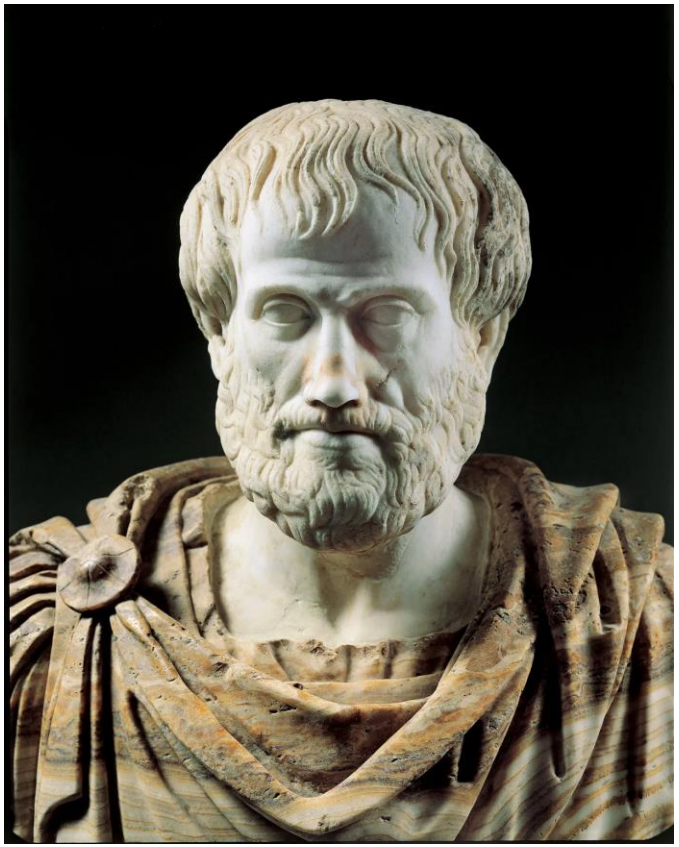


Name: **Form:**

"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.

Lees Brook Academy

Year 10 Knowledge Organiser:
Autumn Term 2023

CONTENTS

Instructions for using your Knowledge Organiser

Every school day you should be studying **2** subjects from your knowledge organiser 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 yellow homework book to show the work you have done. Each evening you should start a new page and put the date clearly at the top.

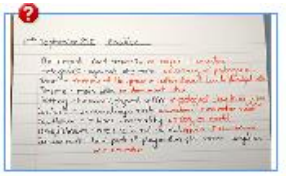
You need to bring your KO and exercise book with you **EVERYDAY** to the academy.

Your parents should sign off your homework every evening using the grid in your KO on pages 4 and 5.

Your KO and exercise book will be checked by your class teacher. Failure to show homework will result in an after school detention that day. Completion of your homework means you will receive a positive point.

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:

https://www.leesbrook.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 mind maps
- 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
- Create flowcharts

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.**

You are expected to study the subjects shown on your timetable each day.
Each day use a page of your exercise booklet to evidence your work.

Year 10: Autumn Term

Timetable for weeks beginning;		Subject 1	Subject 2
04/09/2023 18/09/2023 02/10/2023 16/10/2023 06/11/2023 20/11/2023 04/12/2023 18/12/2023	Monday	English	**A**
	Tuesday	Maths	**B**
	Wednesday	Science	RE
	Thursday	English	Maths
	Friday	Science	Sparx Maths

For weeks beginning;		Subject 1	Subject 2
11/09/2023 25/09/2023 09/10/2023 23/10/2023 13/11/2023 27/11/2023 11/12/2023	Monday	English	Century Tech—Science
	Tuesday	Maths	**C**
	Wednesday	Science	Sparx Maths
	Thursday	English	Maths
	Friday	Science	Century Tech—English

To know which of your options subjects you should study look for your class code (you can find this on your main academy timetable and Go4Schools) in the table below. Once you identify your subjects write them onto your homework timetable above. E.g. if you are in **10A/Cn1** you would write **Construction** in the box with the **A.**

Option A	Options B	Options C
10A/Cn1	10B/Ar1	10C/Ar1
10A/Co1	10B/Co1	10C/Cn1
10A/Dg1	10B/Da1	10C/Eg1
10A/Fd1	10B/Eg1	10C/Fd1
10A/Gg1	10B/Fr1	10C/Fm1
10A/Gg2	10B/Gg1	10C/Gg1
10A/Hb1	10B/Gg2	10C/Hc1
10A/Hi1	10B/Gm1	10C/Hi1
10A/Mu1	10B/Hi1	10C/Ic1
10A/Vs1		
10A/Vs2		

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 thing.		
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

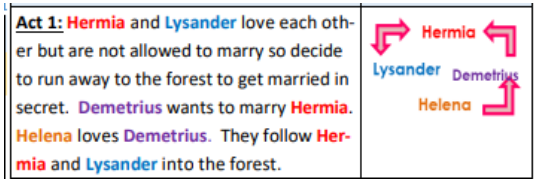
Rather than expand or explain a process, your teacher might ask you to summarise it into its key parts. E.g. summarising the plot 'A Midsummer Night's Dream' in English.

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 10 – English – Modern Play – 'An Inspector Calls' – Autumn Term

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Dramatic Irony (n.)	When the audience are aware of something characters are not.
Omniscient (adj.)	When someone or something is all knowing (God-like).
Juxtaposition (n.)	Two opposites in theme, character, or setting.
Representation (n.)	When a thing or person represents a group of things or people in society.
Symbolism (n.)	Where an object, word, or character are symbolic oof something bigger.
Tier 2 Vocabulary	**Definition**
Capitalist (n.)	The idea that things are privately owned and there is low tax in society and people must help themselves.
Socialist (n.)	The government own public businesses and higher taxes help to support those in society most in need.
Patriarchal Society (n.)	A society where men occupy most if not all positions of power and men have greater freedoms and opportunities than women.
Infantilise (v.)	To treat someone like a child.
Microcosm (n.)	Where something small (like a family or a business) represent wider society.
Social Responsibility (n.)	The concept that everyone (especially those with wealth and power) have to help all in society to make sure everyone prospers.

Section B: Key Concepts/Ideas/Questions

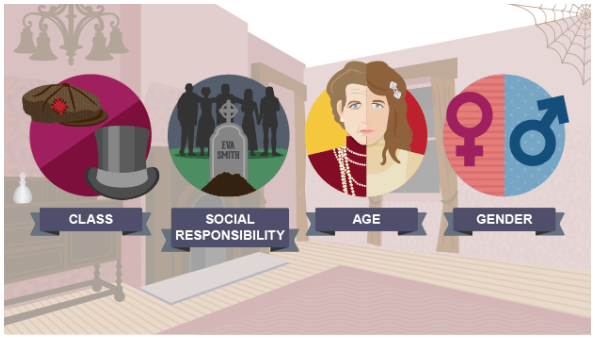
'An Inspector Calls' – Four Key Themes

Gender: The difference between how male and female characters interact and are treated.

Responsibility: How people react to making mistakes and if they are willing to change. How people use their wealth and power in society.

Social Class: Relates more specifically to the upper and working/lower class. Looks at how these classes interact and treat each other. There is usually a power imbalance.

Age: How the younger and older generation interact and treat each other. The differences between how the older and younger generation react to and handle change.



Section C: Subject Specific

Concepts seen before:

- **Class system (Literature and History)**
- **Socialism (Literature, History and Citizenship)**
- **Capitalism (Literature, History and Citizenship)**
- **Gender representation (Literature and History)**
- **Stage directions (Drama)**

Year 10 – English - Language Paper 1 – Autumn Term

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Metaphor (n)	A word or a phrase used to describe something as if it were something else.
Simile (n)	Comparing two things using 'like' or 'as'.
Personification (n)	Giving an inanimate object human characteristics/qualities.
Alliteration (n)	Words that are close together start with the same letter or sound.
Sibilance (n)	The repetition of s or sh sounds.
Onomatopoeia (n)	Language that sounds like its meaning.
Irony (n)	language that says one thing but implies the opposite
Symbolism (n)	The use of symbols to represent ideas or qualities.
Oxymoron (n)	Contradictory words placed next to each other for effect.
Metaphor (n)	A word or a phrase used to describe something as if it were something else.
Tier 2 Vocabulary	**Definition**
Explores (v)	To analyse, examine and evaluate.
Connotes (v)	To imply or suggest.
Implies (v)	To suggest or indicate something.
Infers (v)	To examine and conclude.
Coneys (v)	To make an idea understandable.

Section B: Key Concepts/Ideas/Questions

When we analyse a text, we are looking at the following:

- Word choices used by the author – what do the words mean? What do they make you think of (their connotations)? What word class do they belong to?
- Techniques/linguistic devices – identify them and consider their purpose, use and effect
- Punctuation and sentence structures – do they change the way you read the piece? Does it tell us about the tone in which something is communicated? Does it make us read the text faster or slower?

Writing Success Criteria:

AO5:
Content:
- Register is convincing and compelling for audience
- Assuredly matched to purpose
- Extensive and ambitious vocabulary with sustained crafting of linguistic devices

Organisation:
- Varied and inventive use of structural features
- Writing is compelling, incorporating a range of convincing and complex ideas
- Fluently linked paragraphs with seamlessly integrated discourse markers.

AO6:
- Sentence demarcation s consistently secure and consistently accurate
- Wide range of punctuation is used with a high level of accuracy
- Uses a full range of appropriate sentence forms for effect
- Uses Standard English consistently and appropriately with secure control of complex grammatical structures
- High level of accuracy in spelling, including ambitious vocabulary
- Extensive and ambitious use of vocabulary

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;	" "
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Section C: Subject Specific

Q1- 5 mins – 4 marks. Identify and interpret explicit and implicit information and ideas. Select and synthesise evidence from different texts.

Q2 - 10 mins – 8 marks. Explain, comment on and analyse how writers use language and structure to achieve effects and influence readers, using relevant subject terminology to support views.

Q3 - 10 mins – 8 marks. Explain, comment on and analyse how writers use language and structure to achieve effects and influence readers, using relevant subject terminology to support views.

Q4 - 20 mins – 20 marks. Evaluate texts critically and support this with appropriate textual references.

Q5 - 45 mins – 40 (24+16) marks. Communicate clearly, effectively and imaginatively, selecting and adapting tone, style and register for different forms, purposes and audiences. Organise information and ideas, using structural and grammatical features.

Range of vocabulary and sentence structure for clarity, purpose and effect, with accurate spelling and punctuation.

Concepts seen before: Language analysis tasks in KS3 reading lessons, Writing tasks in KS3 writing lessons. Paper 1 skills lessons in Y10 lessons.

Week Beginning	TASKS **Year 10 – English – Modern Play – 'An Inspector Calls' – Autumn 1 & 2**
4/09/23	**TASK:** Create flashcards for each of the six tier 2 terms. Each flashcard should have the word on one side with an image that relates to it, and on the second side it should contain both a definition, and the word being used in a sentence.
11/09/23	**TASK:** Create flashcards for each of the six tier 3 terms. Each flashcard should have the word on one side with an image that relates to it, and on the second side it should contain both a definition, and the word being used in a sentence.
18/09/23	**TASK:** Create a summary of the key events in Act 1. This should be written in your own words and not copied and pasted from online. It should summarise the following key events/moments: the opening dinner scene, Mr Birling's speech, the Inspector's arrival, the Inspector's interrogation of Mr Birling, and the Inspector's interrogation of Sheila Birling.
25/09/23	**TASK:** Create a summary of the key events in Act 2. This should be written in your own words and not copied and pasted from online. It should summarise the following key events/moments: the start of Act 2, the Inspector's interrogation of Gerald, and the Inspector's interrogation of Mrs Birling.
02/10/23	**TASK:** Create a summary of the key events in Act 3. This should be written in your own words and not copied and pasted from online. It should summarise the following key events/moments: the Inspector's interrogation of Eric Birling, the characters reaction to everyone's interrogation before the Inspector leaves, the Inspector's final speech, Gerald's return, everyone's reaction after Gerald's revelations, the final phone calls, and your opinion on what the ending means.
9/10/23	**TASK:** Create between five and ten flashcards on quotes from/about the Inspector. Each flashcard should have the following: one side should have the quote and the character that says it and/or whom it is about, what act it comes from, and which of the four key themes it links to. The other side should have an inference about the quote, an identification of language within the quote, and a link to context/one of the four key themes.
16/10/23	**TASK:** Create between five and ten flashcards on quotes from/about Mr Birling. Each flashcard should have the following: one side should have the quote and the character that says it and/or whom it is about, what act it comes from, and which of the four key themes it links to. The other side should have an inference about the quote, an identification of language within the quote, and a link to context/one of the four key themes.
23/10/23	**TASK:** Create between five and ten flashcards on quotes from/about Sheila Birling. Each flashcard should have the following: one side should have the quote and the character that says it and/or whom it is about, what act it comes from, and which of the four key themes it links to. The other side should have an inference about the quote, an identification of language within the quote, and a link to context/one of the four key themes.

Week Beginning (dd/mm/yyyy)	TASKS **Year 10 – English – Modern Play – 'An Inspector Calls' – Autumn 1 & 2**
6/11/2023	**TASK:** Create between five and ten flashcards on quotes from/about Gerald. Each flashcard should have the following: one side should have the quote and the character that says it and/or whom it is about, what act it comes from, and which of the four key themes it links to. The other side should have an inference about the quote, an identification of language within the quote, and a link to context/one of the four key themes.
13/11/2023	**TASK:** Create between five and ten flashcards on quotes from/about Mrs Birling. Each flashcard should have the following: one side should have the quote and the character that says it and/or whom it is about, what act it comes from, and which of the four key themes it links to. The other side should have an inference about the quote, an identification of language within the quote, and a link to context/one of the four key themes.
20/11/2023	**TASK:** Create between five and ten flashcards on quotes from/about Eric. Each flashcard should have the following: one side should have the quote and the character that says it and/or whom it is about, what act it comes from, and which of the four key themes it links to. The other side should have an inference about the quote, an identification of language within the quote, and a link to context/one of the four key themes.
27/11/2023	**TASK:** Create between five and ten flashcards on quotes from/about Eva. Each flashcard should have the following: one side should have the quote and the character that says it and/or whom it is about, what act it comes from, and which of the four key themes it links to. The other side should have an inference about the quote, an identification of language within the quote, and a link to context/one of the four key themes.
4/12/2023	**TASK:** Create a revision resource (revision poster, mind-map, leaflet, etc.) about socialism. This should fill one A4 sheet of paper.
11/12/2023	**TASK:** Create a revision resource (revision poster, mind-map, leaflet, etc.) about capitalism. This should fill one A4 sheet of paper.
18/12/2023	**TASK:** Create a revision resource (revision poster, mind-map, leaflet, etc.) about key context. This should fill one A4 sheet of paper. You should write about: the difference between pre-war Britain (1912) and post-war Britain (1945), how women's roles and power in society changed between pre-war Britain and post-war Britain, information about the playwright J.B. Priestley, and any other context you can research that links to the play 'An Inspector Calls'.

Year 10 Foundation—Mathematics—Similarity-Autumn Term 1

Section A: Key vocabulary

Tier 3	Definition
Sine ratio (n)	The ratio of the length of the opposite side to that of the hypotenuse
Cosine ratio (n)	The ratio of the length of the adjacent side to that of the hypotenuse
Tangent ratio (n)	The ratio of the length of the opposite side to that of the adjacent
Hypotenuse (n)	Longest side of a right angle triangle. It is always opposite the right angle.
Tier 2	**Definition**
Adjacent side (n)	The side next to the angle in question
Centre of enlargement (n)	The point at which the shape is enlarged from. Usually given as coordinates.
Congruent (adj)	When two or more objects have the same shape and size. The can be a reflection, rotation or translation of each other, NOT an enlargement. All corresponding angles and lengths are the same
Enlarge (v)	To make a shape bigger (or smaller) by a given multiplier
Corresponding (adj)	Items that are the same size.
Inverse (n)	Function that has the opposite effect.
Opposite side (n)	Side facing to the angle in question.
Scale factor of Enlargement (n)	The ratio of the enlarged shape to the original shape
Similar (adj)	When one shape can become another with a reflection, rotation, enlargement or translation. All corresponding angles are the same.
Scale factor (n)	Multiplier of enlargement

Section B: Key Concepts/Ideas/Questions

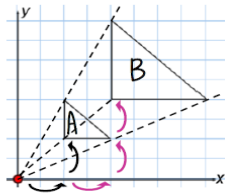
Positive scale factors

Enlargement from a point

Enlarge shape A by SF 2 from (0,0)

The shape is enlarged by 2

The distance from the point enlarges by 2



Identify similar shapes

Angles in similar shapes do not change.
e.g if a triangle gets bigger the angles can not go above 180°

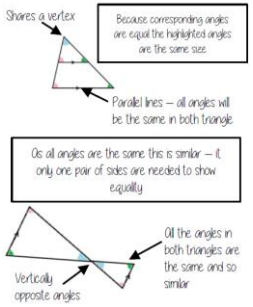
Similar shapes

Scale Factor
Both sides on the bigger shape are 1.5 times bigger

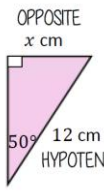
Compare sides: 6 : 9 = 2 : 3 ; 8 : 12 = 2 : 3

Both sets of sides are in the same ratio

Similar triangles

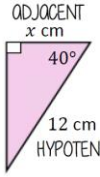


Sin and Cos ratio: side lengths



$\sin\theta = \frac{\text{opposite side}}{\text{hypotenuse side}}$

NOTE
The Sin(x) ratio is the same as the Cos(90-x) ratio



$\cos\theta = \frac{\text{adjacent side}}{\text{hypotenuse side}}$

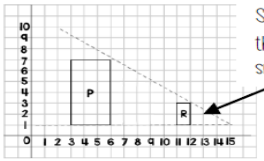
Substitute the values into the ratio formula

Equations might need rearranging to solve

Fractional scale factors

Fractions less than 1 make a shape SMALLER

R is an enlargement of P by a scale factor $\frac{1}{3}$ from centre of enlargement (15,1)



SF $\frac{1}{3}$ - R is three times smaller than P

Conditions for congruent triangles

Triangles are congruent if they satisfy any of the following conditions

Side-side-side

All three sides on the triangle are the same size

Angle-side-angle

Two angles and the side connecting them are equal in two triangles

Side-angle-side

Two sides and the angle in-between them are equal in two triangles (it will also mean the third side is the same size on both shapes)

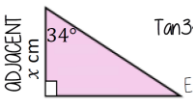
Right angle-hypotenuse-side

The triangles both have a right angle, the hypotenuse and one side are the same

Tangent ratio: side lengths

$\tan\theta = \frac{\text{opposite side}}{\text{adjacent side}}$

Substitute the values into the tangent formula



$\tan 34 = \frac{10}{x}$

Equations might need rearranging to solve

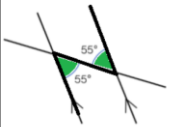
$x \times \tan 34 = 10$

$x = \frac{10}{\tan 34} = 14.8\text{cm}$

Section C: Subject Specific

Angles in parallel lines

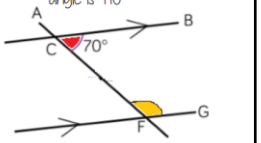
Alternate angles



Because alternate angles are equal the highlighted angles are the same size

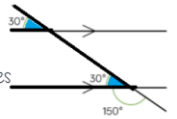
Co-interior angles

Because co-interior angles have a sum of 180° the highlighted angle is 110°



Corresponding angles

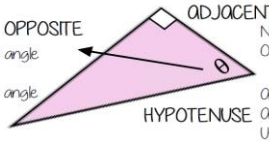
Because corresponding angles are equal the highlighted angles are the same size



As angles on a line add up to 180° co-interior angles can also be calculated from applying alternate/ corresponding rules first

Hypotenuse, adjacent and opposite

ONLY right-angled triangles are labelled in this way



OPPOSITE
Always opposite an acute angle
Useful to label second
Position depend upon the angle in use for the question

ADJACENT
Next to the angle in question
Often labelled last

HYPOTENUSE
Always the longest side
Always opposite the right angle
Useful to label this first

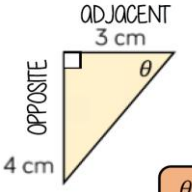
$\sin\theta = \frac{\text{opposite side}}{\text{hypotenuse side}}$

$\cos\theta = \frac{\text{adjacent side}}{\text{hypotenuse side}}$

$\tan\theta = \frac{\text{opposite side}}{\text{adjacent side}}$

Sin, Cos, Tan: Angles

Inverse trigonometric functions



Label your triangle and choose your trigonometric ratio

Substitute values into the ratio formula

$\tan\theta = \frac{3}{4}$

$\theta = \tan^{-1}\frac{3}{4}$

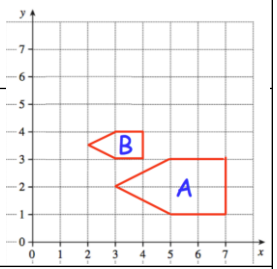
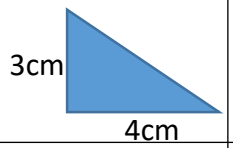
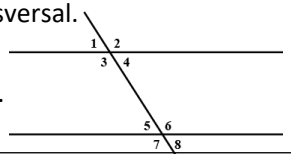
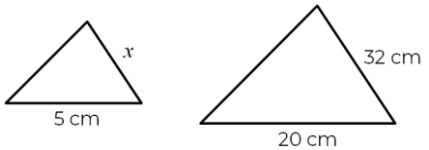
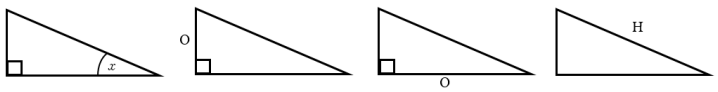
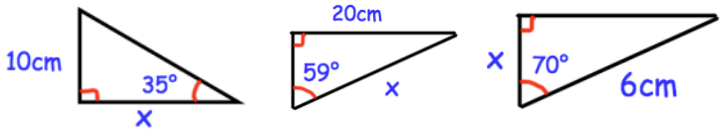
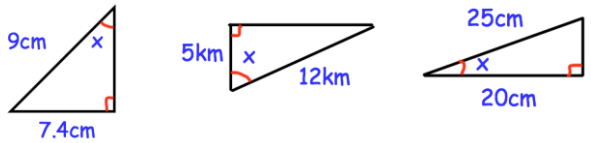
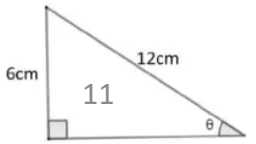
$\theta = 36.9°$

$\theta = \tan^{-1}\frac{\text{opposite side}}{\text{adjacent side}}$

$\theta = \sin^{-1}\frac{\text{opposite side}}{\text{hypotenuse side}}$

$\theta = \cos^{-1}\frac{\text{adjacent side}}{\text{hypotenuse side}}$

Concepts you have seen before:
Enlargement, proportion, angle rules, Pythagoras' theorem and inverse operations

Week Beginning	To hear the homework task read aloud, scan the QR code using the camera on your phone. (You will need to zoom in on the one you want).	TASKS Year 10—Mathematics—Similarity-Autumn 1
	Tuesday task	Thursday task
04/09/2023	Write down the definition of the word enlargement from section A. Find and sketch 3 examples of enlargement from every day life.	Draw a non example of enlargement. Explain why it is a non example. 
11/09/2023	Draw this right angled triangle accurately using a ruler to measure the sides. Draw an enlargement of this shape of scale factor 2. Draw an enlargement of this shape with scale factor ½. 	Describe the transformation that maps A to B. Describe the transformation that maps B to A. How are the descriptions different?
18/09/2023	Write down the mathematical definition of the words congruent and similar from section A. Sketch 2 shapes that are (i) similar (ii) congruent	The diagram shows a pair of parallel lines and a transversal. Identify as many pairs of alternate, corresponding and co-interior angles as you can find. 
25/09/2023	These shapes are similar. What is the length of the missing side? 	Write down the four conditions for congruent triangles. Sketch and label a pair of congruent triangles to represent each condition.
02/10/2023	Produce a Frayer Model for right angled triangles. Your categories should be: Definition Facts/Characteristics Examples Non Examples	Draw 5 right different right angle triangles with one angle given, label the 3 sides OPPOSITE, HYPOTENUSE AND ADJACENT.
09/10/2023	Use the sine, cosine and tangent formulae given in section C to write three formulae triangles. Write down how you would use the formulae triangles to work out each calculation e.g. $O = sin\theta \times H$	Label 
16/10/2023	Find x. 	Create a trigonometry question that requires someone to find a side a) Using multiplication b) Using division
23/10/2023	Find x. 	Find all missing sides and angles on this triangle. 

Year 10 Foundation—Mathematics—Mastering Algebra—Autumn Term 2

Section A: Key vocabulary

Tier 3	Definition
Y intercept (n)	Where the plot of an equation crosses the Y axis
Inequality (n)	An inequality compares two values showing if one is greater than, less than or equal to another
Gradient (n)	A measure of steepness of a linear line plotted on a coordinate plan
Identity (n)	An equation where both sides have variables that cause the same answer. It will have a ≡ sign.
Tier 2	**Definition**
Eliminate (v)	To remove.
Equation (n)	An equation says that two things (expressions) are equal. It will have an equals sign =.
Expression (n)	Numbers, symbols and operators (e.g. + -) grouped together to show the value of something. It does not have an equals sign.
Intersection (n)	The point where two lines meet.
Linear (adj)	An equation or function that is the equation of a straight line
Solve (v)	The process of working out the solution to an equality or solution set for an inequality
Solution (n)	A value we can put in place of a variable that makes the equation true.
Solution set (n)	A set of values we can put in place of a variable that makes the inequation true.
Substitute (v)	Replace a variable with a numerical value.
Variable (n)	A symbol for a number we don't know

Section B: Key Concepts/Ideas/Questions

Solve equations (R)

$3(2x + 4) = 30$

$3(2x + 4) = 30$ — Expand the brackets

$6x + 12 = 30$

$-12 \quad -12$

$6x = 18$

$\div 6 \quad \div 6$

$x = 3$

Substitute to check your answer. This could be negative or a fraction or decimal

Equations: unknown on both sides (R)

$8x + 5 = 4x + 13$

$8x + 5 = 4x + 13$

$-4x \quad -4x$

$4x + 5 = 13$

$-5 \quad -5$

$4x = 8$

$\div 4 \quad \div 4$

$x = 2$

Form and solve inequalities (R)

"Two more than treble my number is greater than 11"

Form: $x \rightarrow \times 3 \rightarrow +2 \rightarrow$ 11

$3x + 2 > 11$

Solve: $x \leftarrow -3 \leftarrow -2 \leftarrow$ 11

$x > 3$

Solve by addition

Addition makes zero pairs

$3x + 2y = 16$

$+ 6x - 2y = 2$

$9x = 18$

$\div 9 \quad \div 9$

$x = 2$

$3x + 2y = 16$

$3(2) + 2(y) = 16$

$6 + 2y = 16$

$-6 \quad -6$

$2y = 10$

$y = 5$

Solve by subtraction

$3x + 2y = 18$

$- \; x + 2y = 10$

$2x = 8$

$\div 2 \quad \div 2$

$x = 4$

$x + 2y = 10$

$(4) + 2y = 10$

$-4 \quad -4$

$2y = 6$

$\div 2 \quad \div 2$

$y = 3$

$x = 4$

$y = 3$

Solve by adjusting one

$h + j = 12$

$2h + 2j = 29$

No equivalent values

$2h + 2j = 24$

$2h + 2j = 29$

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

Solve by adjusting both

$2x + 3y = 39$

$5x - 2y = -7$

Use LCM to make equivalent x OR y values. Because of the negative values using zero pairs and y values is chosen choice

$4x + 6y = 78$

$15x - 6y = -21$

Now solve by addition

Addition makes zero pairs

Section C: Subject Specific

Solutions on a number line

Includes the value it sits above

Does NOT include the value it sits above

$x < 1$ — Both represent values less than 1

$x \leq 1$ — Includes the value 1

$x > 1$ — Both represent values more than 1

$x \geq 1$ — Includes the value 1

Plotting straight line graphs (R)

$y = 3x - 1$ → 3 x the x coordinate then – 1

Draw a table to display this information

x	-3	0	3
y	-10	-1	8

This represents a coordinate pair (-3, -10)

You only need two points to form a straight line

Plotting more points helps you decide if your calculations are correct (if they do make a straight line)

Remember to join the points to make a line

Find solutions graphically

For linear equations there is only one point the graph meets the x value

$x = 2$
$y = 4$

These two lines will cross at (2,4) because they are just x= and y= they are parallel to axes and meet in one place

$y = 3x - 1$

$y = 8$

$3x - 1 = 8$

Remember equation of a line format is $y = mx + c$

The solution is the point the two lines meet (3,8)

Substituting in an expression

$x = 2y$

$x + y = 30$

Pair of simultaneous equations (two representations)

Substitute 2y in place of the x variable as they represent the same value

$x = 2y$ $\quad x + y = 30$

$3y = 30$

$\div 3$

$y = 10$

$x = 2y$

$x = 20$

Substituting known variables

A line has the equation $3x + y = 14$

Two different variables, two solutions

Stephanie knows the point x = 4 lies on that line. Find the value for y

$x = 4$

$3x + y = 14$

$3(4) + y = 14$

$12 + y = 14$

$-12 \quad -12$

$y = 2$

Solve graphically

$x + y = 6$ $\quad y = 2x$

Linear equations are straight lines. The point of intersection provides the x and y solution for both equations

(2, 4) is the point of intersection

The solution that satisfies both equations is $x = 2$ and $y = 4$

Concepts you have seen before:
Straight line graphs, coordinates, solving equations, inequalities, bar modelling and substitution.

TASKS

Year 10—Mathematics
Mastering Algebra—Autumn 2

Week Beginning	To hear the homework task read aloud, scan the QR code using the camera on your phone. (You will need to zoom in on the one you want). **Tuesday Task**	**Thursday Task**
6/11/2023	Write down the definitions of the following words from section A: Equation, Linear, Variable, Inequality, Solve, Eliminate. Use look, cover, write, check to practise their spellings.	Use a bar model to solve the following equations 1) $5y = 45$ 2) $2x + 5 = 13$ 3) $7t - 3 = 25$
13/11/2023	Write down 5 different equations with a solution of x=3. Check they are correct by solving them.	Use a bar model to solve these equations with unknowns on both sides. (a) $4x + 1 = 2x + 7$ (b) $5x + 4 = 3x + 16$ (c) $2x + 8 = x + 12$
20/11/2023	Draw each of these inequalities on a number line. a) $x \geq 9$ b) $x < 13$ c) $x < 4$	Write down the integer solutions that satisfy the following inequalities (a) $2 < x < 6$ (b) $5 < x < 10$ (c) $4 \leq x < 8$ (d) $12 \leq x \leq 15$ (e) $-2 < x \leq 3$ (f) $-5 \leq x < 1$ (g) $-10 \leq x \leq -5$ (h) $-4 < x < 4$
27/11/2023	Use a balance method with inverse functions to solve the following inequalities, make sure you show your working. 1) $5y \leq 45$ 2) $2x + 5 \geq 13$ 3) $7t - 3 < 25$	Debbie has at most £60 to spend on clothes. She wants to buy a pair of jeans for £22 and spend the rest on t-shirts. Each t-shirt cost £8. Form and solve an inequality
4/11/2023	Write down the definitions of the following words from section A: Variable, Substitute, Eliminate, Intersection. Use look, cover, write, check to practise their spellings.	If x=4 and y=3, find z when: a) $z = x + 2$ b) $z = y - 1$ c) $z = x + y$ d) $z = 3y$ e) $z = 3y - 2$ f) $z = 6x - y$
11/12/2023	Solve for x and y x + y = 8 and x + x = 2 x + x + y + y + y + y = 100 and x + x = 60 x + x + y + y = 16 and x + y + y = 10	Read about solving graphically (section C). Sketch the graphs of the following pairs of equations and identify their intersection point. x=2 and y=3 y=2 and y=x x+y=6 and y=x
18/12/2023	Solve by addition $5x + y = 11$, $3x - y = 9$ $2x + 4y = 14$, $4x - 4y = 4$	Solve by subtraction $5x + 3y = 41$, $2x + 3y = 20$ $x + 7y = 64$, $x + 3y = 28$

Year 10 Higher—Mathematics—Similarity-Autumn Term 1

Section A: Key vocabulary

Tier 3	Definition
Sine ratio (n)	The ratio of the length of the opposite side to that of the hypotenuse
Cosine ratio (n)	The ratio of the length of the adjacent side to that of the hypotenuse
Tangent ratio (n)	The ratio of the length of the opposite side to that of the adjacent
Hypotenuse (n)	Longest side of a right angle triangle. It is always opposite the right angle.
Tier 2	**Definition**
Adjacent side (n)	The side next to the angle in question
Centre of enlargement (n)	The point at which the shape is enlarged from. Usually given as coordinates.
Congruent (adj)	When two or more objects have the same shape and size. The can be a reflection, rotation or translation of each other, NOT an enlargement. All corresponding angles and lengths are the same
Enlarge (v)	To make a shape bigger (or smaller) by a given multiplier
Corresponding (adj)	Items that are the same size.
Inverse (n)	Function that has the opposite effect.
Opposite side (n)	Side facing to the angle in question.
Scale factor of Enlargement (n)	The ratio of the enlarged shape to the original shape
Similar (adj)	When one shape can become another with a reflection, rotation, enlargement or translation. All corresponding angles are the same.
Scale factor (n)	Multiplier of enlargement

Section B: Key Concepts/Ideas/Questions

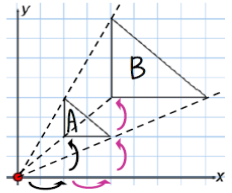
Positive scale factors

Enlargement from a point

Enlarge shape A by SF 2 from (0,0)

The shape is enlarged by 2

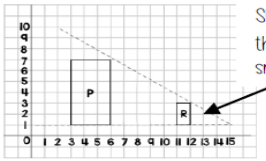
The distance from the point enlarges by 2



Fractional scale factors

Fractions less than 1 make a shape SMALLER

R is an enlargement of P by a scale factor $\frac{1}{3}$ from centre of enlargement (15,1)



SF $\frac{1}{3}$ - R is three times smaller than P

Identify similar shapes

Angles in similar shapes do not change.
e.g if a triangle gets bigger the angles can not go above 180°

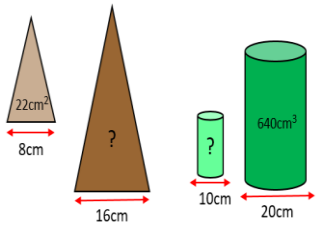
Similar shapes

Scale Factor: Both sides on the bigger shape are 1.5 times bigger

Compare sides: 6 : 9 = 2 : 3 ; 8 : 12 = 2 : 3

Both sets of sides are in the same ratio

Area (ASF)	Volume (VSF)
Calculate the missing area. 1. Find SF: 16/8 = 2 2. Square SF: $2^2 = 4$ 3. Multiply 22 x 4 = 88cm²	Calculate the missing volume. 1. Find SF: 20/10 = 2 2. Cube SF: $2^3 = 8$ 3. Divide 640 ÷ 8 = 80cm³



Conditions for congruent triangles

Triangles are congruent if they satisfy any of the following conditions

Side-side-side

All three sides on the triangle are the same size

Angle-side-angle

Two angles and the side connecting them are equal in two triangles

Side-angle-side

Two sides and the angle in-between them are equal in two triangles (it will also mean the third side is the same size on both shapes)

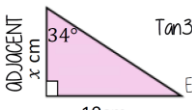
Right angle-hypotenuse-side

The triangles both have a right angle, the hypotenuse and one side are the same

Tangent ratio: side lengths

$\tan\theta = \frac{\text{opposite side}}{\text{adjacent side}}$

Substitute the values into the tangent formula



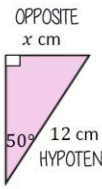
$\tan 34 = \frac{10}{x}$

Equations might need rearranging to solve

$x \times \tan 34 = 10$

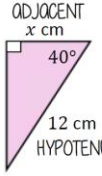
$x = \frac{10}{\tan 34} = 14.8\text{cm}$

Sin and Cos ratio: side lengths



$\sin\theta = \frac{\text{opposite side}}{\text{hypotenuse side}}$

NOTE
The Sin(x) ratio is the same as the Cos(90-x) ratio



$\cos\theta = \frac{\text{adjacent side}}{\text{hypotenuse side}}$

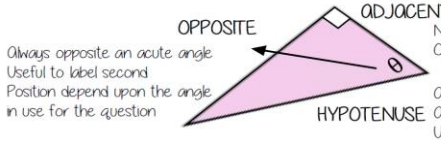
Substitute the values into the ratio formula

Equations might need rearranging to solve

Section C: Subject Specific

Hypotenuse, adjacent and opposite

ONLY right-angled triangles are labelled in this way



Always opposite an acute angle
Useful to label second
Position depend upon the angle in use for the question

Next to the angle in question
Often labelled last

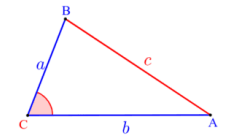
Always the longest side
Always opposite the right angle
Useful to label this first

Sin, Cos, Tan: Angles

$\sin\theta = \frac{\text{opposite side}}{\text{hypotenuse side}}$

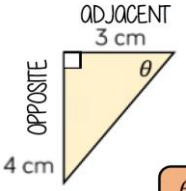
$\cos\theta = \frac{\text{adjacent side}}{\text{hypotenuse side}}$

$\tan\theta = \frac{\text{opposite side}}{\text{adjacent side}}$



$Area = \frac{1}{2}ab\sin C$

Inverse trigonometric functions



Label your triangle and choose your trigonometric ratio

Substitute values into the ratio formula

$\tan\theta = \frac{3}{4}$

$\theta = \tan^{-1}\frac{3}{4}$

$\theta = 36.9°$

$\theta = \tan^{-1}\frac{\text{opposite side}}{\text{adjacent side}}$

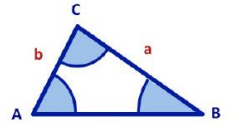
$\theta = \sin^{-1}\frac{\text{opposite side}}{\text{hypotenuse side}}$

$\theta = \cos^{-1}\frac{\text{adjacent side}}{\text{hypotenuse side}}$

SINE RULE

$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Connects:
Angles with their opposite sides

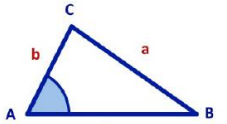


Use when you know:
- two sides and an (opposite) angle;
- two angles and an (opposite) side

COSINE RULE

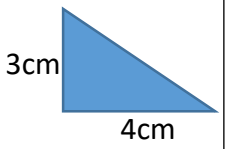
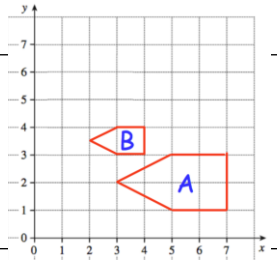
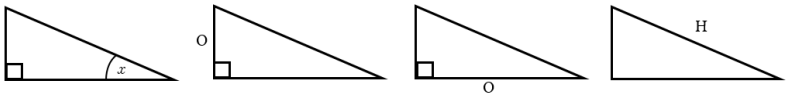
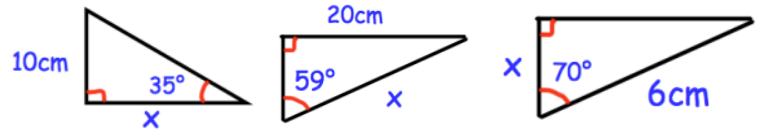
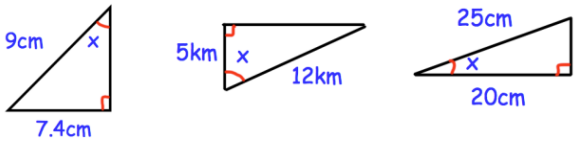
$a^2 = b^2 + c^2 - 2bc\cos A$

Connects:
Three sides and an angle



Use when you know:
- two sides and the 'included' angle;
- all three sides

Concepts you have seen before:
Enlargement, proportion, angle rules, Pythagoras' theorem and inverse operations

Week Beginning	To hear the homework task read aloud, scan the QR code using the camera on your phone. (You will need to zoom in on the one you want).	**TASKS** **Year 10H—Mathematics—Similarity-Autumn 1**
	Tuesday task	**Thursday task**
04/09/2023	Write down the definition of the word enlargement from section A. Find and sketch 3 examples of enlargement from everyday life.	Draw a non-example of enlargement. Explain why it is a non-example.
11/09/2023	Draw this right angled triangle accurately using a ruler to measure the sides. Draw an enlargement of this shape of scale factor 2. Draw an enlargement of this shape with scale factor ½. 	Describe the transformation that maps A to B. Describe the transformation that maps B to A. How are the descriptions different? 
18/09/2023	Draw a table with column headings LSF, ASF and VSF. Complete the first 10 rows of the table LSF=1, LSF=2 etc. Design an exam question that uses the facts given in the LSF=5 row.	Write down the four conditions for congruent triangles. Sketch and label a pair of congruent triangles to represent each condition.
25/09/2023	Draw 5 right different right angle triangles with one angle given, label the 3 sides OPPOSITE, HYPOTENUSE AND ADJACENT.	Label 
02/10/2023	Use the sine, cosine and tangent formulae given in section C to create three formulae triangles. Write down how you would use the formulae triangles to work out each calculation e.g. $O = sin\theta \times H$	Create a trigonometry question that requires someone to find a side a) Using multiplication b) Using division
09/10/2023	Find x. 	Find x. 
16/10/2023	Copy out the section on the sine rule. Create and answer a question that uses the sine rule to find a missing side.	Copy out the section on the cosine rule. Create and answer a question that uses the cosine rule to find a missing side.
23/10/2023	Copy out the formula to find the area of any triangle. Sketch 3 triangles that would have an area of 20cm² to the nearest whole number.	Use section B and C to create a decision tree for finding missing sides in triangles. The first questions should be 'Is the triangle right angled?'

Year 10 Higher—Mathematics—Mastering Algebra—Autumn Term 2

Section A: Key vocabulary

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Inequality (n)	An inequality compares two values showing if one is greater than, less than or equal to another
Gradient (n)	A measure of steepness of a linear line plotted on a coordinate plan
Identity (n)	An equation where both sides have variables that cause the same answer. It will have a ≡ sign.
Tier 2	**Definition**
Eliminate (v)	To remove.
Equation (n)	An equation says that two things (expressions) are equal. It will have an equals sign =.
Expression (n)	Numbers, symbols and operators (e.g. + -) grouped together to show the value of something. It does not have an equals sign.
Intersection (n)	The point where two lines meet.
Linear (adj)	An equation or function that is the equation of a straight line
Solve (v)	The process of working out the solution to an equality or solution set for an inequality
Solution (n)	A value we can put in place of a variable that makes the equation true.
Solution set (n)	A set of values we can put in place of a variable that makes the inequation true.
Substitute (v)	Replace a variable with a numerical value.
Variable (n)	A symbol for a number we don't know

Section B: Key Concepts/Ideas/Questions

Solve equations (R)

$3(2x + 4) = 30$

$3(2x + 4) = 30$ — Expand the brackets

$6x + 12 = 30$

$-12 \quad -12$

$6x = 18$

$-6 \quad -6$

$x = 3$

Substitute to check your answer. This could be negative or a fraction or decimal

Equations: unknown on both sides (R)

$8x + 5 = 4x + 13$

$8x + 5 = 4x + 13$

$-4x \quad -4x$

$4x + 5 = 13$

$-5 \quad -5$

$4x = 8$

$\div 4 \quad \div 4$

$x = 2$

Form and solve inequalities (R)

Two more than treble my number is greater than 11

Form: $x \rightarrow \times 3 \rightarrow +2 \rightarrow$ 11

$3x + 2 > 11$

Solve: $\leftarrow -3 \leftarrow -2 \leftarrow$ 11

$x > 3$

Solve quadratics by factorising

Solve $x^2 - 8x + 15 = 0$

$(x - 3)(x - 5) = 0$

$x - 3 = 0 \quad x - 5 = 0$

$x = 3 \quad x = 5$

Solve by addition

Addition makes zero pairs

$3x + 2y = 16$

$+ 6x - 2y = 2$

$9x = 18$

$\div 9 \quad \div 9$

$x = 2$

$3x + 2y = 16$

$3(2) + 2(y) = 16$

$6 + 2y = 16$

$-6 \quad -6$

$2y = 10$

$y = 5$

= 16, = 2, = 18, $x = 2$, $y = 5$

Solve by subtraction

$3x + 2y = 18$

$- \; x + 2y = 10$

$2x = 8$

$\div 2 \quad \div 2$

$x = 4$

$x + 2y = 10$

$(4) + 2y = 10$

$-4 \quad -4$

$2y = 6$

$\div 2 \quad \div 2$

$y = 3$

$x = 4$, $y = 3$

= 18, = 10, = 18, = 10, = 8, = 4, = 3

Solve by adjusting one

$h + j = 12$ No equivalent values

$2h + 2j = 29$

12, 29

$2h + 2j = 24$

$2h + 2j = 29$

24, 29

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

Solve by adjusting both

$2x + 3y = 39$

$5x - 2y = -7$

= 39, = −7

Use LCM to make equivalent x OR y values. Because of the negative values using zero pairs and y values is chosen choice

$4x + 6y = 78$

$15x - 6y = -21$

= 78, = −21

Now solve by addition

Addition makes zero pairs

Section C: Subject Specific

Solutions on a number line

Includes the value it sits above

Does NOT include the value it sits above

$x < 1$ Both represent values less than 1

$x \leq 1$ Includes the value 1

$x > 1$ Both represent values more than 1

$x \geq 1$ Includes the value 1

Plotting straight line graphs (R)

$y = 3x - 1$ → 3 x the x coordinate then − 1

x	-3	0	3
y	-10	-1	8

Draw a table to display this information

This represents a coordinate pair (-3, -10)

You only need two points to form a straight line

Plotting more points helps you decide if your calculations are correct (if they do make a straight line)

Remember to join the points to make a line

Find solutions graphically

For linear equations there is only one point the graph meets the x value

$x = 2$
$y = 4$

These two lines will cross at (2,4) because they are just x= and y= they are parallel to axes and meet in one place

$y = 3x - 1$

$y = 8$

$3x - 1 = 8$

Remember equation of a line format is $y = mx + c$

The solution is the point the two lines meet (3,8)

Substituting in an expression

$x = 2y$

$x + y = 30$

Pair of simultaneous equations (two representations)

Substitute 2y in place of the x variable as they represent the same value

$x = 2y$ $\quad x + y = 30$

$3y = 30$

$\div 3 \quad \div 3$

$y = 10$

$x = 2y$

$x = 20$

Substituting known variables

A line has the equation $3x + y = 14$

Two different variables, two solutions

Stephanie knows the point $x = 4$ lies on that line. Find the value for y

$3x + y = 14$

$3(4) + y = 14$

$12 + y = 14$

$-12 \quad -12$

$y = 2$

$x = 4$

Solve graphically

$x + y = 6$ $\quad y = 2x$

Linear equations are straight lines. The point of intersection provides the x and y solution for both equations

(2, 4) is the point of intersection

The solution that satisfies both equations is $x = 2$ and $y = 4$

Concepts you have seen before:
Straight line graphs, coordinates, solving equations, inequalities, bar modelling and substitution.

Week Beginning	To hear the homework task read aloud, scan the QR code using the camera on your phone. (You will need to zoom in on the one you want).	**TASKS** **Year 10H—Mathematics** **Mastering Algebra—Autumn 2**
	Tuesday Task	Thursday Task
6/11/2023	Write down the definitions of the following words from section A: Equation, Linear, Variable, Inequality, Solve, Eliminate. Use look, cover, write, check to practise their spellings.	Use a bar model to solve these equations with unknowns on both sides. (a) $4x + 1 = 2x + 7$ (b) $5x + 4 = 3x + 16$ (c) $2x + 8 = x + 12$
13/11/2023	Write down the integer solutions that satisfy the following inequalities. Show your solution sets on a number line. (a) $2 < x < 6$ (b) $5 < x < 10$ (c) $4 \le x < 8$ (d) $12 \le x \le 15$ (e) $-2 < x \le 3$ (f) $-5 \le x < 1$ (g) $-10 \le x \le -5$ (h) $-4 < x < 4$	Use a balance method with inverse functions to solve the following inequalities, make sure you show your working. 1) $5y \le 45$ 2) $2x + 5 \ge 13$ 3) $7t - 3 < 25$
20/11/2023	Solve the following quadratic equations (a) $(x - 1)(x - 3) = 0$ (b) $(y - 4)(y - 9) = 0$ (c) $(m + 1)(m + 6) = 0$ (d) $(x - 3)(x + 2) = 0$ (e) $(t + 7)(t - 3) = 0$ (f) $(k - 10)(k + 9) = 0$ (g) $(w + 5)(w + 11) = 0$ (h) $(y - 8)(y - 2) = 0$ (i) $(x + 3)(x - 9) = 0$	Factorise and solve the following quadratic equations. (a) $x^2 + 6x + 8 = 0$ (b) $x^2 + 7x + 12 = 0$ (c) $y^2 + 7y + 10 = 0$ (d) $y^2 + 3y - 4 = 0$ (e) $x^2 - 2x - 8 = 0$ (f) $m^2 - 7m + 12 = 0$
27/11/2023	Write down the definitions of the following words from section A: Variable, Substitute, Eliminate, Intersection. Use look, cover, write, check to practise their spellings.	If x=4 and y=3, find z when: a) $z = x + 2$ b) $z = y - 1$ c) $z = x + y$ d) $z = 3y$ e) $z = 3y - 2$ f) $z = 6x - y$
4/11/2023	Solve for x and y. x + y = 2 x + x = 8 x + x + y + y + y + y = 60 x + x = 100 x + x + y + y = 16 x + y + y = 10	Read about solving graphically (section C). Sketch the graphs of the following pairs of equations and identify their intersection point. x=2 and y=3 y=2 and y=x x+y=6 and y=x
11/12/2023	Solve by addition $5x + y = 11$, $3x - y = 9$ $x + 7y = 64$, $x + 3y = 28$	Solve by subtraction $5x + 3y = 41$, $2x + 3y = 20$ $2x + 4y = 14$, $4x - 4y = 4$
18/12/2023	Read about adjusting both simultaneous equations and solve. (a) $2x + 2y = 14$, $5x - 3y = 19$ (b) $2x + 3y = 1$, $7x + 2y = -22$ (c) $5x + 3y = 22$, $2x + 4y = 20$ (d) $5x - 6y = 28$, $4x - 4y = 24$ (e) $3x + 2y = 7$, $2x + 9y = 43$ (f) $3x + 3y = -6$, $4x - 4y = -24$	Write 3 different sets of simultaneous equations with the solution x=3 and y=-2 Show how you know they work.

Year 10 – Science - B3: Infection and Response – Autumn Term

Section A: Key Vocabulary

Tier 3	Definition
Prokaryote (n)	Single cell organism with no nucleus (e.g. bacteria).
White Blood Cell (n)	Cell which helps the body fight against infection.
Microbe (n)	Micro-organism e.g. bacteria, virus or fungi.
Pathogen (n)	Disease-causing microorganism.
Antigen (n)	Protein on the surface of the pathogen.
Antibody (n)	Chemical released by the white blood cell to fit over the antigens of a pathogen and stop it causing harm.
Anti-toxin (n)	Chemical released by white blood cell to neutralise toxins (poisons) released by the pathogen.
Engulf (v)	White blood cell ingests the pathogen.
Antibiotics (n)	A medicine that inhibits the growth of microorganisms.
Prokaryote (n)	Single cell organism with no nucleus (e.g. bacteria).

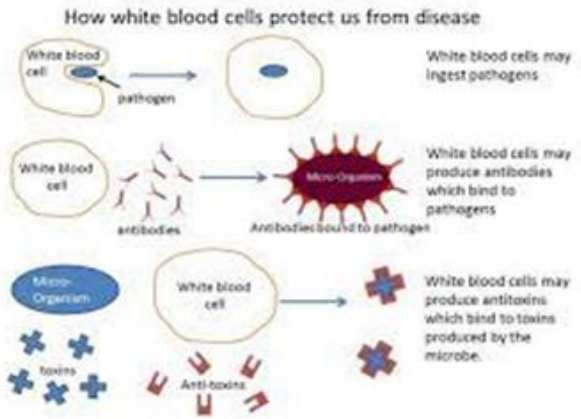
Tier 2	Definition
Produce (v)	To make.
Bind (v)	To stick together.
Ingest (v)	To take into the body.
Health (n)	Good physical and mental condition, free from disease.
Disease (n)	A condition caused by any part of the body not functioning properly.

Section B: Important Ideas / Concepts / Questions

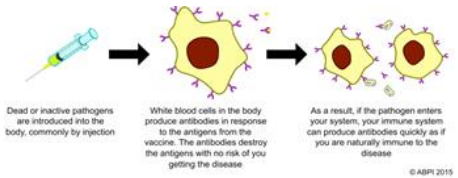
Communicable and Non-Communicable Diseases

A disease that is infectious (can be spread) is a communicable disease, whereas a disease that is not infectious (cannot be spread) is called a non-communicable disease.
Examples of communicable disease include; flu and chickenpox
Examples of non communicable disease include: cancer and Huntington's disease.

How white blood cells protect us from disease



Vaccinations



Section C: Subject Specific

Bacteria

Example of disease: Gonorrhoea
Symptoms: thick yellow or green discharge for the vagina or penis and pain on urination. Some people have no symptoms at all. Untreated can cause long-term pelvic pain, infertility and ectopic pregnancies.
Transmission: unprotected sexual contact with an infected person.

Example of disease: Salmonella food poisoning
Symptoms: Fever, abdominal cramps, vomiting and diarrhoea.
Transmission: Eating undercooked food or food prepared in unhygienic conditions.

Virus

Example of disease: measles
Symptoms: fever and a red skin rash
Transmission: inhalation of droplets from coughs and sneezes

Example of disease: HIV
Symptoms: mild, flu-like symptoms to begin with, attacks the immune cells and damages it to the point where infections can no longer be dealt with.
Transmission: direct sexual contact, the exchange of body fluids such as blood (from sharing needles or unscreened blood is used for transfusions) from mother to child in breast milk.

Fungi

Example of disease: Rose black spot
Symptoms: purple of black spots develop on the leaves, leaves turn yellow and drop early, weakening the plant.
Transmission: spores of the fungus are spread by the wind.

Protist

Example of disease: Malaria
Symptoms: recurrent episodes of fever and shaking, can be fatal.
Transmission: mosquito vector transfers the protest from one person to another.

Concepts you have seen before:
7A: Cells, tissues, organs and systems
8B: Plants and their reproduction
9B: Plant growth

Week Beginning	TASKS Year: 10 Subject: Science Topic: Infection and response Term: Autumn
04/09/23 - Wednesday	**Infection and response:** Learn the spellings and the definitions of the Tier 3 vocabulary words for the infection and response topic. Do this by writing out the definitions and then writing out the words next to each definition in a mixed up order. Match up the words to the definition using a line or colour. Check your answers.
04/09/23 – Friday	**Infection and response:** Create a story board/comic strip to show how our body protects us from diseases. You should include the barriers that prevent pathogens entering the body and our immune response if the do get in.
11/09/23 – Wednesday	**Infection and response:** Create a table that shows the similarities and differences between how the body responds to a disease and how it responds to a vaccine.
11/09/23 - Friday	**Infection and response:** For each of the disease examples given on the topic map describe what you think the best way of preventing the spread of each would be.
18/09/23 – Wednesday	**Infection and response:** Create flash cards to learn the different diseases and the pathogens that cause them and their symptoms.
18/09/23 – Friday	**Infection and response:** Describe how the human body: • prevents pathogens from entering • defends itself against pathogens inside the body. Make sure you use the tier 3 vocabulary
25/09/23 – Wednesday	**Infection and response:** Create a story board or write a story that describes what happens when we are vaccinated and then what happens if we are ever infected by the disease we have been vaccinated against.
25/09/23 –Friday	**Infection and response:** Create a mind map to summarise the infection and response topic.

Year 10 – Science - C4: Chemical Changes – Autumn Term

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Anion (n)	A negatively charged ion, formed by gaining electrons (usually a non-metal ion).
Anode (n)	Positive electrode.
Cathode (n)	Negative electrode.
Cation (n)	A positively charged ion formed by losing electrons.
Electrode (n)	A rod made of a metal or graphite that carries the current into or out of the electrolyte.
Electrolysis (n)	The process in which energy transferred by a direct electrical current decomposes electrolytes.
Electrolyte (n)	An ionic compound that is molten or dissolved in water.
Oxidation (n)	A reaction in which oxygen is added to a chemical substance; loss of electrons by an atom or negative ion.
Reduction (n)	A reaction in which oxygen is lost by a chemical substance; gain of electrons by an atom or negative ion.
Redox (n)	A reaction in which oxidation and reduction take place.

Tier 2 Vocabulary	Definition
Inert (a)	An electrode that is unreactive, such as graphite or platinum.
Ore (n)	A rock that contains a high concentration of a metal or metal compound.
Rusting (n)	The reaction between iron, air and water to form hydrated iron(III) oxide (rust).
Corrosion (n)	A reaction in which a metal reacts with air and sometimes water to form a metal oxide or hydroxide.

Section B: Key Concepts/Ideas/Questions

Cations are positive ions and are attracted to the negative **cathode**

Anions are negative ions and are attracted to the positive **anode.**

H

The half equation for the anode reaction is:

$Cu(s) \rightarrow Cu^{2+}(aq) + 2e^-$

The half equation for the cathode reaction is:

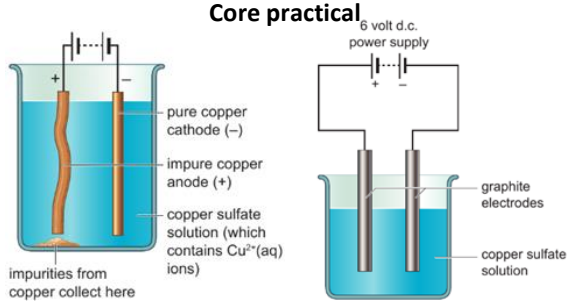
$Cu^{2+}(aq) + 2e^- \rightarrow Cu(s)$

Electrolysis of molten ionic compounds can give different products to electrolysis of solutions of these same compounds. This is because in solution, water is also split by electrolysis into H^+ and OH^- ions.

Metal	Method of extraction
potassium	electrolysis of a molten compound
sodium	
calcium	
magnesium	
aluminium	
(carbon)	
zinc	heat an ore with carbon
iron	
copper	
silver	found as the uncombined element
gold	

Section C: Subject Specific

Core practical



H

The half equation for the anode reaction is:

$Cu(s) \rightarrow Cu^{2+}(aq) + 2e^-$

The half equation for the cathode reaction is:

$Cu^{2+}(aq) + 2e^- \rightarrow Cu(s)$

Exam-style questions

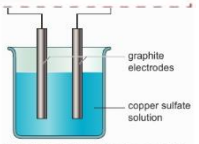
1 Explain why a different product is formed at the anode when copper sulfate solution is electrolysed using graphite electrodes rather than copper electrodes. *(4 marks)*

2 Look at the method for electrolysis using copper electrodes.

- **a** State and explain *one* safety precaution *(1 mark)*
- **b** State why it is important to use clean copper electrodes. *(1 mark)*
- **c** Give a reason why a variable resistor is used in the electrolysis circuit. *(1 mark)*
- **d** Suggest a reason why the electrodes are washed at the end of the electrolysis. *(1 mark)*
- **e** Suggest a reason why propanone is used after washing the electrodes with distilled water. *(1 mark)*

3 The results of an investigation of the electrolysis of copper sulfate solution using copper electrodes are given in table D.

- **a** Calculate the changes in mass of the electrodes. *(2 marks)*
- **b** Plot a suitable graph to look for a correlation between the change in mass of each electrode and the current. *(4 marks)*
- **c** Describe the pattern in the change in mass at each electrode. *(2 marks)*
- **d** Explain the changes in mass of each electrode. *(4 marks)*
- **e** Explain the effect of increasing the current on these changes in mass. *(2 marks)*
- **f** Predict the change in mass at the anode when the current is 0.35 A. *(1 mark)*
- **g** Suggest a reason why the change in mass at the cathode is not the same as the change in mass at the anode when the same current is used. *(1 mark)*
- **h** Describe how you could improve the experiment to obtain more accurate results at the cathode. *(1 mark)*



C electrolysis circuit for using graphite electrodes

Current (A)	0.2	0.3	0.4	0.5
Mass of anode at start (g)	2.77	2.68	2.53	2.36
Mass of anode at end (g)	2.69	2.55	2.36	2.15
Mass of cathode at start (g)	2.51	2.55	2.62	2.70
Mass of cathode at end (g)	2.58	2.66	2.76	2.87

D results of an electrolysis investigation

Concepts seen before:
Atoms and ions
Electricity

Week Beginning	TASKS Year: 10 Subject: Science Topic: Chemical Changes Term: Autumn
02/10/23 – Wednesday	**Chemical Changes:** Make flash cards to learn ten words from the key vocabulary for the Chemical change topic. Write the key word on one side and the definition on the opposite side. Test yourself until you know the definition of each word by memory. Stick theses in your knowledge organiser book so they can be reused for revision.
02/10/23 – Friday	**Chemical Changes:** Write a method including an equipment list for how to carry out electrolysis.
09/10/23 – Wednesday	**Chemical Changes:** Answer the exam style questions about electrolysis.
09/10/23 – Friday	**Chemical Changes:** Explain why different metals need different methods of extraction.
16/10/23 – Wednesday	**Chemical Changes:** Using the key words describe what is happening during electrolysis.
16/10/23 – Friday	**Chemical Changes:** The reactivity series is given to you on the topic map. Write the method for a practical or practicals you could carry out to prove that this is the correct order.
23/10/23 – Wednesday	**Chemical Changes:** 1. Name the three products made when you electrolyse sodium chloride solution. Describe the positive testes for the gases named 2. You can also electrolyse molten sodium chloride. Compare the products formed with those from the electrolysis of sodium chloride solution. Explain the differences.
23/10/23 – Friday	**Chemical Changes:** Create a mind map to summarise the Chemical changes topic.

Year 10 – Science - P1 Energy – Autumn Term

Section A: Key Vocabulary

Tier 3	Definition
atomic / nuclear energy (n)	Energy that is stored inside atoms. Another name for 'nuclear energy'.
chemical energy (n)	Energy that is stored in chemical substances. Food, fuel and batteries all store chemical energy.
Conduction (n)	The way energy is transferred through solids by heating. Vibrations are passed on from particle to particle.
Convection (n)	The movement of particles in a fluid depending on their temperature. Hotter, less dense regions rise, and cooler, denser regions sink.
Dissipated (a)	Spread out.
Elastic potential energy (n)	Energy that is stored in stretched or squashed things that can change back to their original shapes. Another name for 'strain energy'.
Gravitational potential energy (n)	Energy that is stored in objects in high places that can fall down.
Radiation (n)	A way of transferring energy by heating. Also known as infrared radiation.
Kinetic energy (n)	Energy that is stored in moving things.
thermal energy (n)	Energy that is stored in hot objects. The hotter something is the more thermal energy it has.

Tier 2	Definition
Efficiency (n)	A way of saying how much energy something wastes. A more efficient machine wastes less energy.
Insulation (n)	A material that does not allow something, e.g. heat or electricity, to pass through it.
Lubrication n)	To reduce friction by putting a substance (usually a liquid) between two surfaces.

Concepts you have seen before:
Energy and energy transfers

Section B: Important Ideas / Concepts / Questions

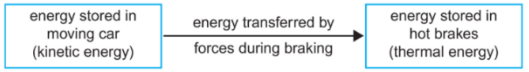
Renewable and non-renewable resources

Non-renewable: Any energy resource that will run out because we cannot renew our supplies of it (e.g. fossil fuel, nuclear fuel).

Renewable: An energy resource that will never run out (e.g. solar power, hydroelectricity, tidal, wind, biofuel).

Flow diagram

Energy stores and transfers are represented using diagrams



B A flow diagram showing the energy transfers when a car brakes.

Efficiency

No device can be more than 100% efficient, because you can never get more energy from a machine than you put into it.

Reasons devices waste energy:

1. Friction between the moving parts causing heating.
2. The resistance of a wire causes the wire to get hot when a current passes through it.
3. Air resistance causes a force on a moving object that opposes its motion. Energy transferred from the object to the surroundings by with force is wasted.
4. Sound created by machinery causes energy transfer to the surroundings.

Section C: Subject specific

Equations

work done = force × distance along the line of action of the force	$W = Fs$
kinetic energy = 0.5 × mass × (speed)^2	$E_k = \frac{1}{2}mv^2$
Gravitational potential energy = mass × gravitational field strength (g) × height	$Ep = mgh$
elastic potential energy = 0.5 × spring constant × (extension)^2	$E_e = \frac{1}{2}ke^2$
change in thermal energy = mass × specific heat capacity × temperature change	$\Delta E = mc\Delta\theta$
$power = \frac{energy\ transferred}{time}$	$P = \frac{E}{t}$
$power = \frac{work\ done}{time}$	$P = \frac{W}{t}$
$efficiecy = \frac{useful\ output\ energy\ transfer}{total\ input\ energy\ transfer}$	
$efficiecy = \frac{total\ power\ output}{total\ power\ input}$	

Week Beginning	TASKS Year: 10 Subject: Science Topic: Energy Term: Autumn
06/11/23 – Wednesday	**Energy:** Learn the spellings and the definitions of the Tier 3 vocabulary words for the Energy topic. Do this by writing out the definitions and then writing out the words next to each definition in a mixed up order. Match up the words to the definition using a line or colour. Check your answers.
06/11/23 – Friday	**Energy:** An electric motor is used to power a car-lifting machine. 1. Calculate the increase in the gravitational potential energy store of a car lifted 2.5 m off the floor. The mass of the car is 950kg. Gravitational field strength is 9.8 N/kg. 2. Calculate the power of the lifting machine if it takes 10 seconds to raise the car. 3. Calculate the efficiency of the lifting machine if 3.6 kW of power were supplied. Give your answer to 2 significant figures. 4. Grease is used to reduce friction in the lifting machine. Suggest one effect friction has when two surfaces are rubbed together.
13/11/23 – Wednesday	**Energy:** Create a table with the headings Energy transfer by, useful energy output, wasted energy output. Fill in the table for at least 10 different appliances including: an electric fan heater, a television, an electric kettle and headphones.
13/11/23 – Friday	**Energy:** Draw 10 different energy flow diagrams including ones for: An object when it falls and when it hits the ground, A Torch, A fan heater
20/11/23 – Wednesday	**Energy:** For each of the four ways that devices waste energy describe a way manufactures could reduce the problem
20/11/23 – Friday	**Energy:** Make flash cards for all of the equations and use them to learn the different equations.
27/11/23 – Wednesday	**Energy:** Rearrange the equations to make the other parts the subject i.e if you had the speed equation speed = distance ÷ time your would rearrange it twice once to make distance the subject (distance = speed x time) and once to make time the subject (time = distance ÷ speed).
27/11/23 – Friday	**Energy:** Create a mind map to summarise the Energy topic.

Year 10 - B4: Bioenergetics – Autumn Term

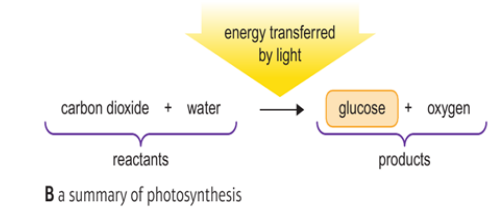
Section A: Key Vocabulary

Tier 3	Definition
Aerobic respiration (n)	An exothermic reaction in which glucose is broken down using oxygen to produce carbon dioxide and water and release energy for the cells.
Anaerobic respiration (n)	An exothermic reaction in which glucose is broken down in the absence of oxygen to produce lactic acid in animals and ethanol and carbon dioxide in plants and yeast. A small amount of energy is transferred for the cells
Chlorophyll (n)	The green pigment contained in the chloroplasts
Chloroplasts (n)	The organelles in which photosynthesis takes place.
Metabolism (n)	The sum of all the reactions taking place in a cell or the body of an organism.
Mitochondria (n)	The site of aerobic cellular respiration in a cell.
Photosynthesis (n)	The process by which plants make food using carbon dioxide, water, and light.
Endothermic (a)	A reaction that requires a transfer of energy from the environment

Tier 2	Definition
Limiting factors (n)	Limit the rate of a reaction.
Oxygen debt (n)	The extra oxygen that must be taken into the body after exercise has stopped to complete the aerobic respiration of lactic acid

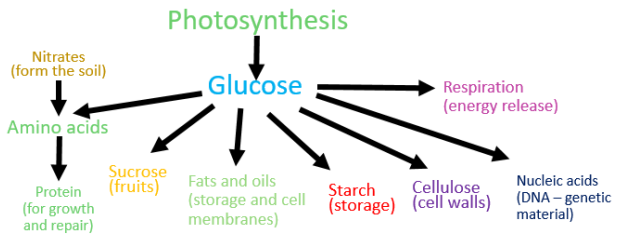
Section B: Important Ideas / Concepts / Questions

Photosynthesis



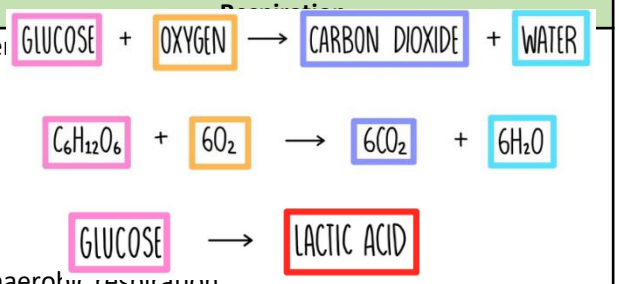
B a summary of photosynthesis

Uses of Glucose



Respiration

Aer



Anaerobic respiration:

Section C: Subject Specific

Factors that affect photosynthesis

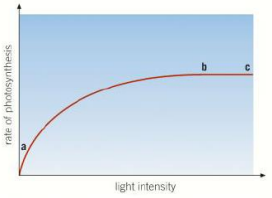


Figure 1 *Investigating the effect of light intensity on the rate of photosynthesis*

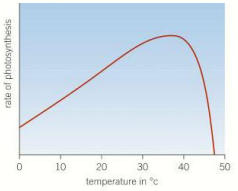


Figure 2 *The effect of increasing temperature on the rate of photosynthesis*

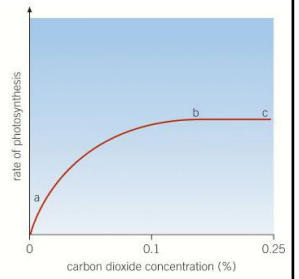
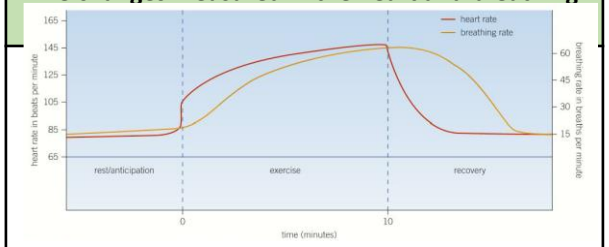


Figure 3 *The effect of increasing carbon dioxide concentration on the rate of photosynthesis*

The changes measured in the heart and breathing



Concepts you have seen before:
Cells, tissues, organs and systems
Breathing and respiration
Plant growth

Week Beginning	TASKS Year: 10 Subject: Science Topic: Bioenergetics Term: Autumn
04/12/23 – Wednesday	**Bioenergetics:** Make flash cards to learn ten words from the key vocabulary for the Bioenergetics topic. Write the key word on one side and the definition on the opposite side. Test yourself until you know the definition of each word by memory. Stick theses in your knowledge organiser book so they can be reused for revision.
04/12/23 – Friday	**Bioenergetics:** Photosynthesis can be affected by different factors, Describe an experiment including the equipment needed to investigate the effect of light of photosynthesis.
11/12/23 – Wednesday	**Bioenergetics:** Using the graph showing the changes measured in the heart and breathing rate before, during an dafter a period of exercise, describe the effect of exercise on the heart rate and breathing rate of a fit person. Describe how you think the graph would differ if it was for an unfit person.
11/12/23 – Friday	**Bioenergetics:** Write a paragraph that explains how plants produce glucose and describes the different uses that the plant has for it.
18/12/23 – Wednesday	**Bioenergetics:** Compare and contrast aerobic and anaerobic respiration.
18/12/23 – Friday	**Bioenergetics:** Create a mind map to summarise the Bioenergetics topic

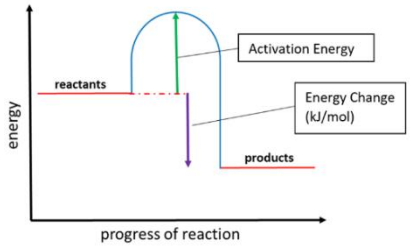
Year 10 – Chemistry (Triple) : Energy Changes – Autumn Term

Section A: Key vocabulary

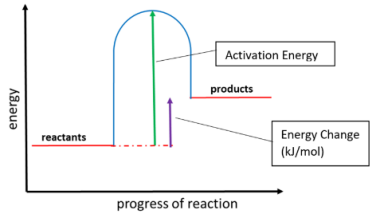
Tier 3 Vocabulary	Definition
Activation energy (n)	the minimum amount of energy that colliding particles must have for them to react
Bond energy (n)	the amount of energy required to break one mole of a particular covalent bond
Endothermic (n)	a reaction that takes in energy from the surroundings
Exothermic (n)	a reaction that transfers energy to the surroundings
fuel cells (T)	sources of electricity that are supplied by an external source of fuel
Reaction Profile (n)	A chart showing how the energy of reactants and products changes during a reaction
Thermal decomposition (n)	Type of reaction in which a compound breaks down to form two or more substances when it is heated

Tier 2 Vocabulary	Definition
Final (a)	Occurring at the end
Initial (a)	existing or occurring at the beginning.
Investigating (v)	carry out research or study into a subject or problem
Insulate (v)	To help maintain the temperature

Section B: Key Concepts/Ideas/Questions



The reaction profile for an **endothermic reaction**. The energy of the reactants is lower than that of the products.



The reaction profile for an **exothermic reaction**. The energy of the products is higher than that of the reactants.

For a chemical reaction to take place:

· bonds in the reactants must be broken. Energy is supplied to break bonds. This means energy is transferred to the reactants meaning bond breaking is always an endothermic process.

· New chemical bonds are formed to make the products, transferring energy to surroundings, meaning it is an exothermic process.

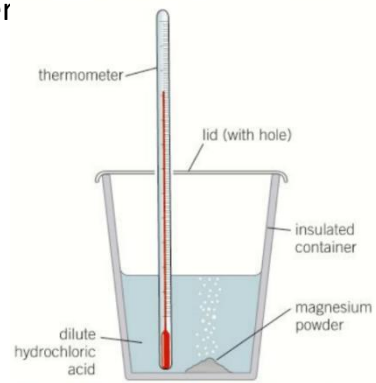
· This means every chemical reaction has components which are both endo- and exo-thermic, which explains why reaction profiles always have the energy of the reaction mixture increasing then decreasing.

Section C: Subject Specific

Practical skills: identifying a reaction as exothermic or endothermic

A reaction can be determined as exothermic or endothermic by finding the change in temperature, that is the difference between the **initial temperature** of a reaction and the **final temperature.** Temperature of the reaction mixture is measured using a **thermometer**.

A reaction is usually carried out in an **insulated container** (e.g. a polystyrene cup) to prevent heat loss to the surroundings, along with a lid on the container



Concepts seen before:
Atoms, Chemical reactions, Periodic table and reactivity

Year 10 – Science (Triple) - P4 Radioactivity – Autumn Term

Section A: Key Vocabulary

Tier 3	Definition
Activity (n)	The number of unstable atoms that decay per second in a radioactive source.
Alpha radiation (α) (n)	An ionising radiation made up of two protons and two neutrons (A helium nucleus).
Beta radiation (β) (n)	An ionising radiation made up of a single fast moving electron
Gamma radiation (γ) (n)	An ionising radiation made up of electromagnetic radiation
Ionisation (n)	A process in which atoms become charged.
Isotopes (n)	Atoms with the same number of protons but a different number of neutrons
Radioactive contamination (n)	Where radioactive nuclei get onto a substance meaning the substance will now emit ionising radiation
Tier 2	**Definition**
Absorb (v)	Take in through a physical or chemical process.
Reflect (v)	Give back out without taking in.

Concepts you have seen before:
The periodic table
Energy stores

Section B: Important Ideas / Concepts / Questions

Types of radiation

Alpha	Beta	Gamma
Absorbed by a few mm of paper	Absorbed by a few mm of aluminium	Absorbed by a few meters of lead.
Has the highest ionisation out of the three types	Has no mass and a charge of -1	Has the lowest ionisation out of the three types
Used in smoke alarms to detect smoke	Is used in thickness detectors to see how thick a material is	Is used in radiotherapy to help cure cancers.

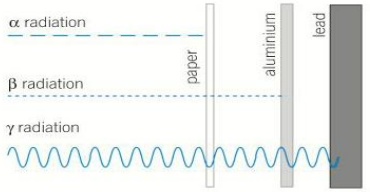


Figure 2 *The penetrating power of alpha, beta, and gamma radiation*

Nuclear equations

Worked example W1

Radium-226 emits an alpha particle. What is the other product?

$^{226}_{88}Ra \rightarrow {}^{4}_{2}He + ?$

On the right of the arrow the nucleus has an atomic number of 88 – 2 = 86. This is radon (Rn). (The atomic numbers also represent the positive charges.)

Mass numbers must also balance. The radon nucleus has a mass number of 226 – 4 = 222.

$^{226}_{88}Ra \rightarrow {}^{4}_{2}He + {}^{222}_{86}Rn$

Worked example W2

Iodine-131 undergoes β^- decay. What is the other product?

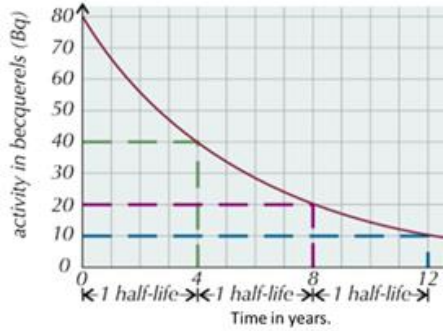
$^{131}_{53}I \rightarrow {}^{0}_{-1}e + ?$

The mass number stays the same. The atomic number goes up by 1 to 54. This is xenon (Xe). The atomic numbers represent positive charges and the –1 on the beta particle represents a negative charge.

$^{131}_{53}I \rightarrow {}^{0}_{-1}e + {}^{131}_{54}Xe$

Section C: Electricity in the home

Half-life



The half life of the above sample is 4 year. Half-life is the time it takes the activity of the sample to drop by half.

It takes 12 years for the activity of this sample to drop to 10 Bq. This means 10 atoms are undergoing radioactive decay every second.

Worked Example

The activity of a radioisotope is 640 cpm (counts per minute). Two hours later it has fallen to 80 cpm. Find the half life of this sample.

initial count		after one half-life		after two half-lives		after three half-lives
640	(÷2)	320	(÷2)	160	(÷2)	80

It takes three half-lives for the activity to fall from 640 to 80. Two hours represents three half-lives, so the half-life is 120 mins ÷ 3

= 40 minutes

Triple Science Tasks

Week Beginning	TASKS Year: 10 Subject: Science Term: Autumn
04/19/23 - Wednesday	**Energy:** Learn the spellings and the definitions of the Tier 3 vocabulary words for the Energy topic. Do this by writing out the definitions and then writing out the words next to each definition in a mixed up order. Match up the words to the definition using a line or colour. Check your answers.
04/19/23 – Friday	**Infection and response:** Learn the spellings and the definitions of the Tier 3 vocabulary words for the infection and response topic. Do this by writing out the definitions and then writing out the words next to each definition in a mixed up order. Match up the words to the definition using a line or colour. Check your answers.
11/09/23 – Wednesday	**Chemical Changes:** Make flash cards to learn ten words from the key vocabulary for the Chemical change topic. Write the key word on one side and the definition on the opposite side. Test yourself until you know the definition of each word by memory. Stick theses in your knowledge organiser book so they can be reused for revision.
11/09/23 - Friday	**Energy:** Create a table with the headings Energy transfer by, useful energy output, wasted energy output. Fill in the table for at least 10 different appliances including: an electric fan heater, a television, an electric kettle and headphones.
18/09/23 – Wednesday	**Infection and response:** Create a story board/comic strip to show how our body protects us from diseases. You should include the barriers that prevent pathogens entering the body and our immune response if the do get in.
18/09/23 – Friday	**Chemical Changes:** Write a method including an equipment list for how to carry out electrolysis.
25/09/23 – Wednesday	**Energy:** Draw 10 different energy flow diagrams including ones for: An object when it falls and when it hits the ground, A Torch, A fan heater
25/09/23 –Friday	**Infection and response:** Create a table that shows the similarities and differences between how the body responds to a disease and how it responds to a vaccine.

Triple Science Tasks

Week Beginning	TASKS Year: 10 Subject: Science Term: Autumn
02/10/23 – Wednesday	**Energy:** An electric motor is used to power a car-lifting machine. 1. Calculate the increase in the gravitational potential energy store of a car lifted 2.5 m off the floor. The mass of the car is 950kg. Gravitational field strength is 9.8 N/kg. 2. Calculate the power of the lifting machine if it takes 10 seconds to raise the car. 3. Calculate the efficiency of the lifting machine if 3.6 kW of power were supplied. Give your answer to 2 significant figures. 4. Grease is used to reduce friction in the lifting machine. Suggest one effect friction has when two surfaces are rubbed together.
02/10/23 – Friday	**Infection and response:** For each of the disease examples given on the topic map describe what you think the best way of preventing the spread of each would be.
09/10/23 – Wednesday	**Chemical Changes:** Explain why different metals need different methods of extraction.
09/10/23 – Friday	**Energy:** For each of the four ways that devices waste energy describe a way manufactures could reduce the problem
16/10/23 – Wednesday	**Infection and response:** Create flash cards to learn the different diseases and the pathogens that cause them and their symptoms.
16/10/23 – Friday	**Chemical Changes:** Using the key words describe what is happening during electrolysis.
23/10/23 – Wednesday	**Energy:** Make flash cards for all of the equations and use them to learn the different equations.
23/10/23 – Friday	**Infection and response:** Describe how the human body: • prevents pathogens from entering • defends itself against pathogens inside the body. Make sure you use the tier 3 vocabulary

Triple Science Tasks

Week Beginning	TASKS Year: 10 Subject: Science Term: Autumn
06/11/23 – Wednesday	**Energy:** Rearrange the equations to make the other parts the subject i.e if you had the speed equation speed = distance ÷ time your would rearrange it twice once to make distance the subject (distance = speed x time) and once to make time the subject (time = distance ÷ speed).
06/11/23 – Friday	**Infection and response:** Create a story board or write a story that describes what happens when we are vaccinated and then what happens if we are ever infected by the disease we have been vaccinated against.
13/11/23 – Wednesday	**Chemical Changes:** The reactivity series is given to you on the topic map. Write the method for a practical or practicals you could carry out to prove that this is the correct order.
13/11/23 – Friday	**Radioactivity:** Make flash cards of the tier 3 vocabulary in section A of the Radioactivity knowledge organiser. Write the key word on one side and the definition on the other. Test yourself until you know the words and meanings by memory.
20/11/23 – Wednesday	**Infection and response:**
20/11/23 – Friday	**Chemical Changes:** 1. Name the three products made when you electrolyse sodium chloride solution. Describe the positive testes for the gases named 2. You can also electrolyse molten sodium chloride. Compare the products formed with those from the electrolysis of sodium chloride solution. Explain the differences.
27/11/23 – Wednesday	**Radioactivity:** Compare the properties of alpha, beta and gamma radiation, including what they are composed of. What makes radiation dangerous? Evaluate the level of danger from each of the sources of radiation. Include ideas about distance from the source and how this might affect the level of risk from it.
27/11/23 – Friday	**Energy Changes:** Make flash cards to learn ten words from the key vocabulary for the Energy changes topic. Write the key word on one side and the definition on the opposite side. Test yourself until you know the definition of each word by memory. Stick theses in your knowledge organiser book so they can be reused for revision.

Triple Science Tasks

Week Beginning	TASKS Year: 10 Subject: Science Term: Autumn
04/12/23 – Wednesday	**Radioactivity:** Half-life 1. What does the half-life of an isotope describe? 2. A 10 kg sample of caesium-137 has a half-life of 30 years, what is the half-life of a 5 kg sample? 3. Strontium-90 has a half-life of 29 years. How many strontium90 half-lives is: a) 29 years b) 58 years c) 116 years d) 14.5 years 4. There are 10 million atoms in a sample of radon-222 (half-life – 3.8 days). How many undecayed nuclei are left after a) 3.8 days b) 7.6 days c) 11.4 days d) 1.9 days
04/12/23 – Friday	**Infection and response:** Create a mind map to summarise the infection and response topic
11/12/23 – Wednesday	**Energy changes:** Describe and explain the difference between the reaction profile for an exothermic reaction and an endothermic reaction.
11/12/23 – Friday	**Radioactivity:** 1. Draw a table to summarise the charges and relative masses of the different types of radiation emitted from atomic nuclei. 2. What materials will absorb and stop beta particles? 3. The reactor in a nuclear power station is surrounded by large amounts of concrete. Why is this necessary?
18/12/23 – Wednesday	**Energy Changes:** Write a set of practical instructions for someone to follow if they were trying to investigate if substances were exothermic or endothermic, include a table of results that they could use.
18/12/23 – Friday	**Radioactivity:** 1. Compare the properties of alpha, beta and gamma radiation, including what they are composed of. 2. What makes radiation dangerous? Evaluate the level of danger from each of the sources of radiation. Include ideas about distance from the source and how this might affect the level of risk from it.

Religious Studies: Christian Beliefs - Nature of God and Creation — Autumn Term 1

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Monotheist (n)	Someone who believes in one God
Trinity (n)	One God in three different forms: Father, Son and Holy Spirit
Nicene Creed (n) Apostles Creed (n)	Statements of main Christian beliefs
Creatio ex nihilo (n)	God created the world out of nothing
Stewardship (n)	Looking after something so that it can be passed on to the next generation
Fundamentalist (n)	Christians who interpret the Bible literally, believing it be historically and scientifically true.
Liberal (n)	Christians who read the Bible as a metaphor that tells (in story form) important truths about God.
Tier 2 Vocabulary	**Definition**
Metaphor (n)	A figure of speech that describes an object or an action in a way that isn't literally true but helps explain an idea.
Metaphorical (n)	

Section B: Nature of God

Christians believe in ONE God. The Nicene Creed explains that there is one being—God—experienced as three different persons: Father, Son and Holy Spirit who are all equal and eternal.

"We believe in one God, the Father, the Almighty...We believe in one Lord, Jesus Christ, the only Son of God...We believe in the Holy Spirit, the Lord, the giver of life,"

All three aspects of the Trinity were present at **Creation:**
- **Father**: 'In the beginning, God created the heavens and the earth...' (Genesis—Bible)
- **Son**: 'In the beginning was the Word (Jesus)...and the Word was God...' (John—Bible)
- **Holy Spirit**: 'The Spirit of God was hovering over the waters...' (Genesis 1)

All three aspects of the Trinity were present at Jesus' **baptism: '***As soon as Jesus was baptised,* ***he went up out of the water****. At that moment heaven was opened, and he saw the* ***Spirit of God descending like a dove*** *and alighting on him. And* ***a voice from heaven*** *said, "This is my Son, whom I love; with him I am well pleased."'* (Matthew—Bible)

How the Trinity is used in belief and worship:
- The Nicene Creed is repeated during Eucharist weekly.
- Catholics show their belief in the Trinity by crossing themselves when they enter a church.
- Priests begin their sermons with: 'In the name of the Father, and of the Son and of the Holy Spirit...'
- Baptisms and marriages are performed in the name of the Trinity.

Concepts you have seen before:
Key Christian beliefs—Trinity, Creation

Section C: Creation

Genesis 1	Genesis 2-3
Day 1 – God created the heavens and the earth, light Day 2 – God separated the waters from the sky Day 3 – God created dry land, plants and trees Day 4 – God created the sun, moon and stars Day 5 – God created the fish and birds Day 6 – God created animals and humans	- God created the heavens and the earth. - He formed man from dust and breathed life into him. - Made trees and the Garden of Eden. - Made a companion for Adam from his rib (Eve). - Adam and Eve ate the forbidden fruit from the Garden and were condemned to suffer.

All Christians believe that God was responsible for the creation of the universe but differ in how they **interpret** the Genesis Creation story:

Fundamentalist	Liberal
The creation story is **historical** and scientific because the Bible is the Word of God and can't be wrong. - God created the world in six 24 hour periods. - God is **omnipotent** so it is possible. - Scientific explanations like Big Bang theory and Evolution are wrong.	- The creation story is **metaphorical**. - It isn't meant to be taken word for word as true but as a **metaphor** teaching truths about God – that He is the **creator** and that the world is **special** to Him. - There is **no conflict between religion and science**. Science explains **how** the world was created and religion explains **why** it was.

Importance for Christians today:
- God's creation shows God's goodness: '***...and God saw that it was good...***' at the end of each day.
- God created human beings in His image (**imageo dei**), meaning that humans occupy a unique place in creation.
- Humans are **stewards** and have a responsibility to God to care for creation.

Religious Studies: Christian Beliefs - Jesus' Incarnation / Last Days—Autumn Term 1

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Incarnation (n)	God took on human form as Jesus.
Virgin birth (n)	The belief that Jesus was not conceived through the act of sex.
Son (n)	Jesus is God's Son – fully human yet without sin and fully God.
Gospel (n)	The New Testament books of the Bible that record the events of Jesus' life.
Last Supper (n)	Jesus' last meal with his disciples.
Sanhedrin (n)	Jewish Council (supreme religious authority) at the time of Jesus.
Crucifixion (n)	Jesus was killed by being nailed on a cross.
Resurrection (n)	After three days Jesus came back from the dead.
Ascension (n)	Forty days after his resurrection Jesus went up to heaven.
Prophecy (n)	Divine knowledge of future events.
Miracle (n)	An act of God which cannot be explained by science.

Tier 2 Vocabulary	Definition
Treason (n)	Attempting to overthrow a government or state.
Blasphemy (n)	Speaking disrespectfully about God or sacred things.
Sacrifice (n)	To offer something of value for a higher purpose.

Section B: Incarnation

God came to earth as a human in the person of Jesus ***"The Word became flesh and made his dwelling among us.*** " (John 1:14) Jesus' birth fulfilled the prophecy of Christ coming to earth as Saviour of all humankind.

Jesus as Divine (God):
* Jesus forgave sins;
* Jesus performed miracles;
* Jesus was resurrected after death which shows his omnipotence.

Jesus as Human:
* Jesus was born to a human mother;
* Jesus got tired, hungry and thirsty;
* Jesus showed human emotions like sadness;
* Jesus died.

The importance of the incarnation:
It shows that God cared so much about the world that he sent his Son to show humans what God is like and to teach how to live the way they were made to. It is the

1. The Last Supper:
The night before his crucifixion (Maundy Thursday) Jesus shared a meal with his disciples. Jesus broke bread and drank wine

"This is my body given for you, do this in remembrance of me." In the same way after supper, he took the cup, saying, "This cup is the new covenant in my blood,

2. Betrayal & Arrest
Judas handed Jesus over to the Temple Guard for silver. There was a fight between some of the disciples and the Temple guards who came to arrest him. Jesus ordered there to be no violence and was arrested.

'He approached Jesus to kiss him, but Jesus asked him, "Judas, are you betraying the Son of Man with a kiss?"'

Section C: Jesus' Last Days

3. Trial: Jesus was tried by the Sanhedrin, the Jewish Council, who condemned him for claiming to be "the Christ, the Son of God", which for them was **blasphemy.** The next morning Jesus was taken before Pilate, the Roman Governor, and accused of being the King of the Jews (**treason**). Pilate offered the release of a prisoner, the crowd chose another so Jesus was condemned to crucifixion.

4. Crucifixion:
Jesus was crucified on Good Friday. The soldiers laid a crown of thorns on his head and mocked him. The disciples ran away, only the women followers stayed by Jesus. The crucifixion lasted over

*"But God demonstrates his own love for us in this: while we were still sinners, Christ died for us." **Romans 5:8***

'For our sake he was crucified under Pontius Pilate; he suffered death and was buried.'
Nicene Creed

5. Resurrection:
On Sunday morning, women went to anoint Jesus' body with spices. They found the tomb empty. Two angels appeared who told them Jesus had risen which they quickly told to the disciples. Jesus then appeared to the disciples.

*"Why do you look for the living among the dead? He is not here; he has risen!" **Luke***

*'...while he was blessing them, he left them and was taken up into heaven.' **Luke 24:51***

6. Ascension: Forty days after the resurrection, Jesus told the disciples to stay and receive God's Holy Spirit; then he was taken up from them into a cloud.

Concepts you have seen before:
Birth, life, death and resurrection of Jesus, Christian beliefs

Yr10 Religious Studies - Islam: Muslim Beliefs (Nature of Allah and Six Sunni Beliefs) Autumn 2

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Ar-Rahman (a)	The All-Merciful
As-Salam (n)	The Source of Peace
Al-'Alim (a)	The Knower of All (omniscient)
Al-Wadud (a)	The Loving One (omnibenevolent)
Al-Qadir (a)	The All Powerful (Omnipotent)
Al-Afu (a)	The forgiver
Al-Hakam (n)	The Judge
Al-adl (a)	The Just
Tawhid (n)	Belief in one God, oneness of God
Piety (n)	The act of showing devotion to God

Tier 2 Vocabulary	Definition
Belief (n)	Trust, faith or confidence in something/someone
Devotion (n)	Showing love, loyalty or enthusiasm to someone

Section B: Nature of Allah

Ar-Rahman	The All-Merciful	"My mercy embraces all things"
As-Salam	The Source of Peace	"I seek Allah's Forgiveness. O Allah, You are As-Salaam" - said at the end of Salah.
Al-'Alim	The Knower of All (omniscient)	"Not a leaf falls, but that He knows it"
Al-Wadud	The Loving One (omnibenevolent)	"Your Lord's bounty (love/kindness) is not restricted"
Al-Qadir	The All Powerful (Omnipotent)	"He has power over all things"
Al-Afu	The Forgiver	"Allah is all pardoning, ever-forgiving"
Al-Hakam	The Judge	"Is not Allah the best of Judges..."
Al-'Adl	The Just	"Allah commands justice"

Section C: Six Beliefs overview

These are six principles that a Sunni Muslim must believe to be accepted as a Muslim.

- Belief in Allah
- Belief in His angels
- Belief in His holy books
- Belief in His messengers
- Belief in the Day of Judgement
- Belief in Predestination

Based on the Qur'an "...believe in Allah, and His angels, and His books, and His messengers, and in the Last Day, and in the Decree of Allah."

Based on the Hadith of the Prophet Muhammad.

The Six Beliefs are important because:

Believing in Tawhid shows that Muslims believe God is the only one, which means he must be the creator of everything, and so must be all powerful

Believing in angels shows that God can communicate with humans using His special beings

Believing in the holy books of God demonstrates that God has sent books to show humans what to believe and how to live

How these impact Muslim communities today:

- The Six Beliefs mean that all people are created equal in the sight of God. No-one is superior to others (except because of their religious devotion/piety) therefore people should not judge others.
- These Beliefs mean that in Sunni Islam there are no priests or holy men with special authority, there can be no prophets after Prophet Muhammad so no human can have God's special authority.
- Salvation in Islam comes through believing in the Six Beliefs and living in the way set out by Islam.

Section D: The five roots in Shi'a Islam ('Usul ad-Din)

These are five roots of faith which ar faith.

- Belief in the oneness of God (Tawhid)
- Belief in Allah's justice (Adalat)
- Beliefs in Allah's prophets from Adam to Muhammad (Nubuwwah)
- Belief in the successors of Prophet Muhammad (Imamah) and belief that chosen descendants of the Prophet Muhammad were given special powers by Allah.
- Belief in the Day of Judgement

The 'Usul ad-Din are important because:

- They are the basis of Shi'a Islam; it is from the 'roots' that the religion grows.

- They are the five principles of faith and show a person what they must believe to be a Muslim.

- They come from the teachings of the Qur'an and the Twelve Imams, which means they are of utmost importance to Shi'a Muslims.

- Shi'a Muslims believe that unless they understand and believe the five roots, they will not be able to perform the acts of worship necessary to live the Muslim life.

- They are the beliefs that Muslims must hold if their practices are to be correct and to ensure that they go to heaven.

Concepts you have seen before:

Nature of God, teachings and actions of the prophets,

Who was Prophet Muhammad? (Yr8)

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Akhirah (n)	A belief in life after death
Jannah (n)	Heaven
Jahannam (n)	Hell
Barzakh (n)	Time between death and Last Day
Yawm ad-din (n)	Day of Judgement
Yawm al-Qiyyamah (n)	Day of resurrection
Book of Deeds (v)	Book that records everyone's deed
As-Sirat (n)	Bridge that you pass over to Jannah (Heaven)
Munkar (n)	An angel who asks the questions on the Day of Judgment
Nakir (n)	The second angel who asks the questions on the Day of Judgment
Niyyah (n)	Intentions
Tier 2 Vocabulary	**Definition**
Significant (a)	Important

Concepts you have seen before:

End of life, holy books, vicegerents, nature of God

Section B: Day of Judgement

Muslims believe that when they die their body stays in the grave until the Last Day.
The Qur'an teaches that Allah will bring this world to an end (Last Day). This will be after Isa (Jesus) has returned, the angel Israfil will sound the trumpet and the dead will be raised. We will stand before God on the plain of Arafat to be judged and either sent to heaven or hell.

All Muslims believe that heaven is paradise. It is described in the Qur'an as ***al-Jannah*** (the Garden):

> "Allah hath promised to Believers, men and women, gardens under which rivers flow, to dwell therein, and beautiful mansions in gardens of everlasting bliss. But the greatest bliss is the good pleasure of Allah." (Surah 9:72)

Hell is ***Jahannam*** and is portrayed in the Qur'an as a place of fire and torture. Most Muslims believe that this is a place for eternity, some Muslims believe that bad Muslims only stay to be punished for their sins or for as long as God wills and that there are seven classes/realms of hell.

Some differences in belief:
The belief that the soul stays in the grave until the Last Day is challenged by some Muslims as the Qur'an states that those who die on Hajj or fighting in holy war will go straight to heaven and so the afterlife is spiritual; meaning your souls are judged immediately after death and go to a spiritual heaven or hell.
Barzakh – period between death and body being raised. Some Muslim traditions say that after death, souls are visited by the angel of death and questioned about their faith. If they have true Muslim faith they are shown their place in heaven and look at it until the Last Day. If they are not, they are beaten with clubs until their judgement.
Other traditions say that the soul hovers over the grave until the Last Day.
Others say the soul simply sleeps so that Barzakh seems a moment between death and the Last Day.

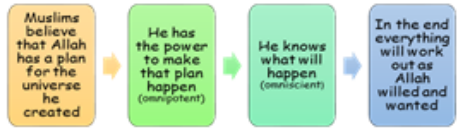
Section C: Why is life after death important in Islam?

Life after death is important because:
- The Qur'an teaches there is Akhirah
- Prophet Muhammad taught that there is Akhirah
- It is one of the Six fundamental Sunni Beliefs

This can affect the lives of Muslims because:
- Muslims will try to live good Muslim lives if they are to go to paradise and avoid hell;
- Living a good Muslim life means observing (practicing) the Five Pillars;
- Living a good Muslim life means following Shari'ah law—eat halal meat, follow Muslim dress laws, not drink alcohol or gamble.

Section D: Al-Qadr—The Decree of Allah

This means power, fate or predestination. This means that everything in the universe is following a divine plan.



Al-Qadr and the Day of Judgement

Muslims believe that at the final judgement, Allah will judge everyone on the basis of their beliefs and actions and reward or punish accordingly. People can only be punished for actions which they are responsible and could have done differently. This means that the concept of al-Qadr and Allah's final judgement contradict one another. This has led to two different Muslim explanations:

- Shi'a Muslims—Allah created humans with free will and as His vicegerents responsible for the world. It is therefore up to humans to decide what happens and take responsibility for their actions and so pay the price on the Last Day.
- Sunni Muslims – Allah knows what people will do before they do it, but they do it of their own free will.

What does al-Qadr mean for Muslims today?

- Although Muslims may face suffering, they do not need to worry as God is in control, so all will be well.
- All suffering must be accepted as it must be part of God's plan and will have a good outcome in the end.
- Although God's plans will happen, Muslims have to make their own choice and be responsible for their own actions and destiny.

Week Beginning	TASKS: Religious Studies – Autumn Term
04/09/2023	**Christian Beliefs 1:** Revise the following Tier 2 and 3 vocabulary by creating 10 flashcards of words and definitions: Monotheist / Trinity / Nicene Creed / Apostles Creed / Creatio ex nihilo / Stewardship / Fundamentalist / Liberal / Metaphor / Metaphorical. Once made, test yourself on the definitions. Put the ones you get right in the 'correct' pile. Retest yourself on the ones you got wrong first time.
18/09/2023	**Christian Beliefs 1:** Read Section B on the Nature of God. Answer the following questions. 1. What is the Trinity? Explain using the words because, but and so. 2. Summarise how the Trinity is used in belief and worship in 10 words.
02/10/2023	**Christian Beliefs 1:** Read the Section on 'Creation'. Write out what happened in Genesis 1 and Genesis 2-3. Draw images (dual code) to show what happened.
16/10/2023	**Christian Beliefs 2:** Revise the following Tier 2 and 3 vocabulary by creating 13 flashcards of words and definitions: Incarnation / Virgin Birth / Son / Gospel / Last Supper / Sanhedrin / Crucifixion / Resurrection / Ascension / Prophecy / Miracle / Treason / Blasphemy Once made, test yourself on the definitions. Put the ones you get right in the 'correct' pile. Retest yourself on the ones you got wrong first time.
06/11/2023	**Christian Beliefs 2:** Read Section B on 'Incarnation'. Summarise the information into a 10 bullet points in your own words. This should be roughly half a page in your homework books.
20/11/2023	**Muslim Beliefs 1:** Use Look/Cover/Write/Check/Correct to learn the following key words: Ar-Rahman / As-Salam / Al-'Alim / Al-Wadud / Al-Qadir / Al-Afu / Al-Hakam / Al-Adl / Tawhid / Piety Upgrade and correct your answers.
04/12/2023	**Muslim Beliefs 1:** Read Section D on the Five Roots of Shi'a Islam. Summarise the information into 10 bullet points.
18/12/2023	**Muslim Beliefs 2:** Revise the following Tier 2 and 3 vocabulary by creating 10 flashcards of words and definitions: Akhirah / Jannah / Jahannam / Barzakh / Yawm ad-din / Yawm al-Qiyyamah / Book of Deeds / As-Sirat / Munkar / Nakir / Niyyah Once made, test yourself on the definitions. Put the ones you get right in the 'correct' pile. Retest yourself on the ones you got wrong first time.

Year 10– History – Conflict and Tension: Stalemate and End of the First World War– Autumn Term 1

Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Western Front (n)	A line of trenches ranging from the sea to the Alps.
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.
Zeppelin (n)	Large bomber airship
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.
Tier 2 Vocabulary	**Definition**
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.
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.
Armistice (n)	an agreement made by opposing sides in a war to stop fighting for a certain time.

Section B: Key Concepts/Ideas/Questions

Verdun

Verdun was fought in February 1916 between the French and the Germans. This 6 month battle lead to the war of attrition. By July 700,000 men had lost their lives.

Somme

The **Battle of the Somme** took place in July 1916 and was fought by the English and the Germans. It began mainly to relieve pressure for the French at Verdun. Between July and November 1916, 1.25 million men loss their life. This is a controversial battle with **General Haig** being the leader for the British, causing public outrage.

Passchendaele.

The **Battle of Passchendaele** , July 1917, highlights key **technological changes in warfare** with artillery killing 10,000 Germans in one stroke. The weather condition at Passchendaele was very muddy which caused lots of problems during the battle.

The war on other fronts

World War One didn't just take place on the Western Front.

Gallipoli 1915

This saw a land invasion from the British, French and the ANZAC forces. This was lead by **Winston Churchill** and was seen as a huge failure for Britain as they were ambushed by the Turkish soldiers on the beaches.

Jutland in May 1916

This was the only battle at sea during World War One. The key players in this battle were Germany and Britain. During this battle **England lost 14 ships and 6000 sailors** whereas Germany lost **13 ships and 2500 sailors**.

Sinking of the RMS Lusitania

In early 1915, Germany introduced a policy of **unrestricted submarine warfare** in the Atlantic. On the 7th May 1915, the Lusitania was struck by a torpedo causing the death of 1,195 people, including 123 Americans .

Ending the war

By 1917, America had entered the war following Germany breaking its pledge to stop its U-boat campaign. By March 1918, Russia had surrendered to Germany but the German economic situation was unstainable, due to the continued **Naval Blockade**. An Armistice was signed between the Entente and Germany in November 1918.

Section C: Subject Specific

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

Concepts seen before: Offensive, treaty, Allies, war, troops.

Year 10– History – Democracy to Dictatorship: Germany and Growth of Democracy– Autumn Term 1

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.
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 2: Important Ideas

The Weimar Constitution

The President (Elected every 7 years and is the supreme commander of the army).

The Chancellor Needs majority support from the Reichstag.

Article 48: An emergency law the president can make which means they do not have to be checked by the Reichstag. This meant they could suspend the constitution.

Reichstag (Lower House)
Voted for by the German public using proportional representation. Has 421 members in 1919 and 647 in 1933. Elected every 4 years. Their role is to make laws.
Reichsrat (Upper House)
Each state sent representatives. 55 from 18 states in total. They cannot make laws but could approve them.

Voters: Everyone over the age of 20 can vote for the Reichstag and the President.

Ideas/ key words you have seen before: Kaiser Wilhelm II, Weltpolitik, Weimar Republic, abdicate, armistice, treaty, democracy, parliament, Ruhr, League of Nations and rebellion.

Section 3: Chronology

1871	German states **unify** to become Germany.
1881	Kaiser Wilhelm II becomes leader of Germany.
1915	500 women protest German Parliament for involvement in the First World War.
1918	**Mutiny (revolt)** in Kiel. German navy followed to follow orders.
9 Nov 1918	Kaiser Wilhelm II abdicates and secretly leaves Germany never to return.
11 Nov 1918	Germany surrender, ending the First World War.
6 Jan 1919	Left-wing Spartacists protest against the new Weimar Government.
Jan 1919	Left-Wing Ebert wins the election becoming the German President.
May 1919	Right-Wing Free Corps protest the 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.
Nov 1923	**Munich Putsch.** Hitler and the Nazi party rise against the government.
1924	German currency changes to **Rentenmark then Reichsmark**.
1925	Germany signs Locarno Pact with Britain, France, Belgium and Italy promising never to invade each other.
1925	Germany joins the League of Nations.

Week Beginning (DD/MM/YYYY)	TASKS Year 10—Conflict and Tension: Stalemate & Ending the War. —Democracy to Dictatorship: Germany and Growth of Democracy— Autumn Term
A/B: 04/09/23 C: 11/09/23	1) **Write out** the tier 2 and tier 3 key words from the **Conflict and Tension: Stalemate KO** in your knowledge book: You should have 13 words in total. 2) Now **write a summary** of each definition alongside each word. Your summary definition must be no more than 5 words per key word. 3) Now **check your summary** definitions. Have you included words such as 'the, is, a, of'? If so, an you replace them with more meaningful key words?
A/B: 18/09/23 C: 25/09/23	1) **Draw a table** for 'Look, Cover, Write, Check and Correct' as on your 'How do I self-quiz?' page. 2) In the 'Look, Cover' column, **write out key dates from each battle.** 3) **Write out, from memory**, what each battle is like, using examples for each. Then check them against the knowledge organiser. Put a 'tick' or a 'cross'. 4) If you got the answer wrong, **write in the correct answer** in the 'Correct' column.
A/B 02/10/23 C: 09/10/23	1) Read through **section B the key concepts** on your knowledge organiser. Write **a sub-title** for each into your book. 3) Under each subtitle, write your own summary of **what happened in each battle, focusing on the key developments**. 4) Check **your answers** against the knowledge organiser. Put a 'tick' or a 'cross'. If you got the answer wrong write the correct answer next to it. 5) **Use the knowledge organiser** to upgrade and improve your description of each stage. If you got all correct draw a picture of each stage of the formation.
A/B: 16/09/23 C: 23/10/23	1) Read through **section C, and pick 5 key dates.** 2) Write 5 dates one side of a flash card and what happened during that date on the other 3) Test yourself with each of the flash cards. Tick the flashcard if you get it right, a cross if you get it wrong.
A/B: 06/11/23 C: 13/11/23	1) **Write out** the key words in your knowledge book. You should have 16 words in total. 2) Now **write a summary** of each definition alongside each word. Your summary definition must be no more than 3 words per key word. 3) Now **check your summary** definitions. Have you included words such as 'the, is, a, of'? If so, an you replace them with more meaningful key words
A/B: 20/11/23 C: 27/11/23	1) Draw a table for 'Look, Cover, Write, Check and Correct' as on your 'How do I self-quiz?' page. 2) In the 'Look, Cover' column, **write out the dates from the timeline for Germany and the Growth of Democracy**. 3) Write out, from memory, what you think happened on those dates. Then check them against the timeline on the knowledge organiser. Put a 'tick' or a 'cross'. If you got the answer wrong, write in the correct answer in the 'Correct' column.
A/B: 04/12/23 C: 11/12/23	Read through **section C, and pick 5 key dates.** Write 5 dates one side of a flash card and what happened during that date on the other Test yourself with each of the flash cards. Tick the flashcard if you get it right, a cross if you get it wrong.
A/B: 18/12/23	1) Write out **"Weimar Constitution "** in a bubble in the centre of your section. 2) Off of the main bubble, write out important categories to organise your ideas. E.g. Article 48 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.

Year 10 - Geography—Weather and Climate —Autumn Term 1

Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Atmospheric Circulation	The circular movement of air in the atmosphere which creates cells and areas of high and low pressure.
Jet stream (n)	A fast flowing ribbon of air in the high atmosphere, affecting the UK's weather
Thermohaline Circulation (n)	The ocean conveyor belt—movement of warm and colder waters in the oceans.
Anticyclone (n)	A high pressure weather system which brings clear skies and dry conditions.
Depression (n)	A low pressure weather system which brings clouds, rain and windy conditions.
Air pressure (n)	The weight of the air above. Falling air = high pressure, rising air = low pressure.
Air mass (n)	A large body of air with similar characteristics.
Front (n)	The edge of an air mass. Often brings rainfall.
Tier 2 Vocabulary	**Definition**
Weather (n)	The day to day changes in temperature and precipitation in the atmosphere.
Climate (n)	The long term average weather conditions of a place, measured over 30 years.
Atmosphere (n)	The layer of gases surrounding the Earth.
Precipitation (n)	Rain, sleet, hail or snow falling from the atmosphere.
Altitude (n)	The height above sea level.
Maritime (n)	Refers to ocean voyage—in geography refers to air masses which are wet
Latitude (n)	Distance from the equator. Low latitude = close to the equator.

What affects the UKs weather?	
Factors which affect weather across the UK:	
Solar radiation is stronger at low latitude—meaning temperatures are warmer in the south than the north.	Ocean temperatures change more slowly than land—so coastal areas are warmed by oceans in the winter and cooled by the oceans in the summer.
Temperature decreases with altitude—so upland areas in the north of England and west of Scotland are cooler.	The gulf stream brings water from the Gulf of Mexico—meaning the prevailing weather in the UK comes from the south west and is wet!
The UK's weather is changeable due to it's location—it is located between varying air masses which bring different conditions.	The jet stream moves north and south over the UK. When the jet stream buckles, air from Arctic or Tropical areas replaces the vacated area, changing the weather.
Anticyclones and depressions in the UK	
Anticyclones are periods of high pressure. Falling air (clockwise in the UK) makes it difficult to form clouds which lead to clear skies and a lack of rainfall.	Depressions are low pressure systems. Rising air (anti-clockwise) leads to a collision of fronts which causes wind and rain.
In winter, anticyclones lead to cold and clear conditions. The lack of cloud cover means heat escapes into the atmosphere and causes frost and ice. The cold temperatures mean driving conditions can be dangerous and can often cause burst pipes. Colder temps. also mean higher heating bills!	The passage of a depression has different conditions: - A warm front catches cold air. This causes light rainfall. - The warm sector arrives. This is warmer (not always hot!) air with dry conditions. - The cold front catches the warm air. The front forces cold air underneath warm, leading to heavy rain.
In summer, clear skies lead to heatwaves. These can be dangerous to health (especially for vulnerable people) and can cause droughts— like in California.	Depressions can cause flooding, damage to roads and infrastructure and storm surges at the coast. In winter this can be more severe and can also bring snowfall.

Case Studies	
California Droughts	
California is a state on the west coast of the USA. It has an arid (dry) climate and relies on winter rains and snow for it's yearly water. From 2010 to 2015, California was in the grips of a drought. Prolonged high pressure has led to long term reduction of rainfall and high temperatures..	Social impacts: Residents were asked to reduce water. It was forbidden to wash cars and water lawns during the drought (although golf courses were allowed to!) Environmental impacts: Desertification has occurred on large areas of land which has been over cultivated for farming.
Economic impacts: California has the largest agricultural industry in the USA. The reduced water has put significant strain on the industry and $5 billion was lost in 2014. This has led to a rise in food prices of produced mainly produced in CA such as almonds.	Wildfires: The dry conditions led to widespread and large wildfires during the droughts. The town of Paradise was almost completely destroyed in 2014 by a wildfire. This has led to further challenges of migration and resources to help affected communities.
Hurricane Katrina	
Around the 23rd August 2005 a small tropical depression formed over the warm waters of the coast of Florida; within a week it had deepened to form a Category 5 hurricane that destroyed the Louisiana city of New Orleans. The storm hit large areas of the South Eastern USA where it killed over 1,700 people and caused in excess of $100 billion in damages. Hurricanes need ocean temperatures of over 27 degrees to form and are common at the end of the summer —but Katrina was exceptionally strong.	Over half a million US citizens became refugees in their own country and half of these said they were unlikely to return to New Orleans as a result of their trauma. It was the poor, working class population, often without insurance, who lost the most in the storm. Katrina rewrote the population distribution map of the region; the state population fell by over 8% and within Louisiana, areas outside New Orleans grew in numbers as the city's people fled. In the coastal state if Mississippi 109,000 were made homeless and over 230 died.
The US government was criticised widely for it's slow response to the disaster. Residents who did not evacuate were forced to evacuate to the Superdome which lacked supplies and facilities. The US army took days before responding.	Other revision: • Seneca learning • BBC Bitesize • BBC Weather • Liam Dutton—weatherman (twitter)

Year 10 - Geography—Changing Economic World—Case study of a NEE: Nigeria- Autumn Term 2

Section A: Key vocabulary

Tier 3	Definition
Development (n)	The progress of a country in terms of economic growth, technology and welfare.
Development gap (n)	The differences in levels of development between the world's richest and poorest countries.
Human Development Index (n)	HDI—Development measure using GDP per capita, life expectancy and education level. Given as an index figure.
Transnational Corporation (n)	TNC—A company that operates in more than one country. E.g. Google, Apple, Coca Cola.
Primary industry (n)	The extraction of raw materials from the earth, e.g. mining, farming
Secondary industry (n)	Manufacturing raw materials, e.g. factories
Tertiary industry (n)	The service sector, e.g. teacher, shop worker, call centre worker.
Quaternary industry (n)	The knowledge sector, including scientific research, development and IT.
Tier 2	**Definition**
Colonialism (n)	When a powerful country controls other countries and uses its resources to increase its own power and wealth.
Disparities (n)	Big differences
Limitations(n)	Restrictions, restraints or barriers.
Migration (n)	Movement (from one place to another)
Quality of life (n)	The degree to which a person is healthy, comfortable and able to enjoy life.

Section B: Key ideas

Causes of uneven development

Physical	Economic	Historical
Climate	Poor trade links	Colonialism
Poor farming land	Debt	Conflict
Landlocked	Lack of education	
Few raw materials	Economy based on primary products	
Lack of safe water	Corrupt government	
Natural hazards	Poor health and water quality	

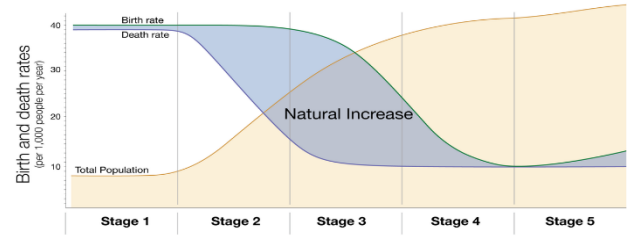
Strategies to reduce the development gap

Aid	A form of help given from one country to another. This could be in the form of money or goods.
Debt relief	Debt is money owed. Debt relief means that (usually a country) is let off paying part of or all of their debts.
Fair trade	When producers in LICs are given a better price for the goods they produce.
Industrial development	Introducing new industries to an area to improve the economy.
Intermediate technology	Simple, easily learned and maintained technology used in a range of economic activities serving local needs in LICs
Investment	Putting money into something for a profit.
Microfinance loans	Very small loans given to people in LICs to help start a small business
Tourism	A holiday or visit.

Section C: Key information

Demographic Transition Model

A model showing how populations change over time in terms of their birth rates, death rates and total population size



The Gambia: example of how tourism in an LIC can be used to reduce the development gap.

How does The Gambia attract tourists?	Beaches; a range of ecosystems; historical sites; all year roundwarm climate; culture; English speaking; 6 hour flight from UK.
How does tourism reduce the development gap?	Multiplier effect: tourist spending positively impacts The Gambia. Poverty rates declined, improvements in health (HIV/AIDS). Tourism contributes to 20% of GNI
Is tourism sustainable?	Health crises (Ebola, 2015 and Coronavirus 2020) impact tourism; corrupt leader Jammeh refused to step down in 2017 and British tourist told not to visit.

Concepts you have seen before: LIC (low income country), **HIC** (high income country), **NEE** (newly emerging economy), **development measures,** such as **adult literacy rate, birth rate, life expectancy.** See year 8 autumn knowledge organiser.

Week Beginning (DD/MM/YYYY)	TASKS Year 10—Weather and Climate —Changing Economic World — Autumn Term
A/B: 04/09/23 C: 11/09/23	1) **Write out** the tier 2 and tier 3 key words from the **Weather and Climate KO** in your knowledge book: You should have 15 words in total. 2) Now **write a summary** of each definition alongside each word. Your summary definition must be no more than 5 words per key word. 3) Now **check your summary** definitions. Have you included words such as 'the, is, a, of'? If so, an you replace them with more meaningful key words?
A/B: 18/09/23 C: 25/09/23	1) **Draw a table** for 'Look, Cover, Write, Check and Correct' as on your 'How do I self-quiz?' page. 2) In the 'Look, Cover' column, **write out factors which affect weather in the UK.** 3) **Write out, from memory**, what each factor is like, using examples for each. Then check them against the knowledge organiser. Put a 'tick' or a 'cross'. 4) If you got the answer wrong, **write in the correct answer** in the 'Correct' column.
A/B 02/10/23 C: 09/10/23	1) Read through **features of anticyclones and depressions** on your knowledge organiser. Write **a sub-title** for each into your book. 3) Under each subtitle, write a description of **the weather system, conditions and effects on the UK**. 4) Check **your answers** against the knowledge organiser. Put a 'tick' or a 'cross'. If you got the answer wrong write the correct answer next to it. 5) **Use the knowledge organiser** to upgrade and improve your description of each stage. If you got all correct draw a picture of each stage of the formation.
A/B: 16/09/23 C: 23/10/23	1) Read through the information on the California Droughts. 2) Write a summary of the impacts droughts onto 5 different flash cards. 3) Test yourself with each of the flash cards. Tick the flashcard if you get it right, a cross if you get it wrong. 4) Repeat steps 1 – 3 for Hurricane Katrina.
A/B: 06/11/23 C: 13/11/23	1) **Write out** the tier 2 and tier 3 key words from the **Changing Economic world KO** in your knowledge book: You should have 13 words in total. 2) Now **write a summary** of each definition alongside each word. Your summary definition must be no more than 5 words per key word. 3) Now **check your summary** definitions. Have you included words such as 'the, is, a, of'? If so, an you replace them with more meaningful key words?
A/B: 20/11/23 C: 27/11/23	1) **Write out** 2 causes from each column in the factors affecting development section of your KO (Physical, economic, historical). 2) For each factor, **write a summary** of how this would affect the development of a country. # 3) Now **check your summaries**. Have you included words such as 'the, is, a, of'? If so, an you replace them with more meaningful key words?
A/B: 04/12/23 C: 11/12/23	1) On one side of the flashcards **Strategies used to reduce the development gap**. You should have 8 flashcards in total. 2) On the other side, **write out how these reduce the gap between more and less developed countries**. 3) Now put them in a pile. For each card, **test if you can remember**. Tick the flashcard if you get it right, a cross if you get it 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.
A/B: 18/12/23	1) In the centre of your knowledge organiser page, add a mind map title 'How does the Gambia use tourism to develop?' 2) Around your mind map, add strategies used to help. 3) From each strategy, explain how and why this helps the country to develop. 4) Check your answers against your KO. Add any strategies you did not know and improve any answers you can think of using 'so'.

Year 10 – French – mes passe-temps! – Autumn term 1

Section A: Key vocabulary

Tier 1 &3 Vocabulary	Definition

Le sport — *Sport*

Je fais … — *I do/go …*
- du canoë-kayak — *canoeing/kayaking*
- du footing — *jogging*
- du hockey sur glace — *ice hockey*
- du patinage — *skating*
- du roller — *roller skating*
- du vélo/cyclisme — *cycling*
- de la boxe — *boxing*
- de la danse — *dancing*
- de la musculation — *weight-lifting*
- de la natation — *swimming*
- de la planche à voile — *wind-surfing*
- de la voile — *sailing*
- de l'escalade — *climbing*
- de l'équitation — *horse-riding*
- des randonnées — *for walks*

Je trouve ça … — *I think it's …*
- bien/cool — *good/cool*
- génial/super — *great/super*
- passionnant — *exciting*
- barbant/ennuyeux — *boring*
- nul/stupide — *rubbish/stupid*

Parler de sport — *Talking about sport*

- Je fais de l'escrime/du footing depuis (quatre ans). — *I've been doing fencing/jogging for (four years).*
- Je pratique le trampoline depuis (trois mois). — *I've been trampolining for (three months).*
- On joue au basket ensemble depuis (trois ans). — *We've been playing basketball together for (three years).*
- J'aime beaucoup ça car c'est … — *I like it a lot because it's …*
  - élégant/facile — *elegant/easy*
  - ludique/sympa — *fun/ nice*
  - rapide/beau — *fast/pleasant*
- C'est un sport qui est bon pour … — *It's a sport that is good for …*
  - le corps/le cœur — *the body/the heart*
  - le mental/la concentration — *the mind/concentration*

Section B: Core text

Je passe beaucoup de temps en ligne.	1	I spend alot of time on-line.
Le soir, je mets mes photos sur Instagram.	2	The evening, I put my photos on Instagram.
En plus, il est facile de faire des recherches pour ses devoirs.	3	In addition, it is easy to do some research for one's homework.
J'aime aussi lire et j'apprécie les **romans fantastiques** mais	4	**I'like also** reading and I'appreciate the **novels fantasy** but
je ne lis jamais les romans policiers parce qu'ils sont moins intéressants.	5	**I not read never** the novels detective be-cause they are less interesting.
Je joue au basket avec mes amis une fois par semaine.	6	I play at basketball with my friends one time per week.
Je joue depuis trois ans.	7	**I play since** three years.
Quelquefois je fais du jogging	8	Sometimes I do some jogging
mais je préfère les sports d'équipe car ça booste le moral.	9	but I prefer the sports of team because that boosts the morale.
Vendredi soir, je suis sortie avec ma meilleure amie.	10	Friday evening, I am wentout with my best friend.
On est allées à un concert	11	We is went to a concert
où j'ai pris beaucoup de photos.	12	Where I've taken lots of photos.
C'était vraiment génial.	13	It'was really great.
Ce weekend je vais aller au cinema	14	This weekend I am going to go tothe cinema
pour regarder **un film d'horreur**.	15	inorder to watch **a film of horror**.
J'adore **les films effrayants**.	16	I'love **the films scary**.

Section C: Tier 3 Vocabulary and Structures

G The imperfect tense — Page 216

The imperfect tense is used to describe what things **were like** in the past or what **used to** happen.

*Avant, **je lisais** des livres, maintenant je lis sur mon écran.*

*Dans le passé, **nous lisions** les journaux, maintenant nous lisons la presse sur ordi.*

How does it work?

- To form the imperfect tense, take the *nous* form of the present tense verb and remove the *-ons* (e.g. *nous dans~~ons~~* → *dans-*). This is the imperfect 'stem'. Then add the imperfect endings.

The imperfect endings are:

*je dans**ais***	*nous dans**ions***
*tu dans**ais***	*vous dans**iez***
*il/elle/on dans**ait***	*ils/elles dans**aient***

The only exception is the most common verb of all: *être*.
The imperfect stem for *être* is ***ét-***:
*j'**étais*** (I was).

- Look out for these common uses of the imperfect:

c'était (it was): *C'était top!* It was brilliant!
il y avait (there was/were): *Il y avait un grand défilé.* There was a big parade.
Il faisait (it was, to describe the weather): *Il faisait beau.* The weather was good.

Concepts seen before: adjective endings, negative constructions. We have also met DOPs. Different tenses, such as past, present and future

Year 10 – French – jours ordinaires, jours de fête!– Autumn Term 2

Section A: Key vocabulary

Tier 1 &3 Vocabulary	Definition
Les fêtes	**Festivals**
Noël	Christmas
la veille de Noël	Christmas Eve
Pâques	Easter
Divali	Diwali
Hanoukka	Hanukkah
Aïd-el-Fitr	Eid al-Fitr
le 6 janvier/la fête des Rois	Epiphany
le premier avril	April Fool's Day
la Chandeleur	Candlemas
le Nouvel An	New Year
la Saint-Sylvestre	New Year's Eve
la Saint-Valentin	Valentine's Day
la fête des Mères	Mother's Day
le 14 juillet/la fête nationale française.	Bastille Day, 14 July
on boit du champagne	we drink champagne
on décore le sapin de Noël	we decorate the Christmas tree
on s'offre des cadeaux	we give each other presents
on ouvre les cadeaux	we open the presents
on chante des chants traditionnels	we sing traditional songs
on allume des bougies	we light candles
on cherche des œufs dans le jardin	we look for eggs in the garden
On prépare/mange ...	We prepare/eat ...
de la dinde rôtie	roast turkey
des légumes	vegetables
une bûche de Noël au chocolat	a chocolate Yule log
des crêpes	crepes
une galette des Rois	tart eaten for Epiphany
toutes sortes de bonnes choses	all sorts of good things
des choses sucrées	sweet things

Section B: Core text

Les jours d'école je dois me lever tôt mais	1	**On school days** I have to get up early but
je ne prends jamais de petit-dejeuner.	2	**I never have** any breakfast.
Je quitte la maison **à sept heures et demie.**	3	I leave the house at **half past seven.**
Samedi dernier je suis allé au magasin de vêtements pour acheter **un nouveau pantalon.**	4	Last Saturday I went to the clothes shop to buy **some new trousers.**
J'ai essayé **un pantalon de marque**	5	I tried on **a pair of designer trousers**
mais il était **trop petit.**	6	but they were **too small.**
Finalement j'ai acheté un pantalon vert foncé qui était **parfait.**	7	Finally I bought a pair of dark green trousers which were **perfect.**
Ma fête préférée est **Noël** car	8	My favourite festival is **Christmas** because
j'adore **décorer le sapin de Noël** avec ma mère et	9	I love **decorating the Christmas tree** with my Mum and
je reçois toujours beaucoup de cadeaux.	10	**I always receive** lots of presents.
Cependant je n'aime pas **le repas de Noël.**	11	However, I don't like **the Christmas dinner.**
Pour célébrer mon prochain anniversaire ma soeur va préparer **un énorme gâteau au chocolat.**	12	To celebrate my next birthday my sister is going to make **an enormous chocolate cake.**
Moi, je vais aller au supermarché où	13	Me, I am going to go to the supermarket where
je vais acheter du poulet épicé.	14	I am going to buy spicy chicken.
On va le manger avec du riz.	15	**We are going to eat it** with rice.
Ce sera vraiment savoureux!	16	It will be really tasty!

Les vêtements	**Clothes**
Je porte …	I wear/am wearing …
un blouson/un chapeau	a jacket/a hat
un costume	a suit
un jean (moulant)	(a pair of) (skinny) jeans
un manteau/un pantalon	a coat/(a pair of) trousers
un sac à main/un short	a handbag/(a pair of) shorts
un sweat à capuche	a hoody
une casquette	a cap
une chemise/une écharpe	a shirt/a scarf
une mini-jupe/une montre	a mini-skirt/a watch
une robe/une veste	a dress/a jacket
des baskets (de marque)	(designer) trainers
en laine/en cuir	woollen/leather
rayé(e)(s)	striped

Section C: Tier 3 Vocabulary and Structures

Saying 'some'

To say 'some' in French, you use **du, de la, de l'** or **des**

masculine singular noun
du pain (some bread)

feminine singular noun
de la glace (some ice cream)

in front of a vowel or h
de l'eau (some water)

plural noun
des poires (some pears)

In English, we don't always use the word 'some', but in French you have to use it.
Pour le diner, je prends **du** poulet et **des** frites.
For dinner, I have (some) chicken and (some) chips.

The perfect and imperfect tenses.

You use the **perfect tense** to describe completed actions in the past.

- Some verbs have irregular past participles:
  avoir – j'ai **eu** (I had)
  boire – j'ai **bu** (I drank)
  prendre – j'ai **pris** (I took)
  recevoir – j'ai **reçu** (I received)
- Some verbs take être in the perfect tense:
  aller – je **suis** allé (e) (I went)
  naître – je **suis** né (e) (I was born)

You use the **imperfect tense** to say 'was' or 'were'.
The imperfect of c'est is **c'était** (it was)
The imperfect of il y a is **il y avait** (there was/were).

Concepts seen before: adjective endings, negative constructions. Different tenses, such as past, present and future

Week Beginning	TASKS **Year 10 – French – Autumn Term**
04/09/2023	**Autumn Term 1:** Look, cover, write , check the vocabulary from section A, starting from “le sport” and going up to “rubbish / stupid”. Show evidence of this in your homework book. Be ready to be tested on this in class.
18/09/2023	**Autumn Term 1:** Copy out the grammar boxes in section C called “the imperfect tense” and then translate the following sentences: 1. **She used to dance** 2. **I used to play** 3. **I used to read**. 4. **it was great**. 5. I used to love trampolining . (**All words you need are on the KO**)
02/10/2023	**Autumn Term 1:** Look, cover, write , check the vocabulary from section A, starting from “parler de sport” and going up to “concentration”. Show evidence of this in your homework book. Be ready to be tested on this in class.
16/10/2023	**Autumn Term 1:** Re-write the core text in section B lines 1-16, changing at least one part per line e.g line 1 “je passe beaucoup de temps en ligne” could be changed to “je ne passe pas beaucoup de temps en ligne.”
06/11/2023	**Autumn Term 2:** Look, cover, write , check the vocabulary from section A, starting from “les fêtes ” and going up to “sweet things”. Show evidence of this in your homework book. Be ready to be tested on this in class.
20/11/2023	**Autumn Term 2:** Copy out the grammar box in section C called “saying “some”” and then translate the following sentences: 1. I tried some cake 2. I am going to eat some chicken. 3. We are going to eat some rice. 4. We light some candles some Rice. 5. I tried some pancakes. (**All words you need are on the KO**)
04/12/2023	**Autumn Term 2:** Look, cover, write , check the vocabulary from section B, starting from “Les vêtements” and going up to “striped”. Show evidence of this in your homework book. Be ready to be tested on this in class.
18/12/2023	**Autumn Term 2:** Re-write the core text in section B lines 1-13, changing at least one part per line e.g line 2 “je quitte la maison à sept heures et demie” could be changed to “je quitte la maison à **huit** heures et demie.”

Year 10 – German – Freizeit – Autumn Term 1

Section A: Key vocabulary

Tier 1 &3 Vocabulary	Definition
die Freizeit	***leisure time, free time***
Briefmarken sammeln	*to collect stamps*
Plüschtiere sammeln	*to collect soft toys*
Sport treiben	*to do sport*
Schach spielen	*to play chess*
Karten spielen	*to play cards*
am Computer spielen	*to play on the computer*
im Internet surfen	*to surf on the internet*
mit Freunden reden	*to chat with friends*
Freunde treffen	*to meet friends*
ins Kino gehen	*to go to the cinema*
in die Stadt gehen	*to go into town*
Musik machen	*to make music*
Radio hören	*to listen to the radio*
Bücher lesen	*to read books*
faulenzen	*to chill, laze about*
nichts tun	*to do nothing*
Ich turne seit (fünf Jahren).	*I have been doing gymnastics for (5 years)*
Ich habe schon (Golf) ausprobiert.	*I have already tried (golf).*
Ich trainiere mit Freunden im Verein.	*I train with friends at the club*
Instrumente	***Instruments***
die Blockflöte	*recorder*
die Flöte	*flute*
die Geige	*violin*
die Klarinette	*clarinet*
die Trompete	*trumpet*
das Klavier	*piano*
das Saxofon	*saxophone*
das Schlagzeug	*drums*
Ich spiele kein Instrument.	*I don't play an instrument.*
Bücher	***Books***
gedruckt	*printed*
das gedruckte Buch	*printed book*
der Fantasyroman(e)	*fantasy novel*
die Horrorgeschichte(n)	*horror story*
die Komödie(n)	*comedy*
der Krimi(s)	*detective / crime story*
die Liebesgeschichte(n)	*love story*
die Zeitung(en)	*newspaper*
die Zeitschrift(en), das Magazin(e)	*magazine*
die Illustrierte(n)	*(glossy) magazine*
das E-Book(s)	*e-book*
der Akku	*rechargeable battery*
der Bildschirm	*screen*

Section B: Core text

In meiner Freizeit gehe ich oft einkaufen.	1	In my freetime go I often shopping
Ich gehe auch gern schwimmen mit meinen Freunden,	2	I go also happily swimming with my friends
und ich lese sehr gern, am liebsten Fantasyromane.	3	And I read very happily, at mosthappily fantasynovels
Wenn ich Zeit habe, koche ich, weil das mir Spaß macht.	4	If I time have, cook I, because that me fun makes.
Musik ist mir sehr wichtig.	5	Musik is to-me very important
Ich höre jeden Tag Musik auf meinem Handy, besonders Rockmusik.	6	I hear every day music on my phone, especially rockmusic.
Ich spiele kein Instrument, aber ich möchte Klavier lernen.	7	I play no instrument, but I wouldlike piano tolearn.
Vor zehn Jahren habe ich Geige gespielt.	8	Before 10 years have I violin played.
Gestern habe ich einen Aktionfilm gesehen.	9	Yesterday have I an actionfilm seen.
Die Sondereffekte waren ausgezeichnet.	10	The specialeffects were outstanding.
Es scheint mir wichtig, die Nachrichten regelmäßig zu sehen	11	It seems to-me important, the news regularly to see
obwohl ich sie langweilig finde.	12	Although I them boring find.
Ich bin nicht sehr sportlich	13	I am not very sporty
Am Wochenende werde ich Tischtennis mit meinem Bruder spielen.	14	Atthe weekend will I tabletennis with my brother play.
Er kann super spielen und er wird bestimmt gewinnen.	15	He can super play and he will definitely win.
Ich würde lieber Karten spielen!	16	I would play morehappily cards!

Oft benutzte Wörter	***High-frequency words***
aufregend	*exciting, thrilling*
ausgezeichnet	*excellent*
blöd	*stupid, silly*
eindrucksvoll	*impressive*
fantastisch	*fantastic*
gewalttätig	*violent*
großartig	*great*
gruselig	*creepy, scary*
lang	*long*
langweilig	*boring*
lustig	*funny*
romantisch	*romantic*
schrecklich	*terrible*
spannend	*exciting, suspenseful*
unterhaltsam	*entertaining*

Section C: Tier 3 vocabulary and structures

Nouns and articles

All nouns have a gender (masculine, feminine and neuter) and a number (singular, plural). These affect the form of the **article** (der, ein, etc).

	masc	fem	neut	pl
definite article: the				
nominative	der	die	das	die
accusative	den	die	das	die
indefinite article: a, an				
nominative	ein	eine	ein	meine
accusative	**einen**	eine	ein	meinen

The **possessive adjectives** (*mein* – my, *dein* – your) follow the same pattern as ein.

***möchten* with the infintive**

Use *möchte* with an infinitive to say what you **wowuld like** to do. The infinitive goes to the end of the clause. ***Mögen*** means 'like', whereas ***möchten*** means 'would like':
Ich ***mag*** Musik = I **like** music.
Ich ***möchte*** Filme sehen = I **would like** to watch films

form of *möchte*:		**+ infinitive:**
ich möchte	*wir möchten*	*eislaufen*
du möchtest	*ihr möchtet*	*(in den Bergen) wandern*
er/sie möchte	*Sie/sie möchten*	*(an den Felsen) klettern*

Add ***nicht*** to say what you **would not like** to do:
Ich **möchte nicht** eislaufen.

Negatives

Develop your sentences by using negatives. Add ***nicht*** (not) or ***nie*** (never).
Das ist **nicht** unterhaltsam - That is **not** entertaining
To say 'not a / not any / no' use ***kein.***

Ich habe **keinen** Film heruntergeladen.	I have **not** downloaded **a** film.
Ich sehe **keine** Dokumntationen.	I don't wantch **any** documentaries.

Concepts seen before: past, present and future tenses. Connectives such as "und" and "oder". Word order rules

Year 10 – German – Beziehungen – Autumn Term 2

Section A: Key vocabulary

Tier 1 &3 Vocabulary	Definition
Charaktereigenschaften	***Personal characteristics***
abenteuerlustig	*adventurous*
dynamisch	*dynamic*
fleißig	*hard-working*
frech	*cheeky*
freundlich	*friendly*
wkreativ	*creative*
langweilig	*boring*
locker	*laid-back*
lustig	*funny*
modisch	*fashionable*
nett	*nice*
originell	*original*
selbstbewusst	*self-confident*
sportlich	*sporty*
Wie ist ein guter Freund?	***What makes a good friend?***
hat immer Zeit für mich	*always has time for me*
ist sympathisch	*is nice*
unterstützt mich immer	*always supports me*
muss hilfsbereit / ehrlich sein	*must be helpful / honest*
darf nie eifersüchtig sein	*may never be jealous*
hat die gleichen Interessen	*has the same interests*
Beziehungen	***Relationships***
Ich komme (nicht so) gut mit … aus.	*I (don't) get on (so) well with …*
Ich verstehe mich (nicht so) gut mit …	*I (don't) get on (so) well with …*
Ich kann ihn/sie nicht leiden!	*I can't stand him/her!*
Er/Sie geht mir auf die Nerven.	*He/She gets on my nerves.*
ehrlich	*honest*
ärgerlich	*annoying*
(zu) vorsichtig	*(too) careful*
nicht hilfsbereit	*not helpful*
weil er/sie (viel / keine) Geduld hat	*because he/she has (a lot of / no) patience*
weil er/sie mich unterstützt	*because he/she supports me*
Ich streite mich mit …	*I argue with …*
Wir streiten uns um …	*We argue about …*
die Kleidung	*clothes*
das Handy	*the mobile phone*
Geld	*money*
Wir haben uns um … gestritten.	*We argued about …*
Damals und heute	**Then and now**
Als ich ein Kind war, …	*When I was a child …*
Mit (zehn) Jahren …	*At age (ten) …*
Früher musste ich immer zu Hause helfen	*Before I always had to help at home*
Heutzutage muss ich viel weniger machen	*Nowadays I have to do a lot less.*
Im Moment ist es besser.	*At the moment it's better.*
Ich darf mit meinen Freunden …	*I'm allowed to … with my friends.*
Ich habe keine Zeit mehr für …	*I no longer have any time for …*

Section B: Core text

Ein guter Freund ist sympatisch	1	A good friend is kind
und hat immer Zeit für mich.	2	and has always time for me.
Ich kenne meine beste Freundin seit zehn Jahren.	3	I know my best friend since ten years.
Wir lachen oft zusammen denn wir haben die gleiche Interessen.	4	We laugh often together because we have the same interests.
Ich komme normalerweise gut mit meiner Familie aus.	5	I come normally good with my family out.
Ich habe eine tolle Beziehung mit meinem Vater, weil er mich immer ünterstützt.	6	I have a great relationship with my father, because he me always supports.
Meine Schwester ist manchmal frech und geht mir auf die Nerven	7	She is sometimes cheeky and goes me on the nerves.
Als Kind war ich sehr ruhig.	8	As child was I very quiet.
Ich dürfte nie mit Freunden einkaufen gehen	9	I wasn'tallowed never with friends shopping togo
aber ich konnte am Wochenende schwimmen gehen	10	but I could atthe weekend swimming togo
Ich werde bestimmt heiraten, weil es sehr romantisch ist.	11	I will defifnitly marry, because it so romantic is
Meine Hochzeit findet auf einem Insel statt,	12	My wedding takes on an island place
obwohl das eine Geldverschendung ist.	13	although that a wasteofmoney is

Section C: Tier 3 vocabulary and structures

Possessive adjectives

Mein (my) *dein* (your), *sein,* (his), *ihr* (her), *unser* (our), *euer* (your, informal plural), *ihr* (their) and *Ihr* (your, formal singular and plural) are possessive adjectives and follow the same pattern as the indefinite article ein.

	nominative	accusative
masc.	*mein (beste**r**) Freund*	*mein**en** (beste**n**) Freund*
fem.	*mein**e** (beste) Freundin*	*mein**e** (beste) Freundin*
neut.	*mein (große**s**) Hobby*	*mein (große**s**) Hobby*
pl.	*mein**e** (beste**n**) Freunde*	*mein**e** (beste**n**) Freunde*

Mein bester Freund heiβt Tom. My best friend is called Tom.
Sie verbringt *ihre Freizeit* im Sportzentrum
She spends her free time at the sports centre.
Wir sehen *unsere Freunde* nicht so oft.
We don't see our friends that often.

Separable verbs – present tense

Separable verbs are made up of a prefix plus a verb. In the present tense, the prefix separates from its verb and goes to the end of the clause.
Man **legt** den Termin **fest.** – You set the date.
Man **lädt** Gäste **ein.** – You invite guests.

Separable verbs – perfect tense

When using separable verbs in the perfect tense, place **ge** between the prefix and the rest of the past participle, at the end of the clause:
Meine Mutter hat eine leckere Torte aus**ge**wählt.
Wir haben ein schönes Kleid aus**ge**sucht.

Separable verbs – future tense

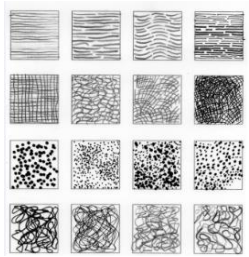
Separable verbs act like other verbs in the future, and appear at the end of the clause in the infinitive form:
Ich **werde** das Essen **vorbereiten.**

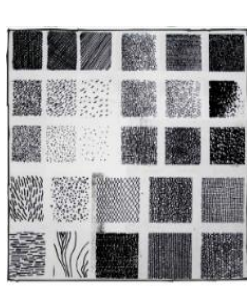
Concepts seen before: past, present and future tenses. Connectives such as "und" and "oder". Word order rules

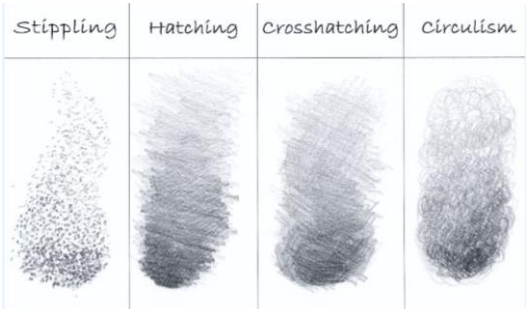
Week Beginning	TASKS **Year 10 – German –Autumn Term**
04/09/2023	**Autumn Term 1:** Look, cover, write , check the vocabulary from section A, starting from “die Freizeit” and going up to “I train with friends at the sports club”. Show evidence of this in your homework book. Be ready to be tested on this in class.
18/09/2023	**Autumn Term 1:** Copy out the grammar box in section C called “nouns and articles” and then translate the following sentences: 1. **a** flute 2. **a** piano 3. **a** rechargeable battery. 4. **My** fantasy book. 5.I play **an** instrument. (**All words you need are on the KO**)
02/10/2023	**Autumn Term 1:** Look, cover, write , check the vocabulary from section A, starting from “Instrumente” and going up to “screen”. Show evidence of this in your homework book. Be ready to be tested on this in class.
16/10/2023	**Autumn Term 1:** Re-write the core text in section B lines 1-16, changing at least one part per line e.g line 1 “in meiner Freizeit gehe ich **oft** schwimmen” could be changed to “in meiner Freizeit gehe ich **nie** schwimmen”
06/11/2023	**Autumn Term 2:** Look, cover, write , check the vocabulary from section A, starting from “Charaktereigenschaften” and going up to “has the same interests”. Show evidence of this in your homework book. Be ready to be tested on this in class.
20/11/2023	**Autumn Term 2:** Copy out the green grammar box in section C called “possessive adjectives” and then translate the following sentences: 1. my best friend Tom is cheeky. 2. My best friend, Sarah is laid-back . 3. My hobby is swimming. 4 my sister is lustig. 5. my best friend must be honest. (**All words you need are on the KO**)
04/12/2023	**Autumn Term 2:** Look, cover, write , check the vocabulary from section A, starting from “Beziehungen” and going up to “I no longer have any time for”. Show evidence of this in your homework book. Be ready to be tested on this in class.
18/12/2023	**Autumn Term 2:** Re-write the core text in section B lines 1-13, changing at least one part per line e.g line 1 “Ein guter Freund ist sympatisch” could be changed to “Ein guter Freund ist abenteuerlustig.”

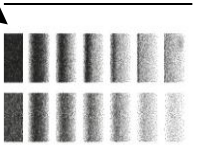
Year 10 GCSE Art – Pencil and Pencil crayon

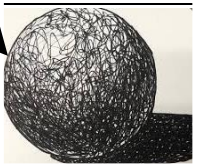
Section A: key vocabulary	
Vocab	**Definition**
Tier 3 Vocabulary	
Hatching	This is where you draw lines that cross right through each other. They can go in any direction.
Crosshatching	This is where you draw lines that cross right through each other. They can go in any direction.
Circulism	This shading technique consists of many overlapping circular shapes. I use it frequently to shade realistic skin. It works well for conveying soft or fuzzy surfaces. The more you overlap the circles, the smoother the texture.
Stippling	Marks made with the tip of the pencil. The closer the dots the stronger the value
Layering	Placing one layer of colour over another
Burnishing	Burnishing involves layering and blending until no paper tooth shows through the coloured pencil layers. To avoid contamination of lighter colours, the artist paints lighter areas first, using minimal pressure to layer lighter colours on top of darker colours.
Pressure shading	Applying a range of pressure on the pencil or crayon to increase or decrease the strength of colour
Scumbling	Scumbling is a shading technique achieved by overlapping lots of little circles. The texture created with this technique is determined by the size of the circles, and the pressure used on the pencil. Scumbling can also be created with more scribbly, spidery type lines, rather than neat little circles.
Watercolour	Refers both to the medium and works of art made using the medium of watercolour – a water soluble paint with transparent properties

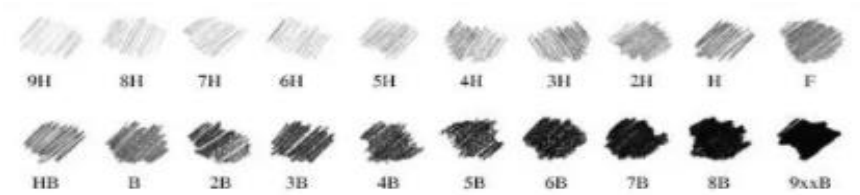












Crayon: https://tinyurl.com/4pmxw5bk

Pencil: https://tinyurl.com/4wzmxwvn

Week Beginning (DD/MM/YYYY)	TASKS: Year 10 – Art and Design – working with pencil and pencil crayon
04/09/2023	Practise creating tonal scales using pencil; going from light to dark and dark to light.
18/09/2023	Create a list of artists that work with Pencil.
02/10/2023	Research one artist of your choice who works with pencil. Create a document with examples of the artists work and information about the artist.
16/10/2023	Practise blending two colours together using Pencil Crayon. Think about complimentary colours.
06/11/2023	Create a list of Artists that work with Pencil Crayon.
20/11/2023	Research one artist of your choice who works with Pencil Crayon. Create a document with examples of the artists work and information about the artist.
04/12/2023	Research and create a list of as many different Watercolour, painting techniques .
18/12/2023	Create a list of Artists that work with Watercolour and research an artist of your choice who works with Watercolour Paints. Create a document with examples of the artists work and information about the artist.

Year 10 – Dance – Shadows – Term 1

Choreographer: Christopher Bruce

Premiere Date: 2014

Company: Phoenix Dance Theatre

Dance Style: Stemming from his own training, Christopher Bruce's signature movement style is grounded in **modern dance techniques** with a **combination of classical and contemporary** dance language termed **"neo-classical".**

Themes: A **politically aware** work which looks at a **family coming to terms with deprivation and poverty**. Bruce describes this piece as "a darker work, with a sort-of narrative", allowing audience interpretation.

Structure: Semi-narrative. Solo, duet, trio, quartet.

Stimulus: Arvo Part's Fratres for violin and piano was the starting point for the work.

Choreographic approach: Bruce **does not prepare movement** before entering the studio, preferring to wait and work with the dancers so that he can be influenced by them.

Lighting description

The lighting was designed by John B Read, who uses the lighting to create an intimate space on stage depicting the feeling of 'a room', as well as to indicate what is waiting for the family outside that they are so reluctant to step into.

Costume:

The costumes are clearly gendered, depicting the era of the 1930s -1940s: simple shirts, skirts, trousers and dresses as well as large overcoats worn at the very end of the piece. Colours are muted and worn down – again symbolising deprivation and poverty.
There are no costume changes in the piece.
Towards the end of the piece the dancers/family prepare to leave the house by putting on shoes and coats. It is clear that these jackets are oversized for the son/ daughter, again referencing to the fact that the family are living in poverty.

Set Design

Description: Shadows uses a minimal set within a black-box (a simple set with bare walls and floor) theatre space. The piece includes a table, a bench, two stools, a coat stand and suitcases – all worn-looking, and somewhat drab: confirming the notion of hardship within the family. The space created allows the audience to enter the heart of the home, the kitchen. This is where the narrative of the choreography and the relationships between the family members unfolds.

Contribution: The minimal set means that the **audiences focus** is on the action content.

The use of props including a table and chair help to set the **location** and help us understand we are in a family home.

Accompaniment/ Aural Setting

The accompaniment is Arvo Part's Fratres (composed in 1977).

The version for violin and piano pre-recorded for use in performance.

The music has no break in tempo, following Part's signature style of composition – using broken chords and diatonic scales.

The music is in a minor key and is integral to the dark, solemn atmosphere of the piece.

There is a clear correlation between the movement vocabulary and accompaniment in terms of speed and dynamics, often used to introduce each character and their emotional response to their environment.

Week Beginning	TASKS Year:10 Subject: Dance Topic: Shadows Term: 1
04/09/2023	When was the it first performed? How many dancers perform? What is the starting point (stimulus)? What are the key themes?
18/09/2023	Draw and annotate the costumes for the Father, Mother, Daughter and Son
02/10/2023	Describe the lighting and set design How do these help to communicate the dance idea?
16/10/2023	Mind-map the aural setting How does the aural setting help to communicate the choreographic intent?
06/11/2023	Create a wordle for shadows using the key information
20/11/2023	Quizlet Shadows revision
04/12/2023	Create a revision cards for Shadows
18/12/2023	Revise all Shadows content for a test

Year 10 – Music – Autumn Term 1

Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Dynamics (n)	The volume of the music – pp-p-mp-mf-f-ff (T3)
Rhythm (n)	The pattern of sounds using different musical note lengths
Pitch (n)	How low or high a sound or instrument/melody is
Structure (n)	The sections of music which make up the form and order of the music
Melody (n)	The main melodic tune in the music
Instrumentation (n)	The different instruments playing in the music (Brass, String, Woodwind, Percussion)
Timbre/sonority (n)	The sound characteristics of the music
Texture (n)	How many layers in the music – monophonic, homophonic, polyphonic
Harmony (n)	The different musical notes which are played simultaneously to create harmony

Section B: Important Ideas / Concepts/ Questions

The Elements of Music

Learn and remember with the help of

Dr TT Smith!

D DYNAMICS

R RHYTHM

T TIMBRE

T TEMPO

S STRUCTURE
SONORITY
SILENCE

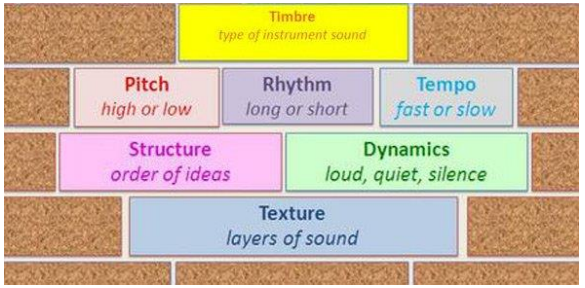
M MELODY

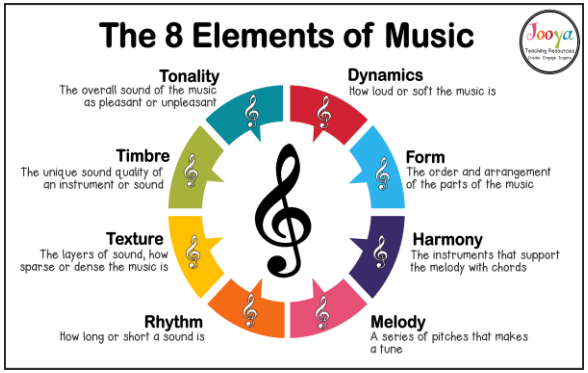
I INSTRUMENTATION

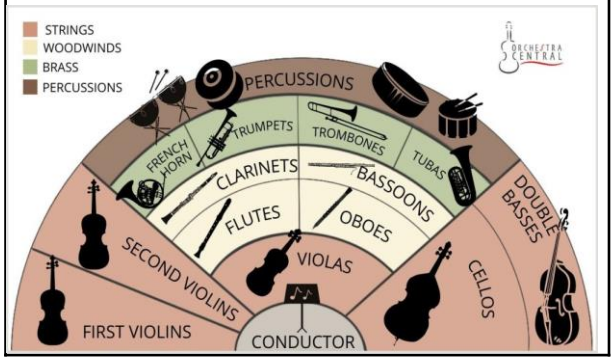
T TEXTURE

H HARMONY

Section C: Important ideas/concepts







Concepts seen before:

- Musical elements - DR P SMITH
- Tier 2 and Tier 3 equivalent vocabulary

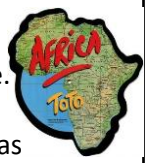
Year 10 - Music - AOS 4 Rock and Pop - Autumn Term 2

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
32 bar song form (v)	The basic AABA 32-bar song form consists of four sections, each section being 8 bars in length, totalling 32 bars.
Strophic form (v)	A song structure in which all verses or stanzas of the text are sung to the same music.
12 Bar Blues (n)	One of the most prominent chord progressions in popular music.
Verse (n)	The lyrics change each verse.
Chorus (n)	Generally the same lyrics repeated.
Riff (n)	A short repeated phrase in popular music and jazz.
Middle 8 (n)	A section in the middle of the song, after the second Chorus in verse-chorus form.
Bridge (n)	A section of a song that's intended to provide contrast to the rest of the composition towards the end of the song.
Syncopation (n)	Displaced beats or accents so that the strong beats are weak.
Chord progressions (n)	Harmonic progression is a succession of chords.
Melismatic (n)	Several notes on one syllable.
Syllabic (n)	One note per syllable in vocal music.
Backing tracks (n)	A recorded musical accompaniment, especially one for a soloist to play or sing along with.
Primary chords (n)	Chords of the first, fourth and fifth degrees.
Secondary chords (n)	A type of altered or borrowed chord, chords which are not part of the key the piece is in.

Section B: Important Ideas / Concepts/ Questions

Popular music is a wide-ranging and diverse art form encompassing several distinct genres. The popular music industry offers a wide range of opportunities for both composers and performers, including singer, song-writer, music producer, arranger and more. Through practical learning we will explore the musical idioms associated with a variety of popular music, and you will have the opportunity to perform popular music as well as compose music associated with a popular music genre. We will also explore music technology, understanding the impact this has on the way music is developed and performed in popular music.

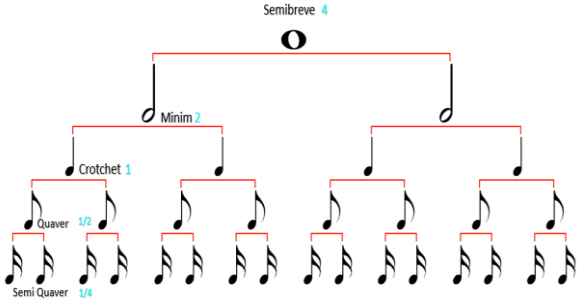


Fill (n)	A short musical passage for attention.
Instrumental break (n)	An interval between vocal sections.
Improvisation (v)	Immediate musical composition on the spot/with vague planning.
Loops (v)	A repeating section of sound material.
Samples (n)	The re-use of a sound recording in another recording.
Panning (v)	Manipulating the sound between the right and left speaker signal.
Phasing (v)	Timing differences when combining identical (or nearly identical) signals.

Concepts seen before:

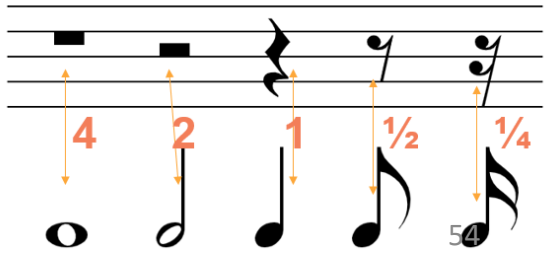
- DR P SMITH acronym
- Extended writing with Listening Skills
- Popular Music exploration
- Instrumentation - Band format (see Section C)

Section C: Important ideas/concepts



Duration

NOTE VALUES AND REST VALUES



Week Beginning	TASKS Year 10 - Music – Autumn Term 1
04/09/2023	Create a poster based on the musical elements with five Tier 3 words per Musical elements e.g. Dynamic (Pianissimo means very quiet)
18/09/2023	Revise instruments of the orchestra and create flash cards ready for listening quiz
02/10/2023	Using the knowledge in Section B of your KO summarise and condense this information into a short paragraph with definitions for each key term
16/10/2023	Listening task – Listen to this piece of Music and discuss its DR SMITH Mozart: Sonata for Piano and Violin in G Major, K. 301 - I. Allegro con spirit (Youtube)
06/11/2023	Practice musical stave notation durations and create flash cards (notes and rests)
20/11/2023	Create a poster on your current knowledge on rock and pop music AOS 4
04/12/2023	Practice primary chords and how to construct them: All major keys (C,D,E,F,G,A,B)
18/12/2023	Chose a solo performance piece – practice this over the holidays ready for your recording mock assessment in January 2024 – if you need help ask/email for support on choosing your piece

Y10 Computer Science – Autumn 1/2 – Systems & Programming

Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Base (n)	The number of characters used in a number system.
Decimal (n)	0 to 9 number system.
Binary (n)	Number system used by computers, 0 and 1 simulates on and off (machine code).
Hexadecimal (n)	Number system that uses 0-9 then A-F. Has 16 values in total (uses nibbles of data).
Bit pattern (n)	The combination of 0 and 1s that represent data e.g. 01110001.
Binary shift (v, n)	Moving data in columns left or right resulting in multiplying or dividing by multiples of 2.
Hard Drive (n)	This is usually the main storage on a desktop and laptop computer. It has a disk that can be magnetically changed to represent 0 and 1.
Solid State Drive (n)	This is another type of storage which is mainly used in portable types of computers as it has no moving parts.
Optical storage (n)	This is another type of storage which uses **CDs DVD and Blu-ray** to store data.
ROM (n)	This is a special memory that is non-volatile that stores the boot up program.
Volatile (n)	This is the term given to memory that **does not remember data** when there is no power.
Non-volatile (n)	This is the term given to memory and storage that **remembers data** when there is no power.

Section B:

Scales
Bit (single 0 or 1)
Nibble (4 bits)
Byte (8 bits)
Kilobyte (1,000 bytes or 1 KB)
Megabyte (1,000 KB)
Gigabyte (1,000 MB)
Terabyte (1,000 GB)
Petabyte (1,000 TB)

Place values for binary. This bit pattern is 93 in decimal. Add the columns with 1s in.

128	64	32	16	8	4	2	1
0	1	0	1	1	1	0	1

CPU - Central Processing Unit. Fetches, decodes and executes instructions using the **ALU, CU** and **registers**.

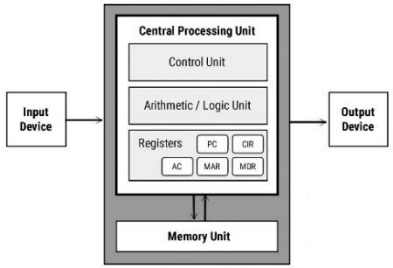
Registers include:
- MAR (Memory Address Register)
- MDR (Memory Data Register)
- Program Counter
- Accumulator

Memory - This is the volatile storage that is used for data currently being used by the computer system. There are 3 categories you need to know: **RAM, Cache and Registers**.

Previously seen concepts:
Y7 Binary and hex conversion, file sizes, basic internal components of a computing device.

Section C:

The CPU is at the heart of the **Von Neumann Architecture** as it is the part of a computing device that handles all data.



The CPU uses the Fetch Decode execute cycle with each instruction. CPU has a clock to synchronize this process. Some CPU have multiple cores meaning they have multiple CPU and therefore can handle more instructions at the same time.

Computers need secondary storage to enable the user to permanently (when the computer is off) keep files for later use.
Common types of storage include:
- Optical (CD, DVD, Blu-ray)
- Magnetic (hard drives - spinning disk)
- Solid state (no moving parts stored in circuits)

When choosing storage, we need to consider these factors against use:
- Capacity
- Speed
- Portability
- Durability
- Reliability
- Cost

Y10 Computer Science – Autumn 1/2 – Networks & programming

Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Decomposition (n)	Breaking a problem down into smaller parts so that you can create a solution.
Algorithm (n)	A list of instructions that will do something.
Selection (n)	A structure in programming that enables you to do different things depending on if a condition is met or not. IF
Iteration (n)	A structure in programming that enables you to repeat something. FOR, WHILE
Variable (n)	A location that is given an identifier that stores data. The data can be changed.
Assignment (n)	The process of giving data to a variable.
Pseudocode (n)	A language similar to English that is used for writing algorithms for planning (not programs).
Abstraction (n)	Looking at a problem and ignoring the irrelevant information.
Definite iteration (n)	Lopping that you know will end. This is usually a For loop but can be a while if it is designed with a counter to track the number of loops.
Indefinite iteration (n)	Looping that you don't know when it will end as it is dependent on a condition to be met.
Condition (n)	A criteria that has to be met for something to happen, used in selection and indefinite iteration. For example a = 3.
Data type (n)	Limits what can be stored in a variable. These include: string, integer, float, Boolean, character.

Section B: Programming Commands	
Output procedure Output a string Output stored data	print() print("hello") print (age)
Input procedure Data needs storing in a variable	input("instruction") inputs default to strings
Variable declaration and assignment	age = 40 age = input("Enter age: ")
Data Types and **casting** (changing data from one type to another)	String = "hello" str() Integer = 78 int() Float = 76.5 float() Boolean = True or False

Selection
Indents matter
	if age < 13:
	print("No account")
	else:
	print("Yes account")

Iteration
Indents matter
	for loop in range(1:10):
	print(2*loop)
	
	while age <13:
	print("No account")

Useful website for more examples and practice: **www.w3schools.com/python/** **www.pythonsandbox.com/**	

Section C: Networks

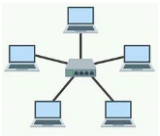
LAN – Local Area Network cover relatively small geographical areas. Often owned and controlled/managed by a single person or organisation.
WAN – Wide Area Network usually cover a wide geographic area. The Internet is the biggest example of a WAN. Often under collective or distributed ownership.

The number of devices connected to a system and the bandwidth effect the performance of a network.

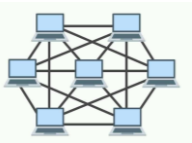
The hardware needed to connect stand-alone computers into a Local Area Network:
- Wireless access points
- Routers
- Switches
- NIC (Network Interface Controller/Card)
- Transmission media

The Internet as a worldwide collection of computer networks which includes:
- DNS (Domain Name Server)
- Hosting
- The Cloud
- Web servers and clients

Star topology



Mesh Topology



Previously seen concepts:
Y7, Y8 and Y9 basics of programming through scratch and python.

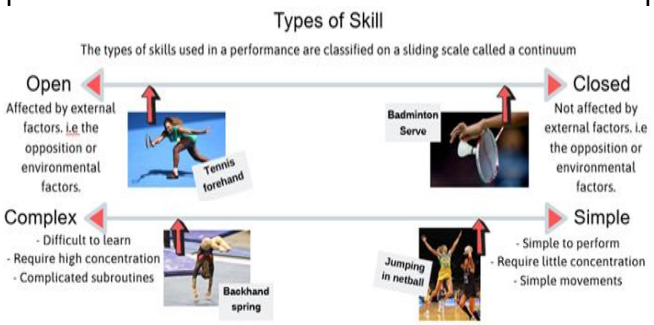
Week Beginning	TASKS Year: 10 Subject: GCSE Computer Science Term: Autumn
04/09/2023	Use Look, Cover, Write, Check to learn the key terms spellings for Systems and Programming.
18/09/2023	Create flash cards to learn the meanings of the key terms for Systems and Programming (card with the word on one side and the meaning on the other). Use these to learn the terms.
02/10/2023	Practice binary conversion by creating 10 questions that coverts binary to denary and denary to binary. Include answers.
16/10/2023	Practice Hexadecimal conversion by creating 10 questions that coverts Hexadecimal to denary and denary to hexadecimal. Include answers.
06/11/2023	Use Look, Cover, Write, Check to learn the key terms spellings for Networks and programming
20/11/2023	Create flash cards to learn the meanings of the key terms for Networks and Programming (card with the word on one side and the meaning on the other). Use these to learn the terms.
04/12/2023	Practice coding - create a code that asks for 2 inputs and compares them. It should output if they are the same or different. Make it loop this process 5 times.
18/12/2023	Practice coding – create a code for a 5 question quiz that gives a score at the end for how many answers were correct.

Year 10 – PE – Cambridge National – Autumn Term

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Skills	The learned combination of movements using muscles and joints so that a smooth and coordinated action is produced.
Techniques	How individuals perform the same skill.
Technical demands	Different sports vary in their technical demands.
Tactics	These are the plans an individual performer uses when playing against an opponent to try and exploit their weaknesses as well as personal strength.
Strategies	These are overall plans on how best to perform as an individual.
Compositions	This is linked more to artistic activities. It is the art of creating and arranging something.
Tier 2 Vocabulary	**Definition**
Identify (v)	Name the key point.
Describe (v)	Recall facts, events or process in an accurate way.
Evaluate (v)	Using the information supplied to consider evidence for and against when making a judgement.
Demonstrate	To show how to do something.

Section B: Key Concepts/Ideas/Questions



Whole practice
This practice involves repeating the whole series of actions. Gymnastic skills and games ıctivities are easier to perform as a whole. The actions can be performed over and over to perfect them.

Part practice
This practice is used when the skill is low in organisation and can be split up into sub routines. If the skill is complex, it can be broken down into sub routine to allow mastery of the 'parts' before putting them all together.

Fixed practice
This practice involves a stable and predictable environment where conditions remained fixed. Fixed practices are usually employed for closed type skills.

Variable practice
This involves using different methods to achieve a learning goal, or performing a task in different situations. It aims to provide the performer with the ability to adapt a skill to a range of possible circumstances

Section C: Subject Specific

Methods to improve performance

Altering context of performance
Playing and training with better players can help improve performance.

Different types of practice
Using the various types of practice that are suited to a specific skill or sport can help improve performance.

Use of tools to aid evaluation
Match analysis and video analysis can help identify areas for improvement.

Ways to measure improvement

Monitoring competition results over time
Results can be monitored over a period of time to see if improvements have been made.

Measurements/data
Fitness tests can be repeated and results can be compared to the original data to see if improvements have been made.

Concepts seen before:
Use of practice types

Week Beginning	TASKS Year: Subject: PE Topic: R185 Term: Autumn
04/09/2023	**Task 1** What is leadership to you? What makes a good leader? What characteristics and qualities do leaders need to have to ensure they are successful? Can you give any examples of who you think are good leaders? You are to define what Leadership means and then research into what you think makes a good leader, use the questions above to help structure your work.
18/09/2023	**Task 2** You are to complete a comparison report between two Sport leaders. You need to analyse their qualities and what makes them good at being a sports leaders, you need to look at any weaknesses they may have. Then you need to analyse them against each other. This can be completed as a word document or power point presentation.
02/10/2023	**Task 3** As a sports leader, you need to understand how to progress your participants by teaching them their skills in sport through different methods. Create a power point explaining what the different types of skills and types of practices are and provide two practical examples for each.
16/10/2023	**Task 4** You are going to create a lesson plan in preparation for your delivery of a sports session.. You need to plan a warm up, two or three different types of activities to develop a specific skill of your choice and then game situations. You also need to include differentiated activities. Use the types of skills and types of practice work to assist you with this.
06/11/2023	**Task 5** As a leader, you need to analyse how students improve within sport sessions. How do you know they have improved? How do you measure this? Using Section C of the knowledge organiser, research the different methods to analysing performance and why a variety is beneficial.
20/11/2023	**Task 6 -** Analysing performance is crucial when trying to ensure improvements are made. You are going to observe a sports leader and peer assess them. You will need to complete a Peer assessment witness sheet for this task.
04/12/2023	**Task 7 -** You are to self assess your own performance from your sports leadership session. You will need to complete a Self assessment sheet for this

Year 10 – PE – GCSE PE - Autumn

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Borg Scale (n)	Scale used to score the RPE
FITT	Frequency, intensity, time and type
Heart rate Zone (n)	Heart rate is working specifically for the intend intensity
Karvonen formula (n)	220 – Age = Maximum Heart rate
PAR Q (n)	Physical activity readiness questionnaire; used to assess somebody's suitability to take part in a training programme
RPE	Rate of perceived exertion; measures the intensity of exercise using a scoring
Thresholds of training	Aerobic training zone = 60-80% of max HR Anaerobic training zone = 80-90% of max HR
Tier 2 Vocabulary	**Definition**
Analyse	Use the information to gain a conclusion
Describe	Recall facts, events or process in an accurate way.
Explain	Make something clear, or state the reasons for something happening
Evaluate	Using the information to consider for/against when making a judgement
Reliability	Using a constant protocol to gain measurable results
Validity	Achieving accurate results

Section B: Key Concepts/Ideas/Questions

Aerobics
Involves continuous activity between 30 – 60 minutes, includes step and aqua aerobics
Improves Cardiovascular fitness

Body pump
Moderate to high intensity, lots of reps & uses barbells
Improves strength & muscular endurance

Yoga
Exercise done on a mat
including relaxation & breathing techniques Improves flexibility, balance & strength

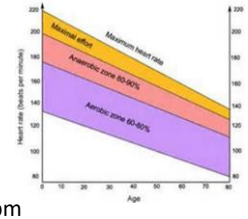
Pilates
Exercises done on a mat, uses resistance and focuses on core strength
Improves flexibility, balance & strength

Spinning
Continuous cycling to music
Improves muscular endurance & cardiovascular fitness

Section C: Subject Specific

Thresholds of training
Aerobic training zone = 60 – 80% of max HR
Anaerobic training zone = 80 – 90% of max HR

The Karvonen formula
Maximum Heart rate = 220 – Age



Worked example
John is 16 years old
His maximum heart rate = 204 bpm
Aerobic training zone = 60 -80 %
60% = 60 x 204 ÷ 100 = 122 bpm
80% = 80 x 204 ÷ 100 = 163 bpm

The Borg Scale and RPE vocabulary are closely linked. The Borg scale takes in to consideration how hard an individual is seen to be working and puts it in to a working scale. A coach, observer or even participant can then gauge how hard they are working. This however is an estimate and not 100%

Concepts seen before:
Methods of training and Health related fitness

Week Beginning	TASKS Year: 10 Subject: GCSE PE Topic: Physical training Term: Autumn
04/09/2023	Scan this QR code to take the quiz 
18/09/2023	Create a Pack of Flash Cards for all the Vocabulary Found in Section A.
02/10/2023	Scan this QR code to take the quiz 
16/10/2023	Create a Mind Map for all the concepts in this knowledge organiser. Think about how they interlink and relate to each other and therefore how you might improve performance.
06/11/2023	Scan this QR code to take the quiz 
20/11/2023	Using your Knowledge Organiser create 3 different training sessions from the exercise classes for 3 different sports, also include the expected Borg scale rating for those activities
04/12/2023	Scan this QR code to take the quiz 

Year 10 - iMedia –Interactive Media Product – Autumn Term

Section A: Tier 2 Key vocabulary

Vocab	Definition
Legislation (n)	The process of making or enacting laws.
Ethical (n)	Relating to moral principles or the branch of knowledge dealing with these.
Passive (v)	Accepting or allowing what happens or what others do.
Active (v)	Engaging or ready to engage.
Navigation (v)	Planning and following a route.

Section A: Tier 3 Key vocabulary

Vocab	Definition
Virtual Reality (n)	The computer-generated simulation of a three-dimensional image.
Interface (n)	A device or program enabling a user to communicate with a computer.
Media Assets (n)	Any digital material owned by an enterprise or individual.
Augmented reality (n)	A technology that superimposes a computer-generated image.
Screen orientation (n)	Landscape of a screen (portrait or landscape).

Section B: Types of interactive media products and their features

When developing a **interactive media product** a company needs to consider the **context** of it content.

Does it **Promote?** - has been created with the sole purpose to promote any product, service or collection of a brand

Does it **Educate?** - aims to enhance or provide a learning environment that can supplement or replace classroom learning.

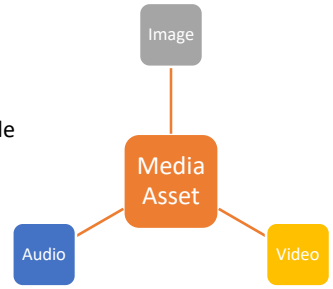
Does it **Entertain?** - that focuses on producing or hosting high quality content that is engaging and enjoyable.

Types of interactive media products:

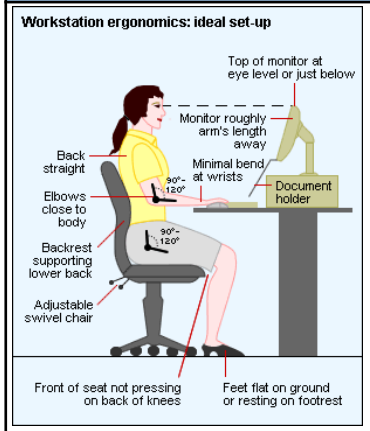
- website
- mobile APP
- interactive kiosk
- eLearning platforms
- interactive television
- interactive video
- augmented reality
- virtual reality

Through this a company will develop different **types** of products that will have their own advantages and disadvantages. They will have unique **features** such as a **website** has **Navigation buttons, Links, Banners, Payment options, Media assets.**

A product will be a combination of multiple media assets.



Section C: Health and safety + Legal and Ethical constraints



Health and Safety measures aren't barriers, but are instead vital in ensuring that no physical or psychological harm comes to those working in a media production environment.

There can be many hazards that present themselves when working on media production and risk assessment have to be made. 4 main ones being:

Location risk assessment
Personnel risk assessment
Transportation risk assessment
Equipment handling

Intellectual Property (IP) Laws:
Content has certain automatic protections that prevent the work being taken, used, and profited from by copycats or competitors. These automatic protections are as follow.
Copyright - Automatic protection under which the copyright owner has the right to control how their material is used.
Design Right - Protect the look and shape of a product.
Trademarks - A type of intellectual property distinguished by a recognisable sign, design, or expression that identifies the product or service as being from a particular source and distinguishes it from others.

Concepts you have seen before:
Year 7, 8 – Copyright, Plagiarism
Year 8, 9 – How images are represented

Year 10 - iMedia –Target Audiences – Autumn Term 2

Section A: Tier 2 Key vocabulary	
Vocab	**Definition**
Sources (n)	find out where (something) can be obtained
Payment (v)	the action or process of paying someone or something or of being paid
Profile (n)	description of a person
Target audience (n)	a particular group at which a product is aimed.
Navigation (v)	planning and following a route
Communication (v)	the imparting or exchanging of information
Sourcing (v)	obtain from a particular source

Section A: Tier 3 Key vocabulary	
Vocab	**Definition**
Profiling (n)	A profile is a written portrait of a person
Psychographics (n)	the study and classification of people according to their attitudes, aspirations, and other psychological criteria, especially in market research
Demographics (n)	the study and classification of people according to their attitudes, aspirations, and other psychological criteria, especially in market research

Section C: Categorising audiences

Demographic

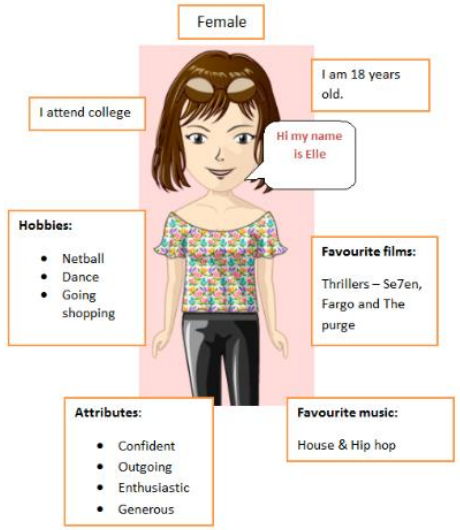
A demographic audience profile defines groups based on things like; **age, gender, income, education and occupation, ethnicity, location, disability, sexual orientation, family situation, religion.**

Psychometric

Using demographics like age, gender and occupation to define or categorise an audience doesn't always give the best results as many people don't fit in the traditional categories.

A Psychometric Audience Profile defines an audience by how they think and by considering their values, **attitudes, lifestyle, beliefs and behaviours.** (VALs).

Example Profile:



Section C: Audience's uses

Profiling:

In marketing, profiling refers to a form of segmentation that focuses on distinguishing between those who make the purchasing decisions and those who influence the purchasing decision.
Primary: those who make the purchase decision.
Secondary: those who influence the purchase decision

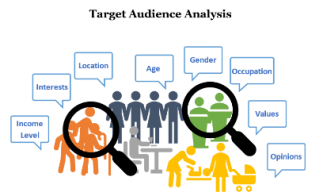
Creating content that is tailored to the personal needs and motivations of an audience is one thing, but being able to do so whilst balancing the needs of the organisation is another thing entirely.

Business goal - The ultimate goal of the business, this will generally revolve around some kind of conversion (e.g. sales)

User goal - The needs, motivations or desires of the target audience - this could relate to their personal life, career, or other

Audience's uses of interactive media:

- source of information
- entertainment
- communication
- personal profile
- payments
- navigation
- purchases
- selling
- self-development



Concepts you have seen before:
Concepts you have seen before:
Year 7, 8, 9 – Design brief to hit a target audience
Year 8, 9 – How images are represented

Week Beginning (DD/MM/YYYY)	TASKS Year 10 —iMedia—Types of interactive media products and their features—Autumn 1
04/09/2023	List all the interactive features of an **interactive television** and link it to an example.
18/09/2023	Describe how a **workstation** should be set up and explain what can happen if not followed.
02/10/2023	A risk assessment should be split into 4 key areas. **List** each area and explain its meaning.
16/10/2023	Explain the importance of sourcing information and content.
06/11/2023	List the types of **demographics** (Challenge task: Explain)
20/11/2023	Find 3 website that presents to different **audiences/demographics.** Explain their features that make that site appeal to the set audience.
04/12/2023	Research and explain what **psychographics** means.
18/12/2023	Explain how a **navigation** system can be created for different **audiences** e.g. young child vs an adult.

Year 10 – Design and Technology – Drawing Techniques – Autumn Term

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Horizon line (n)	This is a line that you draw horizontally across your page and could also be referred to as the 'eye level'.
Perspective/construction lines (n)	These are the construction lines that extend from the edges of objects and join with the vanishing point.
Vanishing point (VP) (n)	This is where all lines join up to.
Freehand sketching (v)	Drawing without the use of a ruler.
Third Angle Orthographic Drawing (n)	A working drawing consisting of three separate views: Front – Side - Plan
Designer (n)	A person who designs products.
User centred design (n)	Where the needs and wants of the user are taken in to account throughout.
Iterative design (n)	A cyclical approach.
Systems thinking (n)	Used when designing electronic and mechanical systems.
Design fixation (n)	Thinking that your first idea is the best and not changing it.
Tier 2 Vocabulary	**Definition**
Line (n)	A line drawn in pencil.
View (n)	A position from which you look at an object.
Plan (n)	A top down view.
Side (n)	A side view of an object.
Front (n)	A front view of an object.
Shading (n)	A technique to make a drawing look 3D.
Rendering (n)	A shading technique.
Modelling (n)	To create a physical representation of a product.
Testing (n)	To test if your product works as expected.
Evaluation (n)	What do you think of your product / idea.

Section B: Key Concepts/Ideas/Questions

NEA = Non Exam Assessment (Coursework)

During the Autumn 1 term, pupils will start by developing their drawing skills in preparation for their GCSE coursework.

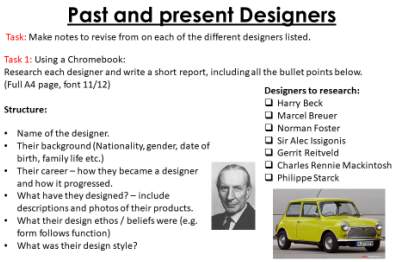
The Designing section of the NEA is worth 40 of the100 marks! So it's crucial that we can translate our ideas in to great designs.

Pupils will draw in:

- One Point Perspective
- Two Point Perspective
- Third Angle Orthographic Projection
- Freehand Sketching techniques

Pupils will be encouraged to use a variety of techniques in their coursework to access the higher marks.

Research in to the work of past and present designers is a key requirement for the NEA, so we will be looking at this and some key companies too.



Past and present Designers

Task: Make notes to revise from on each of the different designers listed.

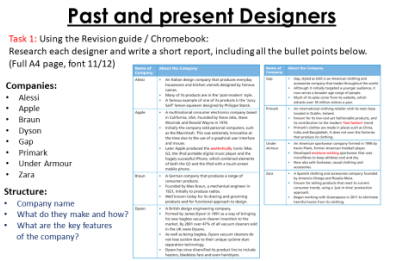
Task 1: Using a Chromebook:
Research each designer and write a short report, including all the bullet points below.
(Full A4 page, font 11/12)

Structure:

- Name of the designer.
- Their background (Nationality, gender, date of birth, family life etc.)
- Their career – how they became a designer and how it progressed.
- What have they designed? – include descriptions and photos of their products.
- What their design ethos / beliefs were (e.g. form follows function)
- What was their design style?

Designers to research:

- ❑ Harry Beck
- ❑ Marcel Breuer
- ❑ Norman Foster
- ❑ Sir Alec Issigonis
- ❑ Gerrit Reitveld
- ❑ Charles Rennie Mackintosh
- ❑ Philippe Starck



Past and present Designers

Task 1: Using the Revision guide / Chromebook:
Research each designer and write a short report, including all the bullet points below.
(Full A4 page, font 11/12)

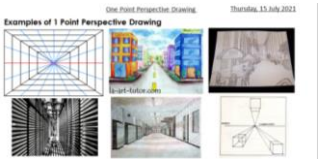
Companies:

- Alessi
- Apple
- Braun
- Dyson
- Gap
- Primark
- Under Armour
- Zara

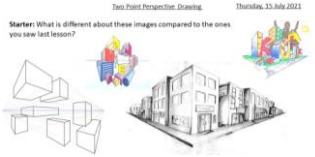
Structure:

- Company name
- What do they make and how?
- What are the key features of the company?

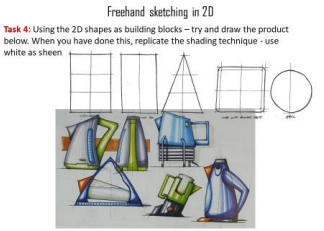
Section C: Subject Specific



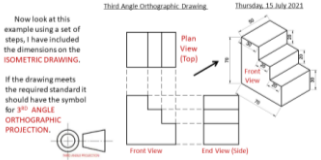
- One Point Perspective



- Two Point Perspective



- Freehand sketching



- Third Angle Orthographic Projection

Concepts seen before:
KS3 drawing and shading
Isometric drawing

Week Beginning	TASKS Year: 10 Subject: D&T Topic: Drawing Term: Autumn Term
1	Using your knowledge organiser can you please 'Look, Cover, Write & Check' each of the 20 key vocabulary words.
2	Using your knowledge organiser, please identify and state an object or product from outside of school that is manufactured by : a) Vacuum forming b) Die casting c) Extrusion d) Wood turning e) Metal turning f) Blow moulding g) Injection moulding h) Carpentry – Joining wood
3	Using your knowledge organiser, please identify an object or product from outside of school that is designed or manufactured with the support of a range of design and technology disciplines. Please give examples of the how each designing and manufacturing sector has supported the manufacture of the product.
4	Can you please identify an activity out of school that relates to each of the following H&S regulations. Please also give an explanation why they relate to them. a) PPE b) COSHH
5	Using ACCESS FM, analyse a product and identify all the aspects that the designer and manufacturer has considered in its product lifecycle.
6	Using your knowledge organiser and the work generated during your homework please produce a range of revision flash cards to help you prepare for your upcoming mock exam.

*Your DT Teacher will tell you the dates for your KO homework.

Y10 Graphic Design – Autumn - Components in Graphic Design

Section A: key vocabulary	
Vocab	**Definition**
Tier 3 Vocabulary	
Colour (n)	Is used to show a mood, theme or feeling. 1 of the 6 key components.
Typography (n)	Is the art of arranging letters and text in a way that makes the copy legible, clear, and visually appealing to the reader. 1 of the 6 key components.
Composition (n)	Also referred to as layout, artwork, design and means the placement or arrangement of visual elements on a blank page. 1 of the 6 key components.
Line (n)	Used in graphic design to separate or enhance information. 1 of the 6 key components.
Tone (n)	Refers to lightness and darkness in, it can help make something stand out. There are many techniques to create tone. 1 of the 6 key components.
Imagery (n)	A visual representation of something, imagery can be created in many different ways. 1 of the 6 key components.
Psychology of colour (n)	Colour psychology is the study of hues as a determinant of human behaviour.
Tier 2 Vocabulary	
Techniques (n)	A way of carrying out a particular task, the execution or performance of a piece of work through skills, software and tools being used.
Experimentation (v)	Graphic design that is concerned with exploring new ideas, materials and/or technology.

Section B: Typography characteristics		
Serif (n)	a slight projection finishing off a stroke of a letter in certain typefaces.	
Hierarchy (n)	designers work with so much text-based content, creating an effective typographic hierarchy—one that clearly shows what information is most important—is a vital skill for designers to master	
Leading (n)	is the spacing between different lines of text.	
Tracking	is a term used to identify the way you decrease or increase the horizontal spacing between a range of letters or characters	
Kerning	the spacing between individual letters or characters	

Rules of composition

Proximity: things that are related should be nearer to each other, things that are unrelated should be placed further from each other

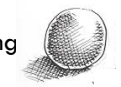
White space: also known as "negative space," is empty space around the content.

Hierarchy: used to show the importance of different features

Repetition: using the same element over and over again to create unity.

Alignment: literally means the lining of graphics and text in relation to the various edges of the design canvas

How to create tone:

- ✓ cross hatching 
- ✓ shading 
- ✓ gradient fills 
- ✓ stippling 

Colour schemes:

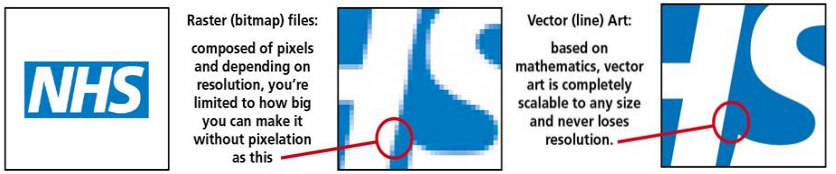
Monochromatic. Three shades, tones and tints of one base colour.

Analogous. Three colours that are side by side on the colour wheel.

Triadic. Three colours that are evenly spaced on the colour wheel.

Tetradic. Four colours that are evenly spaced on the colour wheel.

Raster against Vector:



Purpose of Line:

- ✓ to create expression
- ✓ to create emphasis
- ✓ to define space/group/ organise information

Skills to be developed

- adapting their own ideas and responding to feedback
- evaluating their own work
- independent working
- working to deadlines
- presentation skills

Concepts you have seen before:

Year 7, 8 – Copyright, Plagiarism

Year 8, 9 – How images are represented

Week Beginning (DD/MM/YYYY)	TASKS: Y10 Graphic Design – Autumn - Components in Graphic Design
04/09/2023	Learn all the keywords and definitions in Section A using Look, cover, write check and correct
18/09/2023	Create a mind map with branches for each of the 6 key components add as much information about each - showing why they are so important in Graphic Design.
02/10/2023	Identify how you could use each of the 6 key components on a festival poster, consider how you could link these together – for example bunting imagery could be used as a line to separate pieces of information. I would suggest you sketch and annotate ideas for this piece of work.
16/10/2023	Learn all the keywords and definitions in Section B using Look, cover, write check and correct
06/11/2023	Watch YouTube clips on how to use Pro Create or Adobe suite to create imagery, line, tone etc. record the links and say which have been useful/helpful.
20/11/2023	Review/evaluate how confident you are at using and applying each of the 6 key components. You have completed 2 design briefs, so make reference to particular parts of your work.
04/12/2023	Using your knowledge organiser and what you have learnt this term write and answer 5 questions that could be in an exam. Give a point scoring, aim for the 5 questions to total 15 marks.
04/09/2023	Watch YouTube clips on how to use Pro Create or Adobe suite to create imagery, line, tone etc. record the links and say which have been useful/helpful.

Year 10 - Engineering – Autumn Term

Section A: Key vocabulary	
Tier 3 Vocabulary	**Definition**
Mechanical (a)	Hydraulics (Pascal's principle), gears and pulleys
Electrical and Electronic (a)	Power station, household appliances, integrated circuits
Aerospace (a)	Power station, household appliances, integrated circuits
Communications (n)	Telephone, radio and fibre optic
Chemical (a)	Pharmaceuticals, fossil fuels, food and drinks
Civil (a)	Bridges, roads and railways
Automotive (a)	Cars, motorcycles and trains
Biomedical (a)	Prosthetics, medical devices and radiotherapy
Software (a)	Applications, systems and computer programming.
Tier 2 Vocabulary	**Definition**
Accuracy (n)	The precision used, resulting in the end quality of a product
Motion (n)	Movement - for example the movement of gears / pulleys
Advantage (n)	Superior position. E.g., using mechanisms to multiply force.
Safety (n)	Being protected from or unlikely to cause danger, risk, or injury.

Section B: Key Concepts/Ideas/Questions

HASAWA:
Health and Safety at Work Act. Legislation to keep people safe at work. Regulated by The HSE (Health & Safety Executive)

PPE:
Personal Protective Equipment at Work regulations. Regulations to ensure people are kept safe from Harm.

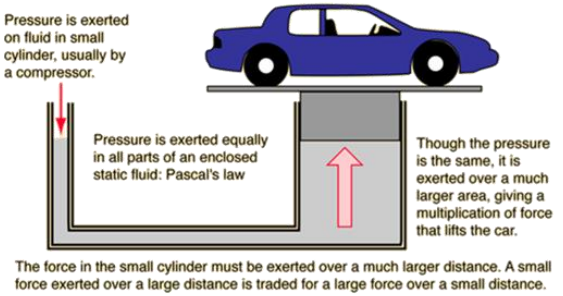
MHOR:
Manual Handling Operations Regulations. Regulations & training to ensure people are not subject to strain or injury whilst lifting, Carrying, etc.

COSHH:
Control of Substances Hazardous to Health.
Found on all chemicals / substances which are dangerous to health.

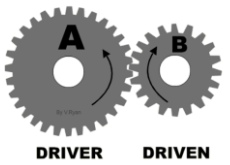
RIDDOR:
Reporting of Injuries, Diseases and Dangerous Occurrences Regulations. Ensuring accidents are reported and learned from.

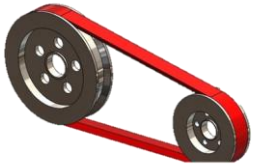
Section C: Subject Specific

Pascals Principle

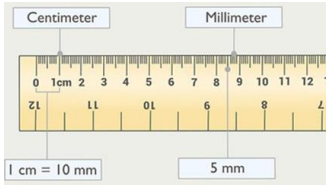


Gears & Pulleys / Ratios





Marking Out processes



Units of measurement:
Metric Scale – Used in most parts of the world including the UK.
Imperial Scale – Used in America

Concepts seen before: Measuring, Health and Safety, PPE

Week Beginning	TASKS Year 10 Engineering
1	Create a revision resource / Flash Card on Mechanical & Electrical. Explain the products and or services
2	Create a revision resource / Flash Card on Aerospace and communications Engineering. Explain the products and or services
3	Create a revision resource / Flash Card on Chemical and Civil Engineering. Explain the products and or services
4	Create a revision resource / Flash Card on Automotive and Biomedical Engineering. Explain the products and or services
5	Create a revision resource / Flash Card on Software Engineering. Explain the products and or services
6	Explain in your own words how Pascals Principle works. Use diagrams to help.
7	Create a revision poster on marking out tools and equipment for metals, woods, and plastics. This can be produced by hand or on the computer. Explain how to use each safely and correctly.
8	Create a revision resource / flash cards on gears. Explain the different types and their application. Use images / diagrams to help make your resource stand out.

Year 10 – Food Preparation and Nutrition – Nutrition – Autumn Term

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
HBV (n)	High biological value, proteins that provide all amino acids
LBV (n)	Low Biological protein, Protein that only contains some of the amino acids
Protein Complementation (v)	Combining two or more forms of LBV to get all of the amino acids
Macronutrients (n)	Carbohydrates, Proteins and Fats
Micronutrients (n)	Vitamins and Minerals
Monosaccharides (n)	Simple sugar with one molecule (glucose)
Disaccharides (n)	Sugar with two molecules (Lactose)
Polysaccharide (n)	Sugar with 3 or more molecules (Sucrose)
Saturated fat (n)	Fats found from animal sources, normally solid at room temp
Unsaturated fat (n)	Fats found in plants, normally liquid at room temp
Fibre (n)	Type of carbohydrate that is not digested in the small intestine.

Tier 2 Vocabulary	Definition
Boil (v)	The cooking technique refers to the heating up of a liquid to boiling point and cooking meat, vegetables or pasta in that liquid.
Simmer (v)	Water that is just below boiling point whilst bubbling gently
Visible fat (n)	Fat that you can see in meat
Invisible fat (n)	Fat that you cannot see, usually found in cakes and pastries.

Key Content

Proteins

- Made up of building blocks called amino acids.
- There are 20 amino acids found in protein.
- Eight amino acids have to be provided by the diet (called essential amino acids).

Recommendations

- 0.75g/kg bodyweight/day in adults.

Sources:

- **Animal sources:** meat; poultry; fish; eggs; milk; dairy food.
- **Plant sources**: soya; nuts; seeds;
- pulses, e.g. beans, lentils; mycoprotein.

Carbohydrates

They can be divided into three main groups according to the size of the molecule. These three types are:

- monosaccharides (e.g. glucose);
- disaccharides (e.g. lactose);
- polysaccharide (e.g. starch).

The two types main of carbohydrate that provide dietary energy are starch and sugars. Dietary fibre is also a type of carbohydrate.
Starchy carbohydrate is an important source of energy.
Starchy foods - we should be choosing wholegrain versions of starchy foods where possible.

Recommendations

Total carbohydrate - around 50% of daily food energy.

- Free sugars include all sugars added to foods plus sugars naturally present in honey, syrups and unsweetened fruit juice (<5% daily food energy).
- Fibre is a term used for plant-based carbohydrates that are not digested in the small intestine (30g/day for adults).

Vitamins

Nutrient	Function	Sources
Vitamin A	Helps the immune system to work as it should and with vision.	Liver, cheese, eggs, dark green leafy vegetables and orange-coloured fruits and vegetables.
B vitamins	Thiamin, riboflavin, niacin, folate, and vitamin B12 have a range of functions within the body.	Different for each B Vitamin.
Vitamin C	Helps to protect cells from damage and with the formation of collagen.	Fruit (especially citrus fruits), green vegetables, peppers and tomatoes.
Vitamin D	Helps the body to absorb calcium & helps to keep bones strong.	Oily fish, eggs, fortified breakfast cereals and fat spreads.
Vitamin E	Helps to protect the cells in our bodies against damage.	Vegetable and seed oils, nuts and seeds, avocados and olives.
Vitamin K	Needed for the normal clotting of blood and is required for normal bone structure.	Green vegetables and some oils (rapeseed, olive and soya oil).

Subject Specific

Fats

Types of fat include:

- saturated fat;
- monounsaturated fat;
- polyunsaturated fat.

Fats can be saturated, when they have no double bonds, monounsaturated, when they have one double bond, or polyunsaturated, when they have more than one double bond.

Recommendations

<35% energy, Saturated fat <11% energy.
A high saturated fat intake is linked with high blood cholesterol levels.

Sources:

Saturated fat: fatty cuts of meat; skin of poultry; butter; hard cheese; biscuits, cakes and pastries; chocolate.
Monounsaturated fat: edible oils especially olive oil; avocados; nuts.
Polyunsaturated fatty acids: edible oils especially sunflower oil; seeds;
margarine; spreadable fats made from vegetable oils and oily fish.

Minerals

Nutrient	Function	Sources
Calcium	Helps to build and maintain strong bones and teeth.	Dairy, calcium-fortified dairy-alternatives, canned fish (where soft bones are eaten) and bread.
Iron	Helps to make red blood cells, which carry oxygen around the body.	Offal, red meat, beans, pulses, nuts and seeds, fish, quinoa, wholemeal bread and dried fruit.
Phosphorus	Helps to build strong bones and teeth and helps to release energy from food.	Red meat, poultry, fish, milk, cheese, yogurt, eggs, bread and wholegrains.
Sodium	Helps regulate the water content in the body.	Very small amounts found in foods. Often added as salt.
Fluoride	Helps with the formation of strong teeth and reduce the risk of tooth decay.	Tap water, tea (and toothpaste).
Potassium	Helps regulate the water content in the body and maintain a normal blood pressure.	Some fruit and vegetables, dried fruit, poultry, red meat, fish, milk and wholegrain breakfast cereals.
Iodine	Helps to make thyroid hormones. It also helps the brain to function normally.	Milk, yogurt, cheese, fish, shellfish and eggs.

Concepts seen before: Nutrition; Macro and Micronutrients. Sources of Nutrients

Week Beginning	TASKS Year: 10 Subject: Food Preparation and Nutrition Topic: Nutrition
04/09/23	Using look, cover, write, check and correct, learn the first 6 key words from Section A on vocabulary. If you are unsure how to do this, use the 'How to self quiz?' guide on page 6 of this knowledge organiser
18/09/23	Create flashcards to learn the last 5 key words you didn't cover two weeks from Section A on vocabulary. If you are unsure how to do this, use the 'How to self quiz?' guide on page 7 of this knowledge organiser.
02/10/23	Read through the information on 'Minerals' in the bottom left hand corner of your Food and Nutrition knowledge organiser. For each mineral, explain why we need to ensure we get enough of this mineral. E.g. for Calcium it says 'Helps to build and maintain strong bones and teeth'. Why is this important?
16/10/23	Summarise the information on proteins and carbohydrates. Remove words you do not need!
06/11/23	Summarise the information on fats. Remove words you do not need!
20/11/23	Read through the information on 'Vitamins' in the bottom right hand corner of your Food and Nutrition knowledge organiser. For each vitamin, explain why we need to ensure we get enough of this vitamin. E.g. for Vitamin A it says 'Helps the immune system to work as it should and with vision'. Why is this important?
04/12/23	Using your knowledge organiser, explain why it is important to balance our proteins, fats and carbohydrates. Use the words 'because', 'but' and 'so' in your paragraph.
18/12/23	Pick 5 key words from this topic you have struggled with. Using look, cover, write, check and correct, relearn these 5 key words. If you are unsure how to do this, use the 'How to self quiz?' guide on page 6 of this knowledge organiser.

Year 10–Health and Social Care - Human Lifespan Development – Autumn Term

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Infancy (noun)	0-2 years. The development of fine and gross motor skills.
Early Childhood (adjective) (noun)	3-8years. Learning to play (solitary, parallel, social).
Adolescence (noun)	9-18years. Peer groups develop, emotions are effected by hormones, building relationships, the onset of puberty.
Early Adulthood (adjective) (noun)	19-45years. Starting a family, having attained full growth or maturity.
Middle Adulthood (adjective) (noun)	46-65years. An individual in the transitional age span between young adult and elderly, potential onset of midlife crisis..
Later Adulthood (adjective) (noun)	65+years. Importance of finding meaning and satisfaction in life, potential onset of dementia.
Tier 2 Vocabulary	**Definition**
Relationship changes (nouns)	Altering the way that two or more people connect with each other.
Life circumstances (nouns)	Factors that play a part in determining aspects of an individual's life.
Expected life events (adjective) (nouns)	A major event that changes a person's status or circumstances, such as giving birth, marriage, divorce, death of spouse, loss of job.
Unexpected life events adjective) (nouns)	Events that take individuals by surprise as they do not know that they are going to happen, they are unplanned. Some examples are having an accident or an unexpected death.

Section B: Key Concepts/Ideas/Questions

PIES (Acronym)	This is an easy way to remember the four areas of development: physical, Intellectual, Emotional and Social.
Menopause (noun)	Physiological changes including the gradual end of menstruation and shrinkage of sexual organs.
Gross motor skills (adjective) (nouns)	Gross motor skills are used to control larger muscle groups in the body.
Fine motor skills (adjective) (nouns)	Fine motor skills are used to control hands and fingers.
Milestones (noun)	A significant stage or event in the development of something.
Abstract thinking (noun) (adjective)	Thinking about something that might not even be there or even exist.
Bonding (noun)	Forming an attachment with a parent or carer.
Attachment (noun)	Attachment is the close emotional connection between people.
Self-esteem (noun)	How much a person likes/values/accepts/ themselves.
Contentment (noun)	Contentment is about feeling satisfied and happy with what you have and what you have achieved.
Self-image (noun)	Self-image is how an individual will think and feel about themselves and how they imagine other people see them.

Section C: Subject Specific

Impact of life events

Starting school/new job	
Opportunities to build new friendships and relationships Develop independence & new skills Improve self-esteem Learn new skills	Anxiety about learning new routines and building relationships You may feel insecure when leaving parents for the first time
Marriage/partnership	
Feel secure and content Develop intimate relationship Improve self-esteem	Loss of independence Have to share
Moving house	
Excited by a new challenge Develop new friendships Discover new areas	Anxiety and stress at the physical and mental pressure of moving Possible loss of close friends
Becoming a parent	
Feel confident Improved emotional wellbeing Develop a strong attachment	Worry about responsibility Feel tired Loss of independence
Retirement	
Reduced stress Socialise more with family/friends More time for activities/hobbies	Loss of relationships Negative self-image and purpose Lose fitness and mobility May feel isolated from work friends
Accident/injury or ill health	
N/A	Loss of mobility Depression/self-confidence Restriction in social activities
Bereavement	
N/A	Low self confidence Loss of friends Unable to cope/function at work Depression
Exclusion from school	
May remove stress that caused exclusion	Low self-esteem Loss of friends/loneliness May effect learning
Imprisonment	
Opportunity to Learn Develop new skills Make different life choices Improves self-awareness	Depression and low self-esteem Fear and anxiety Loss of social contact/feels isolated Loss of independence
Redundancy	
Opportunities to take on new challenges and train for a new job Increased opportunity to socialise as more free time	Can lower self-image & self esteem Feel isolated from work friends Loss of earnings impact on lifestyle choices and ability to socialise

Concepts seen before:
Command words: describe , identify, evaluate , analysis, critically analyse

Week Beginning	TASKS Year: 10 Subject: Health & Social Care. Topic: Human Lifespan Development Autumn Term.
11/9/23	Using Tier 3 words—mind map, the different human life stages and key events that happen in these stages.
25/9/23	Using Tier 2 words— write down the key words and three examples for each: e,g relationship changes: Getting married, divorced.
09/10/23	Put the following key words into a sentence to show you understand what they mean: Infancy, adolescent, contentment, bonding, self-esteem and self-image.
23/10/23	From section c, choose 3 life events and describe the positive and negative impacts they can have on life.
13/11/23	Identify one expected life event that might happen in childhood and one that might happen in later adulthood.
27/11/23	Create a mind map showing how accident and injury may impact on growth and development.
11/12/23	Explain why redundancy may impact on a person's self esteem.

Year 10 – Film Studies – Film Form – Autumn

Section A: Key vocabulary

Tier 3 Vocabulary	Definition
Narrative (noun)	An account of connected events- a story.
Plot (noun)	The sequence of events in a film .
Camera Movement (noun)	How the camera moves.
Camera Shots (noun)	How much space the audience sees in a frame.
Mise-en-scene (noun)	The arrangement of everything in shot.
Setting (noun)	Where the film takes place.
Costume (noun)	What a character is wearing.
Cinematography (noun)	Camerawork in a film
Tier 2 Vocabulary	**Definition**
Analyse (verb)	Examine something and explain the decisions made around it.
Connotations (noun)	An idea a word/item invokes
Summarise (verb)	A brief statement of the main points.
Represents (verb)	Shows or stand for.
Symbolises (verb)	To represent something through an item.

Section B: Key Concepts/Ideas/Questions

BIG QUESTIONS:

1. What are the key conventions in film?
2. How are aesthetics used in film?
3. What is representation?
4. What is narrative theory?
5. What are the conventions of the horror genre?
6. What is the language of genre?
7. What is the sci-fi genre?
8. How do films reflect the contexts of their time?
9. How are film openings structured?
10. How do audiences respond to films?
11. How are films comparable?

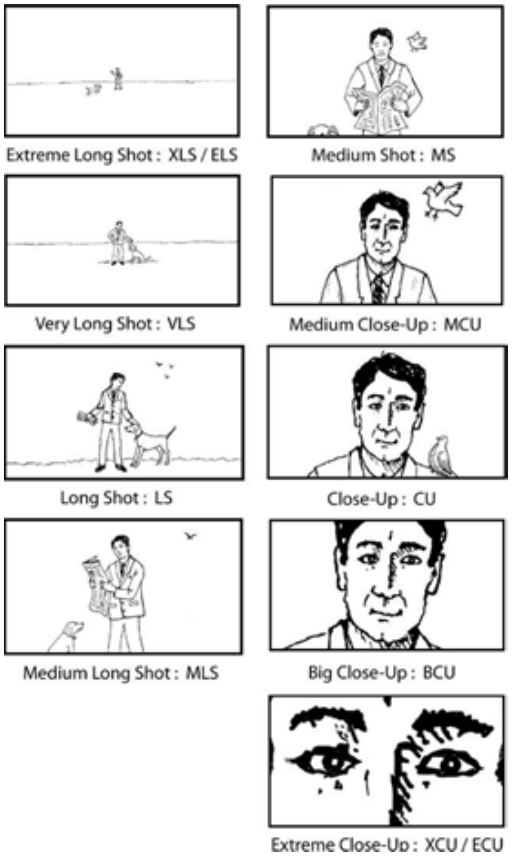
WHAT IS MISE-En-SCENE?

Mise en scène is the arrangement of scenery and stage properties in a play. Translated from French, it means "setting the stage" but, in film analysis, the term mise en scene refers to everything in front of the camera, including the set design, lighting, and actors. Mise en scene in film is the overall effect of how it all comes together for the audience.

WHAT IS CINEMATOGRAPHY?

Cinematography is the art of motion picture photography. Cinematographers use a lens to focus reflected light from objects into a real image that is transferred to some image sensor or light-sensitive material inside a movie camera

Section C: Subject Specific



Concepts seen before:

This unit builds upon the analysis skills you already use in English! Film Studies is a GCSE option subject we offer at Lees Brook and could lead to future careers within the media industry.

Week Beginning	TASKS Year: 10 Subject: Film Studies Topic: Film Form Term: Autumn
11/09/2023	**TASK:** Choose a film genre and create a timeline of films from your chosen genre. Use google to find out about films from the 1950s– up until present day. Include a minimum of ten films.
25/09/2023	**TASK:** Choose a well known film, watch the film trailer and create a large mind-map of the genre conventions you can find. Try to include a minimum of fifteen ideas! HINT: The conventions of a genre are all the things that tell us it belong to that type of film (e.g in an action film you could probably expect to find a fight scene or an explosion).
09/10/2023	**TASK:** Choose two Big Questions and answer them as a mini-paragraph.
23/10/2023	**TASK:** Create a learning poster of the tier 3 vocabulary for this unit. Include the word class of each word and the definition. Include symbols to represent each word/phrase!
13/11/2023	**TASK:** Google a film poster for an age-appropriate film. List the mise-en-scene choices made by the creator and explain what it shows us as the audience. Mise-en-scene is everything you can see. **HINT:** What can you see on the film poster? How do the choices link to the genre of the film? Why do you think these choices have been made? What is the effect on the audience?
27/11/2023	**TASK:** Choose three Big Questions and answer them as a mini-paragraph.

Notes page

Notes page

Your equipment you need for learning every day: