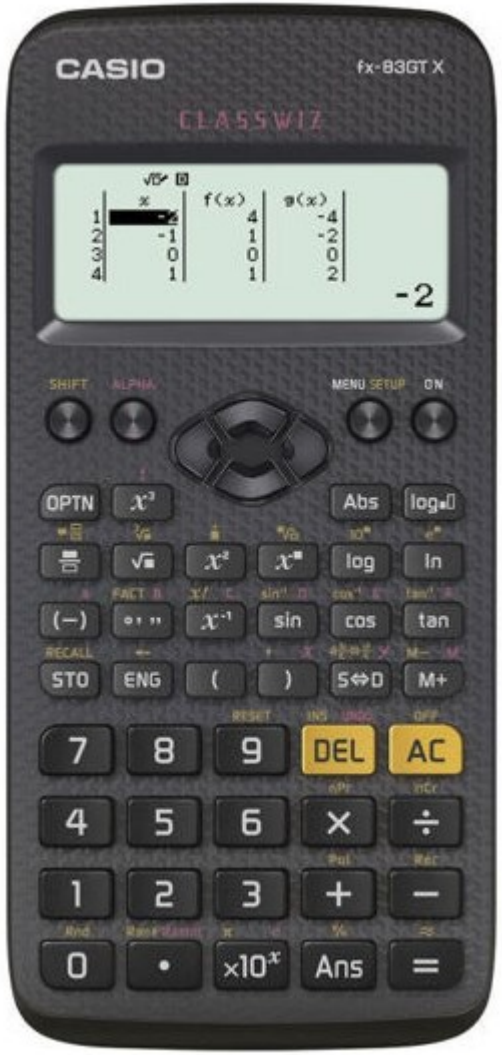
1. very low temperatures inhibit growth of microorganisms;

2. the formation of ice crystals draws available water from the food.

Dehydration – reduces the water activity level, weight, bulk of the food, and helps to preserve a product. There are a number of techniques used including; sun drying, spray drying, fluidised bed drying, roller drying and accelerated freeze-drying.


Your 5 pieces of equipment you need for learning every day:





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