



**The Abbey
School**

Knowledge Organiser

Year 11 Term 4

2023 - 2024

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BIG QUESTIONS

How will I be assessed for my non-fiction writing?

What can I do to improve my SPaG?

What makes a piece of non-fiction writing compelling?

What are the different styles of non-fiction writing?

How do I plan an argument?

How do I upgrade my vocabulary?

How do I use persuasive language techniques in my writing?

What do the questions look like?

You will be given a point of view and asked to write a response to it in a specific format, like this:

'Homework has no value. Some students get it done for them; some don't do it at all. Students should be relaxing in their free time.'

Write an article for a broadsheet newspaper in which you explain your point of view on this statement.

Useful transition phrases

'In other words...'	Notably	'In fact...'
'To put it differently...'	Including	'In general...'
'For one thing...'	Like	'In particular...'
'As an illustration...'	To be sure	'In detail...'
'In this case...'	Namely	'For example...'
'For this reason...'	Chiefly	'For instance...'
'To put it another way...'	Truly	'To demonstrate...'
'That is to say...'	Indeed	'To emphasise...'
'With attention to...'	Certainly	'To repeat...'
'By all means...'	Surely	'To clarify...'
'Don't get me wrong...'	Markedly	'To explain...'
'It is clear to me...'	Such as	'To enumerate...'

What should you consider when writing?

Structure

- Flows from one idea or argument to the next
- Engaging opening to the writing.
- Powerful finish to the writing.
- A carefully chosen and crafted order of ideas including within paragraphs and sentences.
- Use of discourse markers/connectives to link complex ideas.



Ideas

- Complex, detailed ideas with specific examples used to develop them and make them relevant for the reader.
- Wide-ranging ideas that cover multiple areas within an argument and avoids repetition.



Vocabulary

- Really impressive vocabulary choices chosen for effect
- The choice of vocabulary makes the writing interesting and engaging for the reader.



Paragraphs

- Paragraphs are linked together and in an order that engages the reader and makes their argument easy to follow.
- Paragraphs allow the structure of the piece to come through to the reader easily.



Communication








- Your argument is clear and makes sense to the reader.
- You sound confident in the way you write
- The writing is engaging and genuinely interesting for the reader.
- The writing has a distinctive voice that flows and feels natural not robotic.



Tone, style, register

- The tone (sound of writing) is confident and changes dependent on the point being made.
- The writing is appropriately formal or informal (register).
- The pace (speed) of the writing changes depending on the point being made.



	<p>This is where a writer will speak directly to their readers in their writing, often using the pronoun 'you'.</p> <p>You must see that this kind of inaction is wrong, you can do something to change it.</p> <p>Direct address makes the reader feel involved in the text, that they have a sense of responsibility for the topic the writer is explaining, arguing or persuading about. Direct address is a very common technique used in speeches as well.</p>		<p>These are used to make a piece of writing sound more serious or official. Statistics and facts help to back up opinions and make them sound more authoritative.</p> <p>E.g. <u>75%</u> of all statistics are made up on the spot.</p>
Direct Address		Facts and Statistics	
	<p>It's important to know the differences between facts and opinions when it comes to Paper 2. An opinion is a belief that cannot be proven, but facts are statements of truth that can be proven.</p> <p>Liverpool are the best team in the world – opinion Liverpool beat Crystal Palace 4-3 in January 2019 – fact</p> <p>How do the writers in your two exam texts use facts and opinions? Do they get across a sense of <u>bias</u> or seeming to favour one side of an argument?</p>		<p>Exaggerated ideas that aren't meant to be taken literally or at face value.</p> <p>Example: This is the worst day of my life.</p> <p>You see, it probably isn't the worst day of your life, but the use of hyperbole accentuates the point that this was an awful day.</p>
Opinions		Hyperbole	
	<p>Sometimes these are called 'rules of three' or 'triples', but they all mean the same thing: three ideas in a row.</p> <p>Example: England were rampant, ferocious and destructive against Ireland in the Six Nations</p> <p>Putting three adjectives or ideas together provides emphasis, exaggeration and simply sounds pleasant to the ear. It's true!</p>		<p>This is a term for any words that try to evoke emotions from the reader, so to make them feel guilty, sad or responsible. Like so:</p> <p>Homelessness is a cruel nightmare that robs people of their dignity – it is hard to believe ordinary people could lead such atrocious lives in the 21st century.</p> <p>Emotive language is very useful for emphasis and exaggeration but also in winning over a read to your ideas.</p>
Triplets		Emotive language	

Purpose	WRITING TO ARGUE	WRITING TO PERSUADE	WRITING TO ADVISE	WRITING TO EXPLAIN/INFORM
What is it?	Giving the case for one side of a debate	Convincing someone that your opinion is right	Providing ways forward for someone.	Explaining your opinion on a topic to your reader.
What does it involve?	Being aware of the other side of a debate	Using your language to convince your leader.	Not telling someone what to do but giving them options.	You are not convincing people or advising.
What key features do you often find in this type of writing?	Includes counter-arguments, rhetorical questions, facts, statistics, emotive language	Direct address ("you") Alliteration / Adjectives Facts Opinions Rhetorical questions Repetition Exaggeration / Emotive language Statistics Tone / Triples	Modal verbs (Should, could, would, will, must, won't, etc – they modify or alter the meanings of verbs). Pronouns (You, he, she, they, I, etc – they replace names). An empathetic and understanding tone. Imperative sentences (A sentence where you command someone to do.	Facts Opinions A neutral and unbiased tone that gets across your opinions on a topic

	Purpose	Audience	Form	Tone
What is it?	Why a text has been written, what the writer was trying to achieve by writing it (see the table above)	The specific people a writer is trying to target through their writing.	A specific type of writing, for instance letters, speeches, essays and so on.	The sound or mood of a piece of writing.
Why is it important?	The purposes of the two texts given to you in the exam can affect how they are written and the particular language features used. For instance, a persuasive article is going to include more DAFOREST techniques, for instance.	The texts you will analyse in the exam won't necessarily be written for you, they may be written for other people in other places, times, positions and contexts. Reflect on this as you consider what the writer's attitude is and how they address their audience. If they are giving a speech to a group of doctors then their writing will be different comparing to writing a diary entry for themselves.	You may be given two articles in the exam, but you could be given two completely different types of texts (a letter and a speech, for instance). Always consider the types of writing given to you and how this form of writing will impact on style, tone, register, language features, structure and so on.	Understanding the tone of a text in the exam helps you to understand their attitude and perspective better. Are they angry? Are they sad? Are they quite neutral about the topic? The two texts you are given will likely have very different tones.



Homework Links

- Use GCSEPod Pass4English to improve your SPaG and upgrade your vocabulary.
- Answer practise questions under exam conditions
- Read a range of non-fiction texts like newspapers and blogs.
- Watch or read the news to keep up-to-date.
- Research hot topics which may come up in the exam, such as climate change, recycling, race, social media, etc. Read articles about them and watch documentaries.

Key Vocabulary

Adding connectives, to add to your initial ideas:
Moreover
Furthermore
In addition
Additionally
Similarly
As well as this

Contrasting connectives, to show a different perspective or idea:
However
On the other hand
Alternatively
Despite this
In contrast
Conversely
In spite of this

Use your word banks of key vocabulary from class



Sentence Structures

- Independent Clause:** A clause that can stand alone as a sentence. E.g. The cat sat on the mat.
Contains a subject and a verb.
- Subordinate Clause:** A clause that depends on an independent clause to make sense. E.g. Without turning around, the cat sat on the mat.
- Simple Sentence:** Contains just one clause (subject + verb) E.g. Tom went to the shops.
- Compound Sentence:** Independent Clause + Conjunction (FANBOYS) + Independent Clause (For, And, Nor, But, Yet, So) E.g. Tom went to the shops and he bought some bread.
- Complex Sentence:** Contains one main clause and one or more subordinate clause/s. E.g. Although it looked difficult, they still pushed on with the challenge.
- Exclamatory:** A sentence that shows great emotions. E.g. I am appalled by your behaviour!
- Imperative:** A sentence that gives commands. E.g. Get out!
- Interrogative:** A sentence that asks a question (not rhetorical questions). E.g. How much is that?
- Declarative:** A sentence that makes a declaration. E.g. She sells sea-shells.

Sentence Openers

Adverbs Quickly, Carefully, Bravely, Quietly, Slowly, Suddenly, Happily,

Connectives Instead, Unless, Soon, Before, Eventually, While, However

Adjectives Happy and cheerful, Sweet and kind, Scared but excited, Tired and weary,

Relative Pronouns Which, That (animals and things), Who (people)



Paragraphs



Ti...you move to a new period of time

P ... you move to a different place/location

To ... you move from one topic to another

P ... you bring a new person into your writing, or change from one person to another - including dialogue (speech)

Homophones: words that sound the same but have different meanings

- Their** - means it belongs to them. E.g. I ate their sweets.
- They're** - short for they are. E.g. They are going to be cross.
- There** - refers to a place. E.g. I'm going to hide over there.
- Your** - refers to something that belongs to you. E.g. Your bag.
- You're** - contraction of 'you are.' E.g. You're going to win.

Prepositions Inside, Next to, Above, Hidden in, Behind, Under, Past

Ing Words Eating, Crying, Thinking, Laughing, Shouting, Smiling,

Ed Words Worried, Defeated, Scared, Flabbergasted, Shocked,



Punctuation

- **Full stops:** remember to use a full stop at the end of every sentence.
- **Capital Letters :** make sure every name of something has a capital letter. *E.g. California has a capital letter. Also, make sure every new sentence starts with a capital letter.*
- **Apostrophes:** you can use apostrophes to connect certain words together. *E.g. It is = It's OR to express belonging or property = John's phone*
- **Exclamation marks:** used to end a sentence to show a strong feeling of emotion like surprise, anger, or shock. *E.g. I'm so frightened!*
- **Ellipses:** used to show an omission of words, a pause in thought or to create suspense. *E.g. Suddenly, there it was ... his worst nightmare.*
- **Colons:** used to precede lists or explanations. *E.g. I went to the store and bought a lot of fruit: peaches, apples, oranges and pears. Sarah wrote a story: The Hungry Fish.*
- **Semi Colons:** used to join two related independent clauses. *E.g. We made too many mistakes; we lost the game. Also, use a semi-colon instead of a comma, usually in a list. E.g. You will need many backpacking items: a sleeping bag; torch ; tent ; and pillow.*
- **Hyphens:** you can use hyphens for a number of reasons.
 - To separate sentences with added information e.g. *I enjoy English – as well as Maths.*
 - To indicate periods of time. *E.g. 2000-2006.*
 - To form hyphenated words. *E.g. self-respect.*
 - To create emphasis. *E.g. Mum loves seafood – she absolutely adores seafood.*
- **Brackets:** use brackets to indicate added information. The sentence should still make sense when removed. *E.g. I did my homework, (it took me twenty minutes) and brought it in early.*

The 7 Main Commas Rules

- 1.) Use a comma before a conjunction, (and, but, nor, yet, or, so), to connect two independent clauses.
E.g. I had an English test last night, so I revised.
- 2.) Use a comma to set off an opening phrase.
E.g. As such, I feel there is much I can learn.
- 3.) Use a comma when using quotes to separate the quote from the rest of the sentence.
E.g. Like Bob Johnson said, "It's a great day for hockey".
- 4.) Use a comma to separate adjectives in a descriptive list.
E.g. The pizza was hot, delicious and freshly cooked.
- 5.) Use a comma to separate three or more things in a series.
E.g. Of Charles Dickens' novels, I have read "A Christmas Carol", "Oliver Twist", and "Great Expectations".
- 6.) Use a comma with phrases that present a contrast.
E.g. Learning about Hemingway can be highly advantageous for students, not only in their secondary school studies, but also in their future careers.
- 7.) Use a comma to set off a parenthetical element (added information that can be taken out without changing the meaning of the sentence).
E.g. Now, many years after their time, we as a country are faced at the starting ground where these men once were.



Subject: Mathematics

Topic: Recall Knowledge

Year / Group: GCSE F/H
Term: 1-6

Areas

Rectangle = $l \times w$	
Parallelogram = $b \times h$	
Triangle = $\frac{1}{2} b \times h$	
Trapezium = $\frac{1}{2} (a + b)h$	

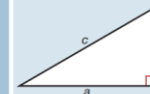
Volumes

Cuboid = $l \times w \times h$	
Prism = area of cross section \times length	
Cylinder = $\pi r^2 h$	
Volume of pyramid = $\frac{1}{3} \times$ area of base \times h	

Pythagoras

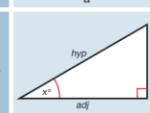
Pythagoras' Theorem

For a right-angled triangle,
 $a^2 + b^2 = c^2$



Trigonometric ratios (new to F)

$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$, $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$, $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$



Compound measures

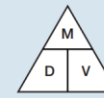
Speed

speed = $\frac{\text{distance}}{\text{time}}$



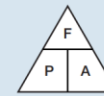
Density

density = $\frac{\text{mass}}{\text{volume}}$



Pressure

pressure = $\frac{\text{force}}{\text{area}}$

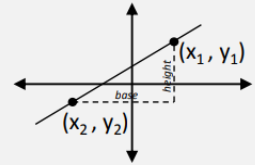


Gradient of a Line

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

or

$$m = \frac{\text{height}}{\text{base}}$$



Midpoint of two points

between (x_1, y_1) and (x_2, y_2) $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

Compound Growth & Decay

The amount after n years (or days, etc.) is:

$$\text{starting amount} \times \left(1 \pm \frac{r}{100} \right)^n$$

where r is the rate of change.

The \pm means $+$ for growth and $-$ for decay

Literacy In Maths	Command Words
Evaluate ...	Work out and write your answer
Work out ...	Working out is required
Calculate ...	Working out is required. A calculator may be needed.
Solve ...	Work out the values
Prove ...	All working must be shown in steps to link reasons and values.
Expand...	Multiply out of the brackets
Draw...	Draw accurately with a pencil and equipment.
Explain ...	Use words to give reasons
Factorise	The reverse process of expanding brackets. Remove the HCF.
Estimate	Work out an approximate answer using rounded values.

Circles

Circumference = $\pi \times \text{diameter}$, $C = \pi d$

Circumference = $2 \times \pi \times \text{radius}$, $C = 2\pi r$

Area of a circle = $\pi \times \text{radius squared}$, $A = \pi r^2$



Area of a Sector

$$A = \frac{\theta}{360^\circ} \times \pi r^2$$

Length of an Arc

$$A = \frac{\theta}{360^\circ} \times \pi d$$

Set Notation

$$A \cup B$$

Union: in A or B (or both)

$$A \cap B$$

Intersection: in both A and B

$$P(A \text{ or } B) = P(A) + P(B)$$

$$P(A \text{ and } B) = P(A) \times P(B)$$

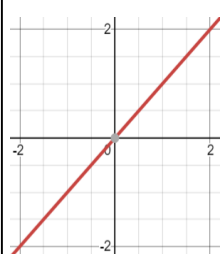
BIG

QUESTIONS

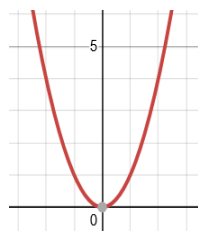
What are the different graphs I can identify and plot?

How do I solve equations, including simultaneous equations?

How do I prove a mathematical statement?



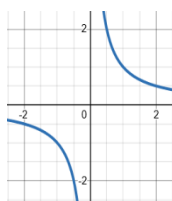
Linear graphs
 $y = x$



Quadratic graphs
 $y = x^2$



Cubic graphs
 $y = x^3$



Reciprocal graphs
 $y = \frac{1}{x}$

Change the Subject

Working with inverse operations to isolate a highlighted variable.

When rearranging we **undo the operations** starting from the last one.

Make r the subject :

$$\begin{aligned} Q &= \frac{2r-7}{3} \\ \times 3 & \quad \times 3 \\ 3Q &= 2r - 7 \\ +7 & \quad +7 \\ 3Q + 7 &= 2r \\ \div 2 & \quad \div 2 \\ \frac{3Q+7}{2} &= r \end{aligned}$$

P
R
O
O
F

Even numbers are represented by:
 $2n$

This is because if we multiply any integer by 2 then it has an even answer.

Odd numbers are represented by:
 $2n + 1$

This is because if we multiply any integer by 2 then it has an even answer, but then by adding on 1 we make it odd.

Consecutive numbers are numbers which are next to each other. They can be represented by:
 $n, n + 1, n + 2 \dots$

This is because to get to any next number in a consecutive sequence we simply add on one to the previous term.

Linear Graphs

Straight line graphs always have the equation: $y = mx + c$
 m is the **gradient** i.e. the steepness of the graph.
 c is the **y intercept** i.e. where the graph cuts the y axis.

Parallel lines have the same gradient. e.g. $y = 2x + 3$ and $y = 2x - 1$

Perpendicular line gradients are the negative reciprocal of one another e.g. $y = 2x$ and $y = -\frac{1}{2}x$

Find the equation of the line between the coordinates (1,1) and (3,5).

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Substitute in one of the coordinates to find c

$$\text{e.g. } (3,5). \quad 5 = (2 \times 3) + c$$

$$-1 = c$$

$$y = 2x - 1$$

$$y = mx + c$$

$$m = \frac{5-1}{3-1} = \frac{4}{2} = 2$$

$$y = 2x + c$$

Sparx Maths

U741, U315,
U585, U201,
U582, U836,
U757, U137,
U980, U593

Simultaneous Equations

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

Simultaneous equations can be solved **algebraically** or **graphically** whereby the **intersection** of the graphs gives the x and y values.

We need to make the y coefficients the same

$$\begin{array}{r} 3x + 2y = 18 \\ 3x - y = 9 \quad \times 2 \\ \hline 3x + 2y = 18 \\ 6x - 2y = 18 \\ \hline 9x = 36 \\ x = 4 \end{array}$$

$\times 2$

SSS – Same Sign Subtract
DSA – Different Sign Add

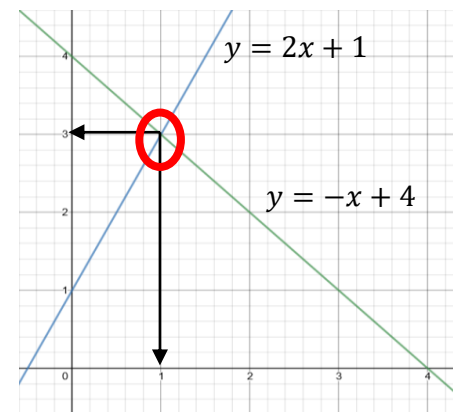
Substitute $x = 4$ into an original equation:

$$\begin{array}{r} 3x + 2y = 18 \\ (3 \times 4) + 2y = 18 \\ 12 + 2y = 18 \\ 2y = 6 \\ y = 3 \end{array}$$

Check in the other equation:

$$\begin{array}{r} (3 \times 4) - 3 = 9 \\ 12 - 3 = 9 \end{array}$$

This is true therefore $x = 4$ and $y = 3$



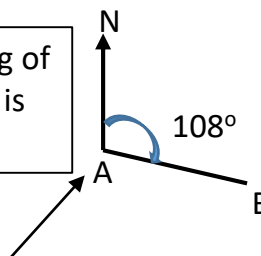
$x = 1$ and $y = 3$

Bearings

Bearings are a type of angle that are used in real life directional instructions. They have **three rules** that they must conform to:

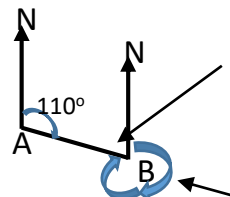
- 1) They must always be **measured from North**.
- 2) They must always be measured in a **clockwise direction**.
- 3) They must always have **3 figures** e.g. 72° is written as 072°

The bearing of B from A is 108°



Where we start measuring from using our **protractor**

We don't always need a protractor to find bearings, we can use our angle facts knowledge.

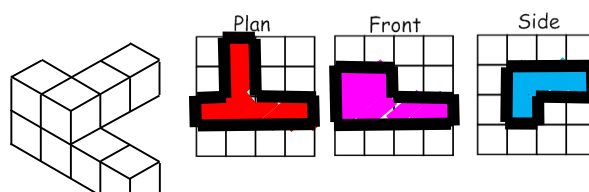


Because we know co-interior angles sum to 180° , this angle must be 70° .

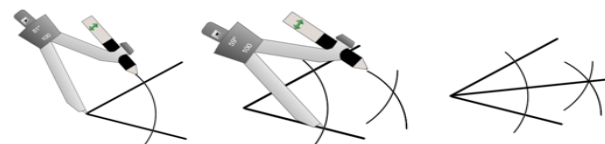
The angle we are finding is the clockwise angle from B. We know angles around a point sum to 360° .

The bearing of A from B is 290°

2D Shapes	Short for 'Two dimensional'. They are 'flat' shapes.	
3D Solids	Short for 'Three dimensional'. They are physical objects.	
Plan View, Front elevation/Side elevation	The plan view of a solid shape looks from directly from above the object. The elevations are the view of from one of the sides.	
Protractor and Compass	A tool used to measure the size of an angle on a 2D shape. A tool used to construct circles or arcs accurately.	Protractor Compass
SSS ASA SAS	Acronyms used when constructing triangles using a compass or protractor. Stands for 'Side, side, side'. Stands for 'Angle, Side, Angle'. Stands for 'Side, Angle, Side'.	Examples of an SSS, ASA and SAS construction.
Congruent	When two shapes are the same size and shape, they are congruent. Reflected or rotated shapes can still be congruent to each other.	
Net	The 2D faces needed to create a 3D solid. You can cut and fold to make a model of the 3D solid.	Net of a cube.
Bisector of an angle/line	A type of construction that divides a line or angle exactly into two.	Angle Bisector Perpendicular Bisector
Loci	A point, line, or curve moving according to mathematically defined conditions.	The red line is the loci of all the points equidistant from the black line.
Bearings	A 3-digit angle showing the direction of one object to another. Measured in a clockwise direction from the north.	



Bisect an angle.

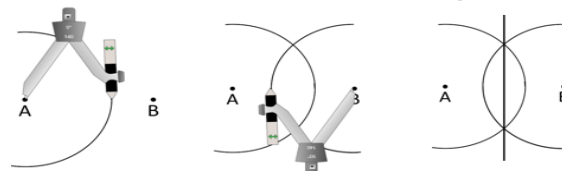


1) Open your compasses and draw an arc over both lines from the angle

2) Keep your compasses at the same width and draw two further arcs with the point of your compasses at the intersections.

3) Draw a line joining the two points where the arcs cross and the angle point

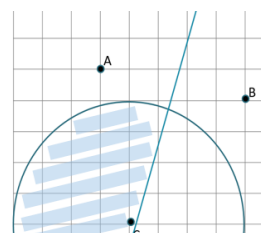
Bisect the distance between two points.



1) Open your compasses past halfway between the two points and draw an arc.

2) Keep your compasses at the same width and repeat from the other point.

3) Draw a line joining the two points where the arcs cross



Shade the region that is:

- closer to A than B
- less than 4 cm from C

Line bisector of A and B

Circle with radius 4cm

Homework Links

Sparx Maths

MathsGenie.co.uk/
GCSE

Corbettmaths.com/
contents

bbc.co.uk/bitesize/s
ubjects

Key Vocabulary

Construction

Plan

Elevation

Solid

Bearing

North

Bisector

Perpendicular

Equidistant

BIG QUESTIONS

How do I use
and plot
statements of
proportionality?

How do I use an
exponential
function?

What can we
discern from the
gradient and
area under
different
graphs?

Sparx Maths

**U640, U721,
U238, U357,
U640, U364**

Direct proportion:

g is directly proportional to the square root of h
When $g = 18$, $h = 16$
Find the possible values of h when $g = 2$

$$\begin{aligned} g &\propto \sqrt{h} & g &= 4.5\sqrt{h} \\ g &= k\sqrt{h} & \text{When } g &= 2 \\ 18 &= k\sqrt{16} & 2 &= 4.5\sqrt{h} \\ 18 &= 4k & \frac{2}{4.5} &= \sqrt{h} \\ 4.5 &= k & \left(\frac{4}{9}\right)^2 &= h \\ g &= 4.5\sqrt{h} & \frac{16}{81} &= h \end{aligned}$$

Inverse proportion:

The time taken, t , for passengers to be checked-in is inversely proportional to the square of the number of staff, s , working.
It takes 30 minutes passengers to be checked-in when 10 staff are working. How many staff are needed for 120 minutes?

$$\begin{aligned} t &\propto \frac{1}{s^2} & t &= \frac{3000}{s^2} \\ t &= \frac{k}{s^2} & 120 &= \frac{3000}{s^2} \\ 30 &= \frac{k}{10^2} & s^2 &= \frac{3000}{120} \\ 3000 &= k & s^2 &= 25 \\ t &= \frac{3000}{s^2} & s &= 5 \end{aligned}$$

Statements of Proportionality

Variables are **directly proportional** when the ratio is constant between the quantities.

Variables are **inversely proportional** when one quantity increases in proportion to the other decreasing.

\propto is the symbol to show that variables are in proportion.

Direct proportion:

$$\begin{aligned} y &\propto x \\ y &= kx \end{aligned}$$

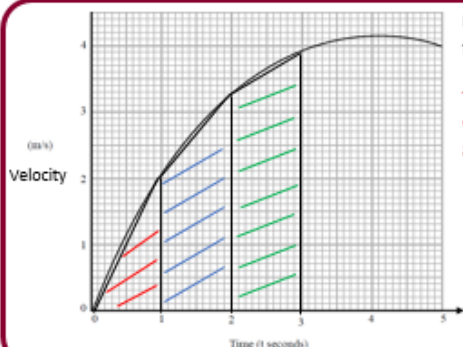
Inverse proportion:

$$\begin{aligned} y &\propto \frac{1}{x} \\ y &= \frac{k}{x} \end{aligned}$$

More Relationships

As well as $y \propto x$ and $y \propto \frac{1}{x}$, watch out for:

y directly proportional to x^2	$y \propto x^2$	$y = kx^2$
y directly proportional to \sqrt{x}	$y \propto \sqrt{x}$	$y = k\sqrt{x}$
y indirectly proportional to x^2	$y \propto \frac{1}{x^2}$	$y = \frac{k}{x^2}$



Use 3 strips of equal width to find an estimate of the distance travelled in the first 3 seconds.

The strips will either be triangles or trapeziums. You will calculate the area of each section separately and combine the answers for the complete distance.

$$\begin{aligned} &\left(\frac{1 \times 2}{2}\right) + \left(\frac{(2 + 3.2) \times 1}{2}\right) \\ &+ \left(\frac{(3.2 + 3.9) \times 1}{2}\right) = 7.15\text{m} \end{aligned}$$

Area under a Graph

A **velocity-time** graph (or speed-time graph) is a way of visually expressing a journey. With speed or velocity on the y -axis and time on the x -axis.

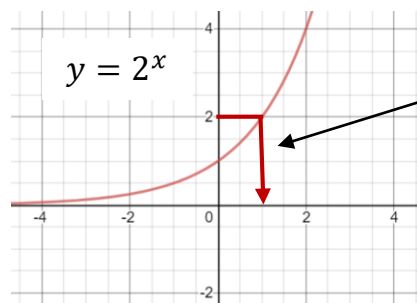
A velocity-time graph tells us **how someone's speed has changed over a period of time**.

The **distance** completed in the journey can be calculated from the **area underneath the curve**.

Exponential graphs are those formed when there is a **power of x** e.g.

$$y = 2^x \text{ or } y = 3^{2x}$$

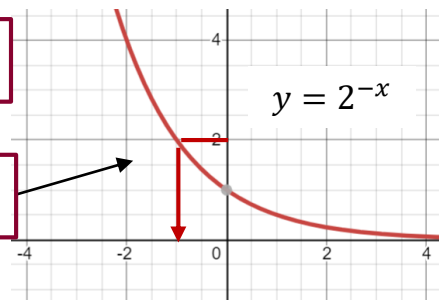
Find the **value** of x when $y = 2$ for both functions. \rightarrow



When $y = 2$,
 $x = 1$

As the value of x increases the y value tends to infinity.

As the value of x decreases the y value tends to 0 but never reaches it.



When $y = 2$,
 $x = -1$

As the value of x decreases the y value tends to infinity.

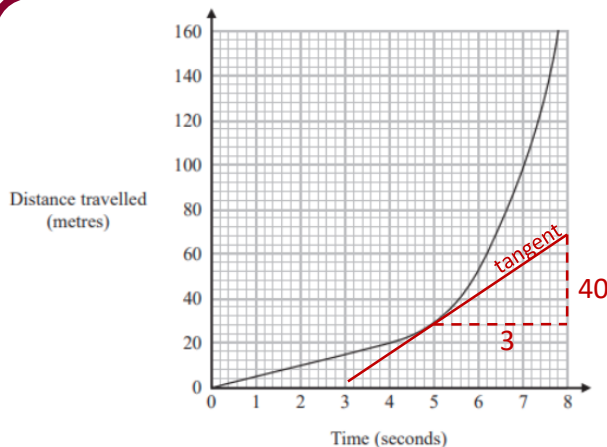
As the value of x increases the y value tends to 0 but never reaches it.

Gradients

When finding an **estimate** of the **gradient** of a curve we must draw a **tangent** to a point on the curve.

We can then find the gradient using:

$$m = \frac{\text{change in } y}{\text{change in } x}$$



The distance-time graph shows information about part of a car journey.

Use the graph to **estimate** the speed of the car at the time of 5 seconds.

Draw a tangent at the point (5, 28) – make sure you use a ruler and a sharp pencil!

$$m = \frac{40}{3} = 13.3 \text{ m/s}$$

Homework Links

Sparx Maths

MathsGenie.co.uk/
GCSE

Corbettmaths.com/
contents

bbc.co.uk/bitesize/s
subjects

Key Vocabulary

Congruent

Similar

Scale Factor

Linear

Proportion

Inverse

Constant

Trapezium

Exponential

Tangent

BIG QUESTIONS

How can vectors be used to solve complex geometrical problems?

Homework Links

[MathsGenie.co.uk/](https://www.mathsgenie.co.uk/)
GCSE

[Corbettmaths.com/](https://www.corbettmaths.com/)
contents

[bbc.co.uk/bitesize/](https://www.bbc.co.uk/bitesize/)
subjects

Adding vectors:

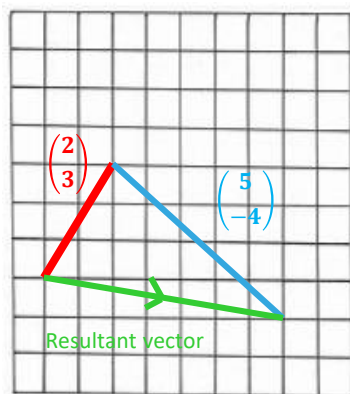
$$\begin{pmatrix} 2 \\ 3 \end{pmatrix} + \begin{pmatrix} 5 \\ -4 \end{pmatrix} = \begin{pmatrix} 2+5 \\ 3+(-4) \end{pmatrix} = \begin{pmatrix} 7 \\ -1 \end{pmatrix}$$

Subtracting vectors:

$$\begin{pmatrix} 3 \\ 9 \end{pmatrix} - \begin{pmatrix} 2 \\ -3 \end{pmatrix} = \begin{pmatrix} 3-2 \\ 9-(-3) \end{pmatrix} = \begin{pmatrix} 1 \\ 12 \end{pmatrix}$$

Vectors and scalar multipliers:

$$2 \begin{pmatrix} 8 \\ -3 \end{pmatrix} = \begin{pmatrix} 2 \times 8 \\ 2 \times -3 \end{pmatrix} = \begin{pmatrix} 16 \\ -6 \end{pmatrix}$$



Vectors notation:

$$\mathbf{a} \quad \overrightarrow{AB} \quad \underline{\mathbf{a}}$$

Magnitude: Length of the arrow

Direction: Where the arrow is pointing

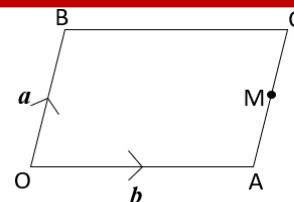
Parallel lines of equal length have the **same** vector.

Parallel lines of different lengths have a **multiple** of the vector.

Travelling against an arrow **changes the sign** of the vector.

Parallel lines of different lengths have a **multiple** of the vector.

For two vectors to form a **straight line** they must have vector values which are **multiples of one another** and must have a **common point**.



$$\overrightarrow{OA} = \mathbf{b} \quad \overrightarrow{OB} = \mathbf{a}$$

OABC is a parallelogram. M is the midpoint of AC.

a) State the vector of \overrightarrow{OC} .

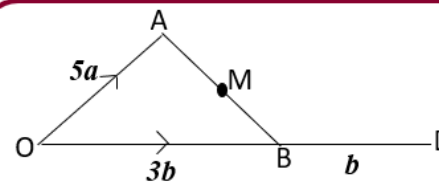
As BC is parallel and equal in length to OA, it has the vector value of \mathbf{b} .
Therefore $\overrightarrow{OC} = \mathbf{a} + \mathbf{b}$

b) State the vector of \overrightarrow{AO} .

As we are travelling against the arrow, the vector changes sign.
Therefore $\overrightarrow{AO} = -\mathbf{b}$

c) State the vector of \overrightarrow{OM} .

As \overrightarrow{AC} is parallel and equal in length to \overrightarrow{OB} , it has the vector value of \mathbf{a} . M is the midpoint of \overrightarrow{AC} .
Therefore $\overrightarrow{OM} = \mathbf{b} + \frac{1}{2}\mathbf{a}$



C is the point such that $OC:CA = 4:1$

M is the midpoint of AB.

D is the point such that $OB:OD = 3:4$

Show that C, M and D are on the same straight line.

$$\begin{aligned} \overrightarrow{CA} &= \frac{1}{5} \overrightarrow{OA} \\ &= \frac{1}{5} (5\mathbf{a}) \\ &= \mathbf{a} \end{aligned}$$

$$\begin{aligned} \overrightarrow{CM} &= \overrightarrow{CA} + \overrightarrow{AM} \\ &= \mathbf{a} + \frac{1}{2} (-5\mathbf{a} + 3\mathbf{b}) \\ &= \mathbf{a} - 2.5\mathbf{a} + 1.5\mathbf{b} \\ &= -1.5\mathbf{a} + 1.5\mathbf{b} \end{aligned}$$

$$\begin{aligned} \overrightarrow{MD} &= \overrightarrow{MB} + \overrightarrow{BD} \\ &= \frac{1}{2} (-5\mathbf{a} + 3\mathbf{b}) + 4\mathbf{b} \\ &= -2.5\mathbf{a} + 1.5\mathbf{b} + \mathbf{b} \\ &= -2.5\mathbf{a} + 2.5\mathbf{b} \end{aligned}$$

C, M and D are on a **straight line** as CM and MD are **multiples** of one another and have the **common point** of M.

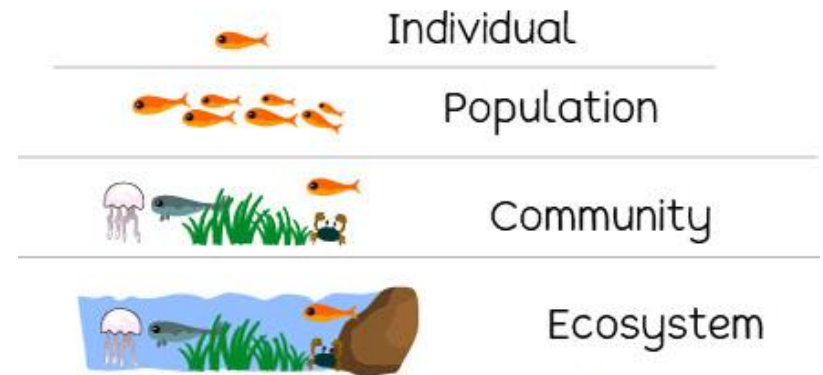
Sparx Maths

U781, U660,
U560, U632,
U903, U564

Biology 7: Ecology Knowledge Organiser

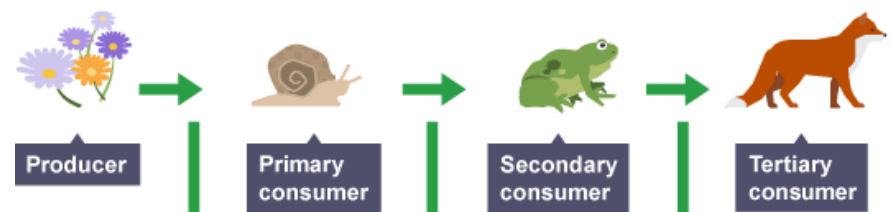
A) interdependence, competition and adaptation

Key term/question	Definition/answer
1. Habitat	The place where an organism lives
2. Population	All the organisms of one species living in a habitat
3. Community	The populations of different species living in habitat
4. Stable community	Population sizes remain roughly constant
5. Abiotic factors	Non-living factors
6. Examples of abiotic factors (5)	1. Moisture level 2. Light intensity 3. Temperature 4. Carbon dioxide levels for plants 5. Oxygen levels for aquatic organisms
7. Biotic factors	Living factors
8. Examples of biotic factors (4)	1. New predators arriving 2. Competition 3. New pathogens 4. Availability of food
9. Ecosystem	The interactions in a community of the biotic factors with the abiotic factors
10. Interdependence	Each species depends on other species for survival (e.g. food, shelter, pollination)
11. What do plants compete for? (4)	1. Light 2. Space 3. Water 4. Nutrients
12. What do animals compete for? (4)	1. Food 2. Territory 3. Water 4. Mates
13. Adaptation	Features that helps an organism survive in the conditions of their natural environment
14. Types of adaptation (3)	1. Structural 2. Behavioural 3. Functional
15. Behavioural adaptation example	The actions an organism takes (e.g. species migrating to warmer climates during winter)
16. Functional adaptation example	How an organism works (e.g. desert animals conserve water by producing little sweat and concentrated urine)
17. Structural adaptation example	How an organism is built (e.g. arctic animals have white fur for camouflage)
18. Extremophiles	Microorganisms adapted to live in extreme conditions of high temperature, pressure and salt concentrations



B) Organisation within and ecosystem

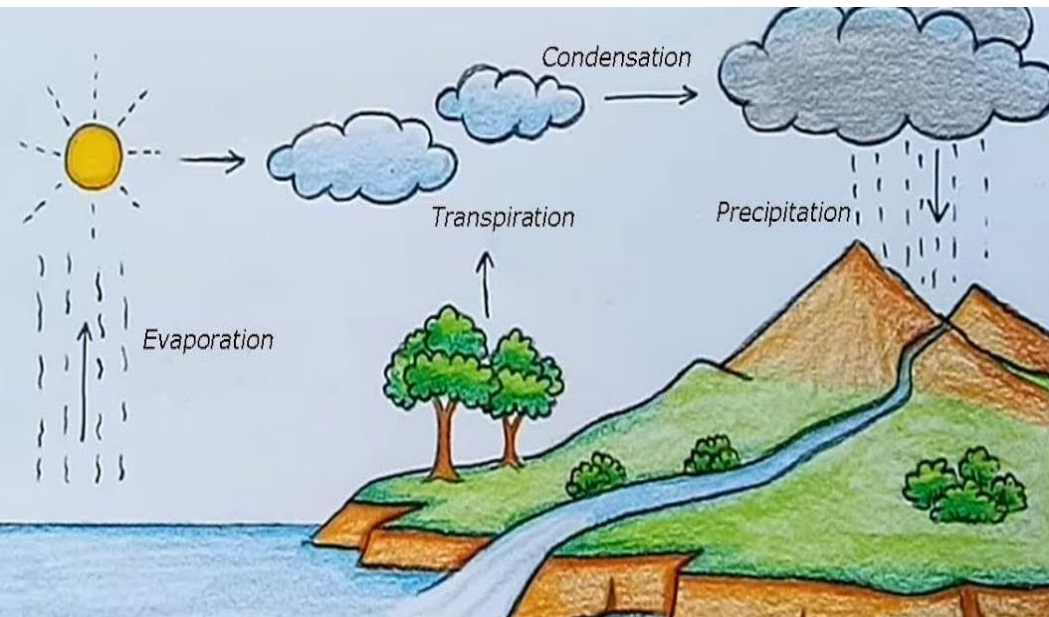
Key term/question	Definition/answer
19. Producer	Green plants and algae that photosynthesis
20. Food chain structure	Producer → Primary consumer → Secondary consumer → Tertiary consumer
21. Biomass	Mass of living material in an organism
22. Quadrat	Square frame with known area
23. Transect	Line across a habitat (often string/rope)



Biology 7: Ecology Knowledge Organiser

C) The water cycle

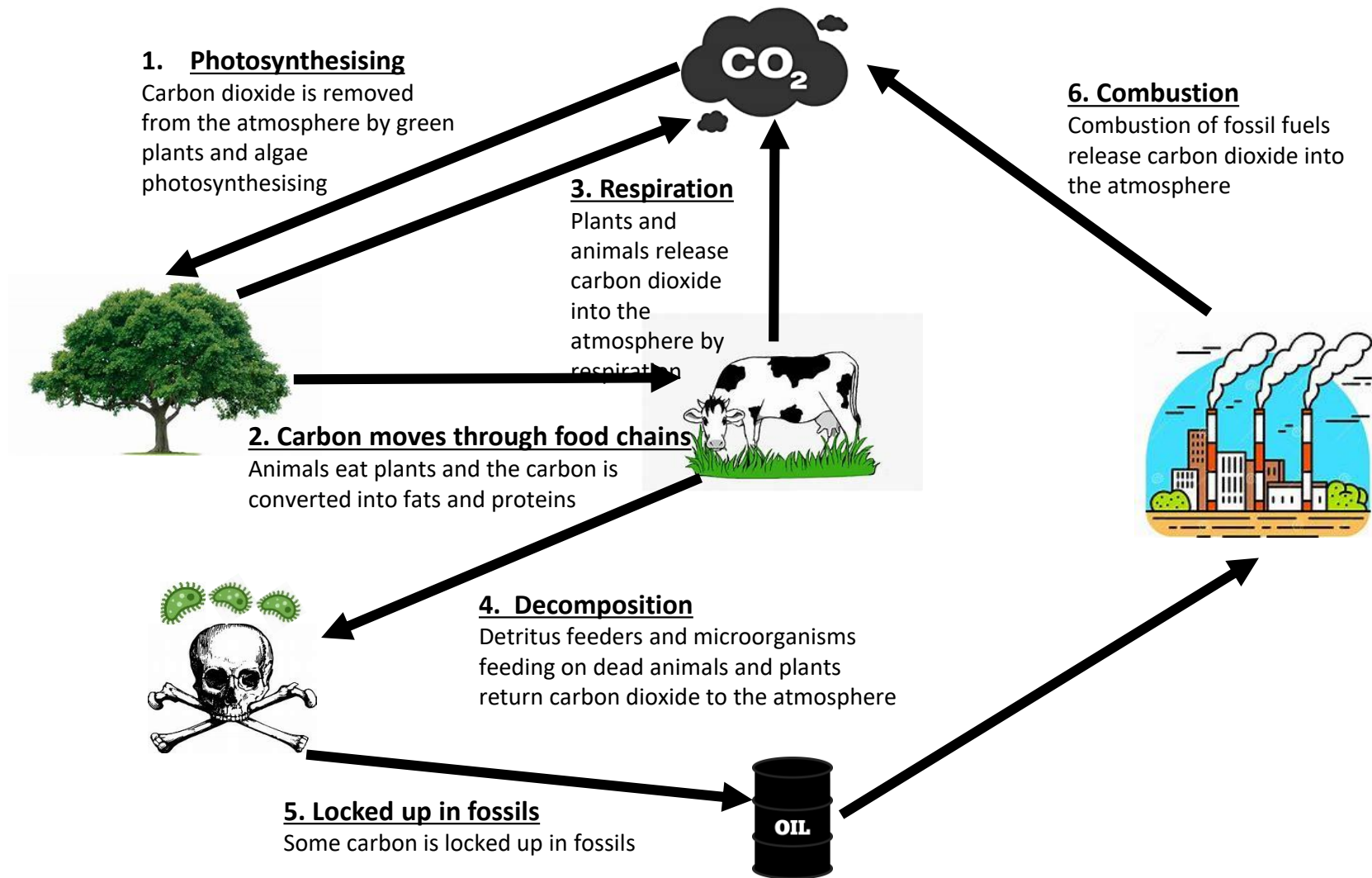
Key term/question	Definition/answer
24. Evaporation	Sun heats earth's surface causing water to go from (liquid → gas)
25. Transpiration	Water loss from surface of leaves
26. Condensation	Water vapour cools forming clouds (gas → liquid)
27. Precipitation	As water droplets get heavier in the cloud they fall as snow, sleet and rain



D) Biodiversity and the effect of human interaction on ecosystems

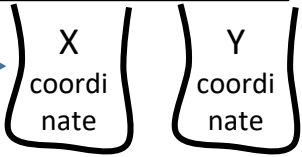
Key term/question	Definition/answer
28. Biodiversity	Variety of different species within an ecosystem
29. Why has the demand on the environment increased? (2)	1. The human population is increasing 2. People want a higher standard of living
30. Greenhouse gases (3)	1. Methane 2. Carbon dioxide 3. Water vapour
31. How do greenhouse gases work?	Absorb and reemit infra-red radiation back to Earth, causing the temperature of the Earth to increase
32. Pollution	Introduction of harmful materials into the environment
33. Types of pollution (3)	1. Water 2. Land 3. Air
34. Global warming	Increase in temperature of Earth
35. Climate change	Impact of global warming on the climate patterns
36. Examples of climate change (4)	1. Ice caps melting 2. Sea levels rising 3. Changes to migration patterns 4. Less biodiversity
37. Deforestation	Cutting down of forests
38. Consequences of deforestation (3)	1. Less biodiversity 2. More carbon dioxide released 3. Less carbon dioxide taken in
39. Bog	Area of land that is acidic and waterlogged
40. Peat	Partly rotted plants, which have not fully decayed
41. Uses of peat bogs (3)	1. Drained for farmland 2. Dried to use as a fuel 3. Compost
42. Why do plants not fully decay in bogs?	Absence of oxygen
43. Ways of maintaining biodiversity (4)	1. Breeding programmes for endangered species 2. Protection of rare habitats 3. Government regulations to reduce deforestation 4. Recycling
44. Conflicting pressures of maintaining biodiversity (3)	1. Expensive to protect biodiversity 2. Increase of unemployment 4. Increase in demand of land to build housing

The Carbon Cycle

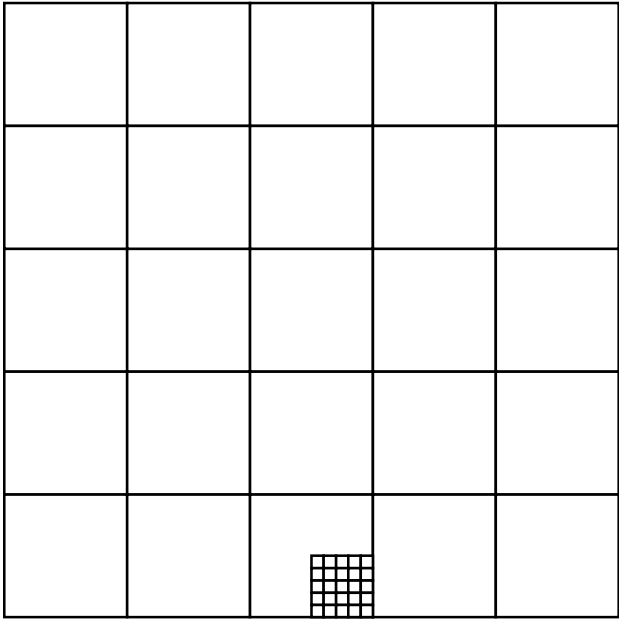


Required practical: Investigating distribution of organisms using a quadrat

1 Select random coordinates



2 Using tape measure, find location in survey area



3 Lay down quadrat

6 Calculate estimated population size (eps)

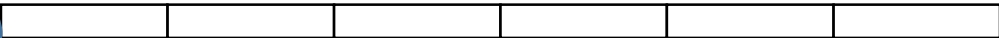
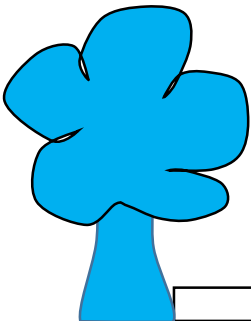
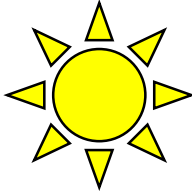
5 Repeat for 1 to 4 for 10 locations

4 Count species

$$eps = \frac{total\ area}{sampled\ area} \times total\ counted\ organisms$$

Required practical: Investigating distribution of organisms using a transect

1 Lay out 30 m tape measure from base of tree to open ground



2 Quadrat at
0 m 5 m
10 m 15 m 20 m
25 m
30 m

3 Measure and record light reading



4 Count and record number of plants in quadrat

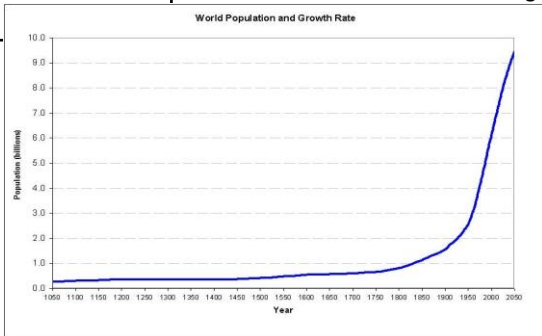
1 Repeat 2 to 4 for all distances



KS4 Biology: Topic 7b Human Impact on the Environment

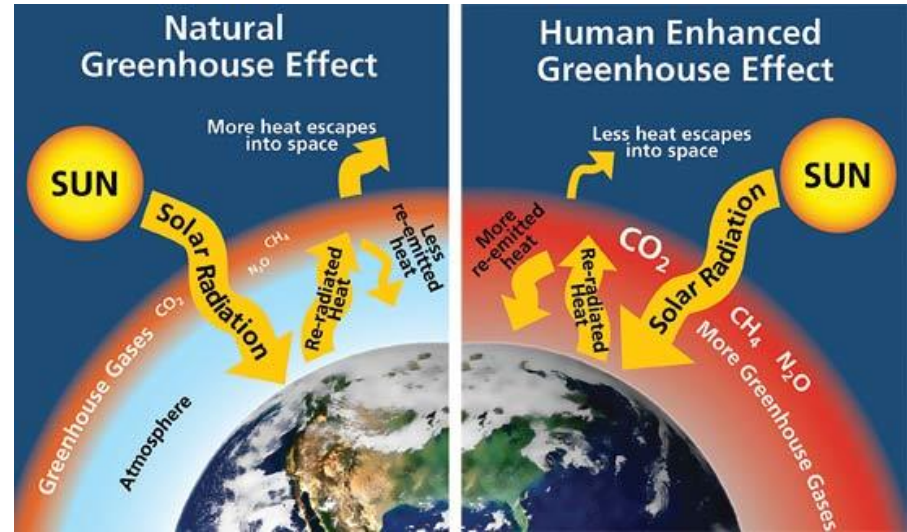
A) Biodiversity and waste

Key term/question	Definition/answer
Biodiversity	The range of variety of species that live in an ecosystem or Earth – they will all interact with each other and populations will change depending on the changes to the environment.
World population	The total number of people living on planet Earth. This has increased dramatically since around 1800 with improvements in farming and medicine
Waste	Rubbish that is created by the day-to-day activities of humans. Included in this is are the by-products of producing goods e.g. a mould used to cast a useful product.
Water pollution	Sewage (Human toilet waste) and toxic chemicals from industry can pollute rivers, lakes, seas and oceans. This harms the ecosystem.
Land pollution	In addition to rubbish sent to landfill, chemicals used in farming (pesticides and herbicides), buried nuclear waste and industrial waste can pollute the land we live on.
Air pollution	Smoke, Vapours and acidic gases pollute the air and when falling in rain can pollute the land and water regions of the Earth.
Recycling	A way to reduce waste by taking products that can be used again or reformed into new ones.
Fossil fuels	Fuels made from the remains of organisms that lived millions of years ago faster than the y are replaced.



Graph of how the world's population has changed over the last 1000 years. There is a rapid increase from around 1800 (the gradient becomes much steeper) due to improved farming and modern medicine helping people to survive more and live longer.

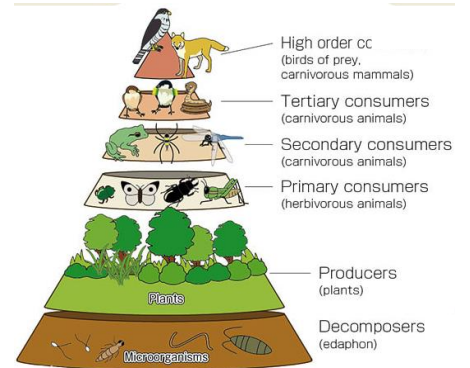
B) Global warming



C) Deforestation and land use

Key term/question	Definition/answer
Deforestation	The removal of trees from an area to create space for human activities.
Peat bogs	An area of acidic and waterlogged land. Plants do not decay fully from here so its acts as a carbon store.
Habitats	Areas that organisms live in. Many organisms are specialised to their habitat and cannot live elsewhere, so die out when their habitat is destroyed.

D) Maintaining ecosystems and biodiversity



To maintain biodiversity, all parts of the food chain need to be protected.

Chemistry 9: Chemistry of the Atmosphere Knowledge Organiser

A) Evolution of the Earth's Atmosphere	
Key term/question	Definition/answer
1. Atmosphere	Layer of gases that surrounds a planet.
2. Main gas of the early atmosphere	Carbon dioxide
3. Other gases of the early atmosphere in small amounts (4)	<u>1.</u> Water vapour <u>2.</u> Nitrogen <u>3.</u> Methane <u>4.</u> Ammonia
4. Gases of the current atmosphere (5)	<u>1.</u> Nitrogen <u>2.</u> Oxygen <u>3.</u> Carbon dioxide <u>4.</u> Water vapour <u>5.</u> Noble gases
5. Percentage of gases in the current atmosphere	<u>1.</u> Nitrogen = 80% <u>2.</u> Oxygen = 20% <u>3.</u> Carbon dioxide, water vapour and noble gases = less than 1%
6. Approximate age of Earth's current atmosphere?	200 million years
7. Cause of gases of the early atmosphere	Volcanic eruptions
8. What happened to the water vapour as the Earth began to cool?	Condensed into oceans
9. Reasons for carbon dioxide levels decreasing in the atmosphere (4)	<u>1.</u> CO ₂ dissolved into the oceans. <u>2.</u> Carbonates formed the skeletons and shells of marine animals. <u>3.</u> Sedimentary rocks and fossil fuels locked up carbon. <u>4.</u> Plants photosynthesised which removed CO ₂
10. Reason for oxygen levels increasing in the atmosphere	Plants photosynthesising releases oxygen into the atmosphere.
11. Word equation for photosynthesis	Light Carbon dioxide + water -----> glucose + oxygen
12. Symbol equation for photosynthesis	Light $6\text{CO}_2 + 6\text{H}_2\text{O} \text{ -----> } \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$
13. Why do scientists find it hard to agree on one theory? (2)	<u>1.</u> Not enough evidence <u>2.</u> The Earth was created 4.6 billion years ago
14. Where do scientists publish their findings?	Peer-reviewed journal
15. What is peer-review?	Other scientists evaluate the results to check they are scientifically accurate with no bias .

B) Greenhouse gases and climate change	
Key term/question	Definition/answer
16. Greenhouse gases (3)	<u>1.</u> Methane <u>2.</u> Carbon dioxide <u>3.</u> Water vapour
17. How do greenhouse gases work?	Absorb and reemit infra-red radiation back to Earth, causing the temperature of the Earth to increase .
18. Global warming	Increase in Earth's temperature
19. Climate change	Impact of global warming on the climate patterns.
20. Human activities releasing greenhouse gases and causing climate change (4)	<u>1.</u> Deforestation <u>2.</u> Combustion of fossil fuels <u>3.</u> Intensive farming of cows and growing rice <u>4.</u> The breakdown of waste on landfills
21. Consequences of climate change (4)	<u>1.</u> Melting ice caps which increases flooding <u>2.</u> More cases of extreme weather <u>3.</u> Change in migration patterns <u>4.</u> Loss of biodiversity

C) Carbon footprint	
Key term/question	Definition/answer
22. Carbon footprint	The amount of carbon dioxide and other greenhouse gases that are released by a product.
23. How can businesses reduce carbon footprint? (5)	<u>1.</u> Using renewable energy sources instead of fossil fuels <u>2.</u> Government to introduce carbon taxes and licences <u>3.</u> Carbon capture <u>4.</u> Carbon off-setting <u>5.</u> Carbon neutral
24. Why is it difficult to reduce carbon emissions? (3)	<u>1.</u> Insufficient renewable energy resources <u>2.</u> Difficult to provide for transport systems <u>3.</u> Limits economic growth

D) Air pollution	
Key term/question	Definition/answer
25. Complete combustion	Unlimited supply of oxygen to fully oxidise carbon into carbon dioxide.
26. Incomplete combustion	Limited supply of oxygen which produces soot (carbon) and carbon monoxide.
27. Problems with carbon particulates (2)	<u>1.</u> If inhaled causes respiratory problems <u>2.</u> Causes global dimming
28. Global dimming	The decrease in the amount of sunlight reaching the Earth's surface due to particulates.
29. Dangers of carbon monoxide	Binds to haemoglobin in red blood cells which reduces oxygen levels in the blood.
30. How is sulfur dioxide produced?	Burning fuels with sulfur impurities, the sulfur is oxidised.
31. How are oxides of nitrogen produced?	When fuels burnt in vehicle engines reach high temperatures, nitrogen and oxygen in the air react.
32. Acid rain	Produced when sulphur dioxide or nitrogen oxides dissolve in rainwater

Chemistry 10: Using Resources Knowledge Organiser

A) Resources and Sustainability

Key term/question	Definition/answer
1. Why do humans use the Earth's resources for? (4)	<u>1.</u> Warmth <u>2.</u> Shelter <u>3.</u> Food <u>4.</u> Transport
2. What are natural resources?	Form without human input (e.g. wind and solar energy)
3. Synthetic products	Products made by humans.
4. Examples of synthetic products to replace natural products. (3)	<u>1.</u> PVC window frames used to replace wooden frames. <u>2.</u> Rubber polymers used in tyres to replace natural rubber extracted from tree sap. <u>3.</u> Plastic corks used as a wine stopper to replace natural cork made from tree bark.
5. Renewable resource	A resource that can be replenished at the same rate as it is used .
6. Non-renewable (finite) resource	A resource that cannot be replenished at the same rate as it is used , so there is a limited supply
7. Examples of renewable resources (3)	<u>1.</u> Wood <u>2.</u> Vegetable crops <u>3.</u> Sustainable fishing
8. Examples of non-renewable resources	<u>1.</u> Fossil fuels <u>2.</u> Nuclear fuels <u>3.</u> Metals
9. Fossil fuels (3)	<u>1.</u> Coal <u>2.</u> (Crude) Oil <u>3.</u> Natural gas
10. Sustainable development	Takes into account the needs of present society, while not damaging the lives of future generations.
11. Agriculture	The science and practice of cultivating plants and livestock .
12. What is agriculture's role in sustainable development?	Provides conditions where natural resources can be enhanced (e.g. using fertilisers to increase crop yield).
13. Reusing a product	Using a product more than once for the same purpose, or putting a used product to a new purpose (e.g. reusing a shopping bag).
14. Recycling a product	Using waste products to make new products (e.g. metal cans be melted and moulded into different metal items).
15. Why is it important to recycle? (4)	<u>1.</u> Uses less energy <u>2.</u> Saves money <u>3.</u> Conserves finite resources <u>4.</u> Reduces the amount of rubbish on landfills
16. What is a life cycle assessment? (LCAs)	Assesses the environmental impact of the entire lifetime of a product.
17. Stages of a LCA (4)	<u>1.</u> Extracting the raw materials <u>2.</u> Manufacturing the product <u>3.</u> Using the product <u>4.</u> Disposal of the product
18. Things to consider for LCAs. (4)	<u>1.</u> Damage to the environment <u>2.</u> Using large amounts of energy resources <u>3.</u> Greenhouse gases emissions <u>4.</u> How long the product lasts

HIGHER TIER

Key term/question	Definition/answer
19. Methods for extracting copper from ores (2)	<u>1.</u> Bioleaching <u>2.</u> Phytomining
20. Bioleaching	Using bacteria to separate copper from its ore
21. Phytomining	Extracting copper from soil by using plants
22. Advantages of bioleaching and phytomining (4)	<u>1.</u> Uses less energy <u>2.</u> Reduces the use of fossil fuels <u>3.</u> Reduces greenhouse gas emission <u>4.</u> reduces habitat destruction
23. Disadvantage of bioleaching and phytomining	Processes take a long time

Chemistry 10: Using Resources Knowledge Organiser

B) Treatment of Fresh Water

Key term/question	Definition/answer
24. Potable Water	Water that is safe to drink. It contains low levels of dissolved salts.
25. Pure water / distilled water	Only contains H ₂ O molecules
26. How is fresh water collected?	From surface water or as ground water.
27. What is surface water? (3)	<u>1.</u> Lakes <u>2.</u> Rivers <u>3.</u> Reservoirs
28. What is ground water?	Water found in rocks called aquifers which traps water underground.
29. How is fresh water treated? (2)	<u>1.</u> Filtration <u>2.</u> Sterilisation
30. Filtration	A wire mesh screens out solid objects.
31. Sterilisation	Kills harmful microorganisms
32. Substances used for sterilisation (3)	<u>1.</u> Chlorine gas <u>2.</u> Ozone <u>3.</u> Ultraviolet light

C) Treatment of Waste Water

Key term/question	Definition/answer
33. Stages for treatment of waste water (sewage water) (4)	<u>1.</u> Screening <u>2.</u> Sedimentation <u>3.</u> Aerobic digestion <u>4.</u> Anaerobic digestion
34. Screening	Large bits of material are removed (e.g. twigs, plastic bags and grit)
35. Sedimentation stages (3)	<u>1.</u> The screened waste enters into a settlement tank. <u>2.</u> The heavier solids sink to the bottom to produce sludge. <u>3.</u> The less dense effluent floats on the top.
36. Aerobic digestion	Air is pumped into the effluent to encourage aerobic bacteria to break down the organic matter
37. Anaerobic digestion	Sludge is broken down by anaerobic bacteria, releasing methane gas.
38. Effluent	Liquid sewage waste
39. Aerobic	With oxygen
40. Anaerobic	Without oxygen

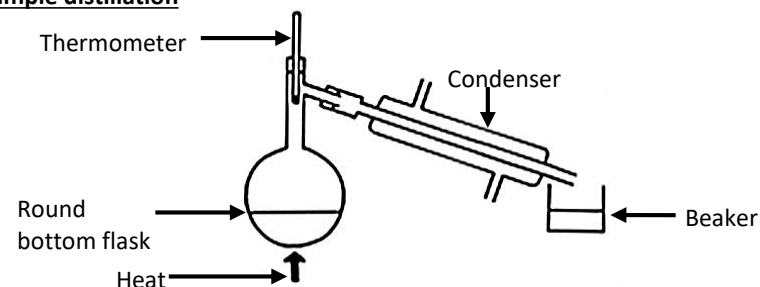
D) Treatment of Sea Water: Required Practical 13 – Simple Distillation

Key term/question	Definition/answer
41. How is sea water treated? (2)	<u>1.</u> Desalination by simple distillation <u>2.</u> Reverse osmosis
42. Desalination	The process of removing the salt from sea water
43. Reverse Osmosis	Sea water is passed through a membrane that allows water molecules to pass through, but traps salt ions.
44. Simple distillation	Separates a liquid from a mixture when their boiling points are greatly different.
45. What is simple distillation used for?	To remove salt from sea water
46. What is pure water	Water that has been distilled and only contains H ₂ O molecules
47. What is the pH of pure water?	7 (neutral)
48. How to test for pure water	Boil the water. Pure water will boil at 100 °C. Impure water will have a higher boiling point.

49. How simple distillation works to separate salt from water

1. Solution of salt and water is placed into a round bottom flask.
2. As the solution is heated, the water will evaporate and pass into a condenser.
3. The water vapour will cool and condense in the condenser.
4. The pure distilled water is collected in a beaker.

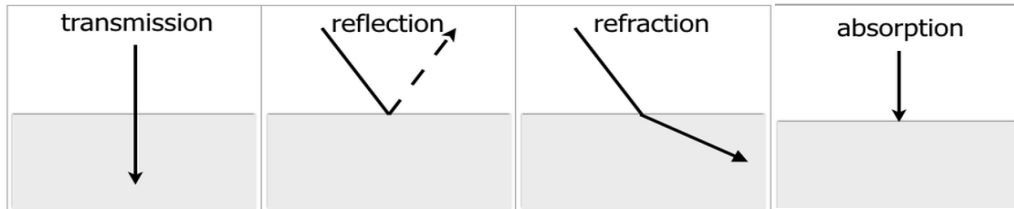
50. Set up for simple distillation



Physics (P6) Waves Knowledge Organiser

C) Waves at a boundary

Key term/question	Definition/answer
18. List what happens to a wave at a boundary between two different materials?	<u>1.</u> Reflection <u>2.</u> Absorption <u>3.</u> Transmission <u>4.</u> Refraction
19. Reflection	A wave bounces off the surface of a material
20. Absorption	The wave's energy is transferred to the material and the wave is stopped
21. Transmission	Waves pass through a material
22. Refraction	Wave changes direction as it travels through a material because it changes speed
HIGHER TIER 23. What happens to a wave when entering a less dense material?	Speed increases and bends away from line of normal
HIGHER TIER 24. What happens to a wave when entering a denser material?	Speed decreases and bends towards the line of normal

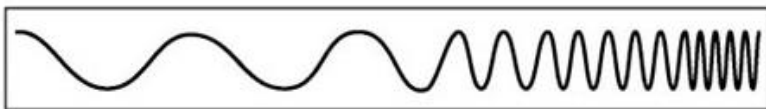


Electromagnetic spectrum

Long wavelength —————> Short wavelength

Radio waves	Microwaves	Infrared	Visible light	Ultraviolet	X-rays	Gamma rays
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Low frequency —————> High frequency



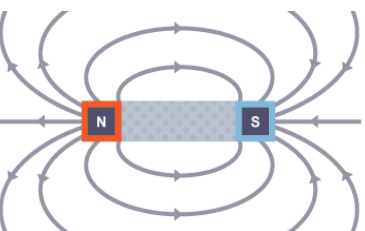
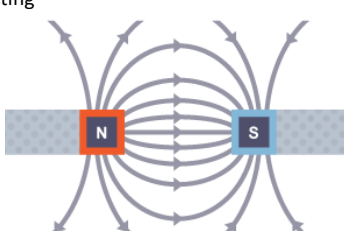
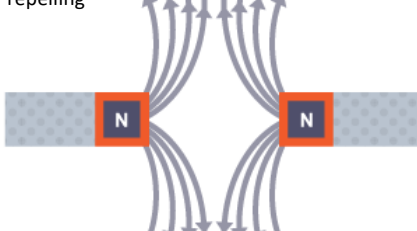
Mnemonic	Spectrum
<i>Raging</i>	<i>Radio</i>
<i>Martians</i>	<i>Microwaves</i>
<i>Invaded</i>	<i>Infrared</i>
<i>Venus</i>	<i>Visible</i>
<i>Using</i>	<i>Ultraviolet</i>
<i>X-ray</i>	<i>X-rays</i>
<i>Guns</i>	<i>Gamma rays</i>

D) Electromagnetic waves

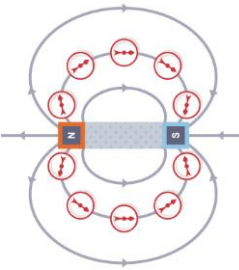
Key term/question	Definition/answer
25. What is the "electromagnetic spectrum"?	A set of electromagnetic waves all travelling at the same speed in a vacuum
26. Electromagnetic waves with the longest wavelength and lowest frequency	Radio
27. Electromagnet waves with the shortest wavelength and highest frequency	Gamma
28. Uses of radio waves	Television and radio
29. Uses of microwave	Cooking, mobile phones, satellite communications
30. Uses of infra-red waves	electrical heaters, cooking food, infrared cameras
31. Use of visible light	Optical fibres
32. Uses of ultraviolet light	Fluorescent bulbs, tanning beds, Counterfeit note detection
33. Use of X-rays	Medical diagnosis for broken bones
34. Uses of gamma rays	Sterilising medical equipment, treating cancer
35. Dangers of over exposure to ultraviolet light (3)	<u>1.</u> Premature aging of skin <u>2.</u> skin cancer <u>3.</u> retinal damage
36. Ionising radiation	Radiation that has enough energy to knock electrons off atoms.
37. Types of ionising radiation	X-rays and gamma rays
38. Dangers to over exposure of x-rays and gamma rays	Cell destruction, Gene mutation and cancer
39. Radiation dose	A measure of the risk of harm from the body being exposed to radiation
40. Unit of measure for radiation dose	Sv = Sieverts

Physics 7: Magnetism and Electromagnetism Knowledge Organiser

A) Magnetic fields

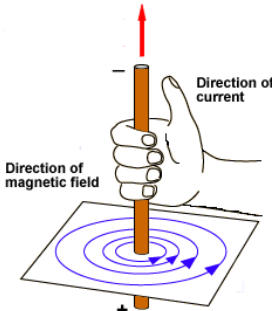
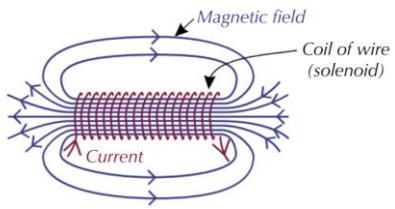
Key term/question	Definition/answer
1. Magnetic field	A region around a magnet where a force acts on another magnet or magnetic material
2. Define pole on a magnet	The place where the magnetic force is the strongest
3. What do two magnets next to each other do?	Exert a force on each other
4. What type of force is a magnetism?	Non-contact force (forces that act without needing to touch)
5. What is the effect of two like poles on each other? (e.g. N-N)	Repel
6. What is the effect of two unlike poles on each other? (e.g. N-S)	Attract
7. Name 4 magnetic materials	Iron, steel, cobalt, nickel
8. Magnetic field diagrams	A series of lines, that show a magnetic field and its direction
9. Rules of magnetic field diagrams	1. The arrows show the direction of force from north to south 2. the closer the lines, the stronger the magnetic field
10. Magnetic field lines on a magnet	11. Magnetic field lines for unlike poles attracting
	
	12. Magnetic field lines for like poles repelling
	
13. State one factor that effects the strength of a magnetic field	Distance from magnet
14. How does a compass work? (3)	1. The Earth has a magnetic field 2. A compass contains a small bar magnet 3. The compass needle points in the direction of the Earth's magnetic field.
15. What is the evidence that the Earth's core is magnetic?	When a compass is not near a magnet, it always points north.

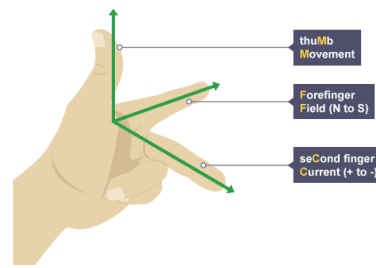
Key term/question	Definition/answer
16. How to use a compass to plot the magnetic field lines around a magnet? (4)	1. Place the plotting compass near the magnet on a piece of paper 2. Mark the direction the compass needle points 3. Move the plotting compass to many different positions in the magnetic field, marking the needle direction each time 4. Join the points to show the field lines
17. What are the two types of magnets? (2)	1. Permanent magnet 2. Induced magnet
18. Permanent magnet	Always produces its own magnetic field. The magnetism can not be turned on or off
19. Induced magnet	A material that becomes a magnet when placed in a magnetic field (e.g. iron nail, electromagnet)
20. What happens to an induced magnet when it is removed from the magnetic field?	Loses all of its magnetism
21. What is the force between a permanent and induced magnet?	Always attractive



B) Electromagnetism

Key term/question	Definition/answer
22. What happens when a current flows through a wire?	A magnetic field is produced around wire
23. Factors that effect the strength of the magnetic field around a wire (2)	1. Current 2. Distance from the wire
24. Current	The flow of electrical charge

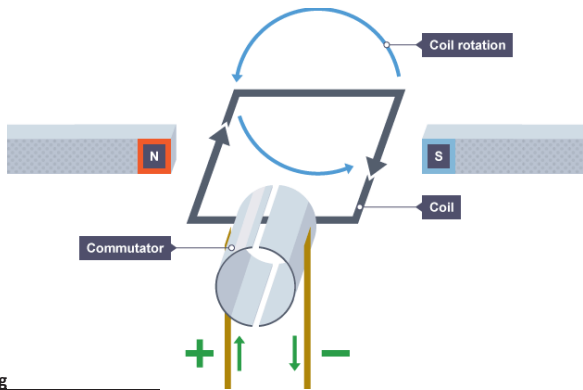
B) Electromagnetism	
Key term/question	Definition/answer
25. How do you determine the direction of the magnetic field around a wire?	Flemings right hand rule (thumb = current direction, fingers = magnetic field direction) 
26. What is a solenoid?	A coil of wire 
27. Behaviour of magnetic field inside a solenoid	Strong and uniform
28. Behaviour of magnetic field outside the solenoid	Same as a bar magnet
29. How can you increase the strength of a solenoid? (3)	<u>1.</u> Increase current <u>2.</u> increase number of coils <u>3.</u> add an iron core
30. Electromagnet	Solenoid (coil of wire) with an iron core. Can switch on and off.
31. Uses of an electromagnet (3)	<u>1.</u> Used in cranes in scrap yards <u>2.</u> Speaker <u>3.</u> headphones
32. Why is a electromagnet useful in a scarp yard and a permanent magnet not? (4)	<u>1.</u> Electromagnet can be switched on and off to lift and release cars to move them <u>2.</u> Permanent magnets cannot be turned on and off so cannot release cars <u>3.</u> Strength of magnetic fields of electromagnets can be varied to lift different masses <u>4.</u> Strength of magnetic fields of permanent magnets cannot be varied so can only lift certain masses
33. How can an electromagnet be used to move a magnetic material (5)	<u>1.</u> Turning the electromagnet on completes the circuit <u>2.</u> Current flows through the coil <u>3.</u> Magnetic field is produced around the coil and iron core becomes magnetised <u>4.</u> magnetic material is attracted to the electromagnet <u>5.</u> Switching off the current turns off the electromagnet and block is released

C) HIGHER TIER – The motor effect	
Key term/question	Definition/answer
34. What is the motor effect?	The force exerted by a conductor and a permanent magnet on each other
35. What does each part of Fleming's left-hand rule stand for?	<u>1.</u> First finger – Field <u>2.</u> seCond finger – Current <u>3.</u> ThuMb - thrust (M otion)
36. How to use Fleming's left-hand rule	<u>1.</u> Hold your thumb, first finger and second finger at right angles to each other. <u>2.</u> The first finger is lined up with magnetic field lines pointing from north to south <u>3.</u> The second finger is lined up with the current pointing from positive to negative <u>4.</u> The thumb shows the direction of the motor effect force on the conductor carrying the current 
37. How to increase the size of the force? (3)	<u>1.</u> Increasing the strength of the magnetic field <u>2.</u> increasing the current through the wire <u>3.</u> Increasing the length of the conductor
38. What is meant by magnetic flux density	Expresses the strength of a magnetic field. How many field (flux) lines are in an area
39. Equation for calculating the size of a force acting on a conductor	Force (N) = magnetic flux density (T) x current (A) x length (m) $F = BIl$
40 Unit for force	Newtons (N)
41. Unit for magnetic flux density	Tesla (T)
42. Unit for current	Amp (A)
43. Unit for length	Meters (m)
44. What tends to happen to a coil of wire when placed into a magnetic field?	It rotates

D) HIGHER TIER – Explaining how the motor effect works

45. Using a simple dc motor

- 1. When a direct current (dc) flows through a coil of wire, the current in the left hand part of the coil causes a downward force and current in the right hand part of the coil causes an upward force.
- 2. The coil rotates anti-clockwise because the forces are acting in opposite directions.
- 3. When the coil reaches a vertical position, it moves parallel to the magnetic field, producing no force. This would tend to make the motor come to a stop, but two features allow the coil to continue rotating:
 - The **momentum** of the motor carries it on round a little
 - A **split ring commutator** reverses the current direction every half turn



46. How a split ring

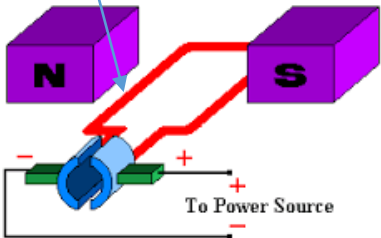
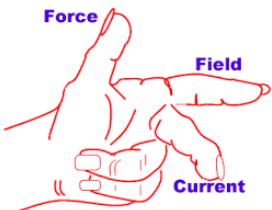
A split ring commutator reverses the current direction, which reverses the direction of the force. This is how it works:

- 1. A split ring commutator is a conducting ring with a gap between the two halves.
- 2. The direct current reaches the commutator by graphite or metal brushes, which maintains the connection while the commutator rotates freely.
- 3. By linking each end of the coil of wire to one half of the split ring commutator, you change the electrical contacts of the coil every half turn. This changes the direction of the current every half turn.
- 4. Therefore, the force acting on each arm of the loop will swap every half turn, allowing rotation to continue in the same direction.

47. Determining the direction that the motor will spin using Fleming's Left-Hand Rule

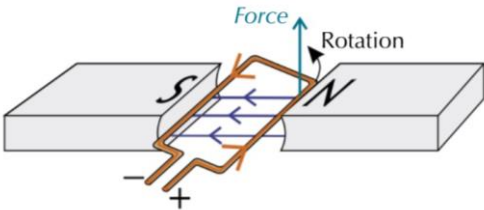
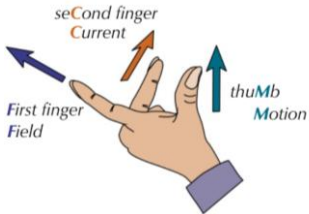
Example one for motor turning clockwise: Looking at the wire next to the North seeking pole of the magnet...

- **Magnetic field** (first finger) is pointing to the **right** (North to south).
- **Current flow** (second finger) is pointing **towards you**. (Remember, conventional flow is + to -)
- **Force/Motion** of the wire will be **upwards**
- So in this case, because the direction of force is upwards, the motor is turning **clockwise**



Example two for motor turning anti-clockwise: By swapping over the magnetic poles the motor will turn anti-clockwise

- **Magnetic field** (first finger) is pointing to the **left** (North to south).
- **Current flow** (second finger) is pointing **away from you**. (Remember, conventional flow is + to -)
- **Force/Motion** of the wire will be **upwards and away from you**.
- So in this case, the motor is turning **anti-clockwise**



Key term/question	Definition/answer
48. Direct current	Current that always flows in the same direction
49. Split ring commutator	A conducting ring with a gap between the two halves
50. How to increase the speed on an electrical motor? (3)	<u>1.</u> Increasing the current <u>2.</u> increasing the strength of the magnetic field <u>3.</u> Increasing the number of coils
51. Name two pieces of equipment that use the motor effect	Loudspeakers and headphones

BIG QUESTIONS

1 Introduction – What was the Cold War?

2 Why did relations between the Grand Alliance deteriorate during WW2?

3 Bombs and Telegrams - How and why did the wartime alliance unravel between 1945 and 1946?

4 What was the Iron Curtain and how was it formed?

5 How did the USA try and contain the spread of Communism?

6 How did the Soviets react to the Truman Doctrine and Marshall Plan?

7 How did the Soviets react to the Truman Doctrine and Marshall Plan?

8 What was the Berlin Crisis of 1948-1949?

9 How did the Cold War develop from 1948-55

10 What happened when Hungary threatened to leave the Warsaw Pact?

SUMMARY OF THE PERIOD

Following the end of World War 2 a new 'cold war' emerged between the Superpowers of the USA and the USSR and their allies. Very little, if any, fighting took place but it was a period of great tension as both sides developed huge arsenals including nuclear weapons. The early years saw great tension with both sides establishing policies or alliances to either contain the other side or try to spread their influence. There were numerous flashpoints across Europe and the Cold War spread to Asia with the outbreak of the Korean War. The arms race saw both sides develop Nuclear arsenals.

Key events and dates

February 1945: Yalta Conference

17th July – 2nd August 1945: Potsdam Conference

6th and 9th August 1945: USA drops atomic bombs on Japanese cities of Hiroshima and Nagasaki

2nd September 1945: World War 2 ends

March 1946: Winston Churchill makes his Iron Curtain speech

March 1947: President Truman outlines his Truman Doctrine

June 1947: The USA launch the Marshall Plan

September 1947: USSR establish COMINFORM

24 Jun 1948 – 12 May 1949: The Berlin Crisis and Berlin Blockade

4 April 1949: NATO established

August 1949: USSR successfully tests their first nuclear weapon

December 1949: By this date the majority of Eastern Europe were a number of USSR Satellite States

14 May 1955: Warsaw Pact signed

23 Oct 1956 – 10 Nov 1956: Hungarian uprising against Communist and USSR control

Key Vocabulary

Communism ideology in which all property is owned by the community and each person contributes and receives according to their ability and needs

Capitalism an economic and political ideology in which a country's trade and industry are controlled by private owners for profit, rather than by the state.

Superpowers A country that is powerful in terms of their wealth and military and will influence other countries and allies

Grand Alliance The name given to the alliance between USA, USSR and Britain during World War 2

Iron Curtain An imaginary divide between the Communist East and Capitalist West in Europe

Containment The idea of trying to stop containment from spreading beyond the USSR and Eastern Europe

Marshall Plan / Marshall Aid The American led programme of supplying aid such as money and resources to countries to help them resist communism

Truman Doctrine The American policy of doing whatever it takes to help countries that were resisting or threatened by Communism

Blockade To stop or prevent something

NATO The North Atlantic Treaty Organisation, an alliance of Western / Capitalist countries created to help protect each other against the threat of communism. Based on the idea of collective security

Warsaw Pact An alliance of Communist countries led by the USSR, in effect the USSR's version of NATO

Cominform The USSR's information Bureau that was used to help spread Communist ideology amongst other Communist nations

Comecon The organisation used to co-ordinate Communist economies, in effect the communist version of Marshall Aid

Satellite States country that is formally independent in the world, but under heavy political, economic and military influence or control from another country.



Big**Questions**

What was The Berlin Crisis of 1958-61?

How was The Berlin Crisis of 1958-61 resolved?

What Caused the Cuban Missile Crisis?

What happened during the CMC and what were the consequences?

Why did the Soviet Union invade Czechoslovakia in 1968 and what happened?

The Berlin Crisis 1958-61**Causes**

The Soviet Union's desire to remove the Western Allies from Berlin created a crisis in 1961.

Problems in East Germany – between 1949 and 1961 about 4 million East Germans fled to the West through Berlin.

The Berlin Ultimatum – 1958 Khrushchev accused allies of breaking the Potsdam Agreement.

Summit Meetings – 1959-61

May 1959 – failed to reach an agreement.

September 1959 – Camp David summit meeting.

May 1960 – Paris summit conference – 9 days before USSR shoot down an American spy plane. Relations sour
Vienna June 1961 – Khrushchev demand Western forces leave West Berlin. Kennedy refuses.

Peace talks between the USA and the Soviet Union broke down.

The Berlin Wall 1961.

13th August 1961 Khrushchev closed the borders between East and West Berlin.

A makeshift wall was built and would be replaced by a permanent one.

The USA and its Allies did nothing to stop the wall being built.

Consequences

Peace was maintained.

Permanent separation of East and West – the wall now acted as a symbol of division in Europe.

The flow of refugees was stopped.

Kennedy visited West Germany in 1963 – 'I am a Berliner'.

The Cuban Missile Crisis –**Causes**

The USA had strong economic interests in Cuba.

1959 Fidel Castro led a successful revolution to remove the pro-American government (Batista).

USA banned Cuban imports and refused to recognise the government due to its communist links .

The Bay of Pigs 1961 - USA attempt to overthrow Castro.

Total failure for President Kennedy.

This forced Cuba to grow closer to Khrushchev. – agreed to station Soviet nuclear weapons on Cuba.

The Cuban Missile Crisis – Main Events of October 1962

16th – Kennedy learns about the proposed missiles.

20th – Kennedy imposes naval blockade around Cuba.

23rd – Khrushchev sent letter to Kennedy.

24th – Khrushchev states their intention to use nuclear weapons in the event of war.

25th – Kennedy writes to Khrushchev asking for the withdrawal of weapons.

26th – Khrushchev responds – he will withdraw missiles in USA agrees to not to invade and removes missiles in Turkey.

27th – US spy plane shot down over Cuba. USA will withdraw missiles if kept secret.

28th – Khrushchev accepts the deal. These events become known as the 'Thirteen Days'.

Consequences

Hotline

The Limited Test Ban Treaty 1963

The Outer Space Treaty 1967

The Nuclear Non-proliferation 1968

Relations between the superpowers improved.

Czechoslovakia 1968

Causes

Communist Czech leader Antonin Novotny became unpopular. The Czech economy was in decline. Many wanted greater democracy promoted by Alexander Dubcek.

The Prague Spring

Key reforms introduced by Dubcek included –
Greater political freedom

Trade restrictions with the west removed

Capitalism introduced to the economy

Rights for Trade Unions

10 year program for political reform

These reforms encouraged demands for further radical reform.

Main Events- Soviet invasion

Brezhnev was worried Czechoslovakia would leave the Warsaw Pact – he was worried the reforms were going too far.

20-1st August Warsaw Pact troops invaded under Soviet orders.

Czechs tried to resist the invasion.

Dubcek was arrested and forced to accept the end of the movement towards democracy.

Consequences

Demonstrations against the Soviet invasion continued till April 1969.

January 1969 Jan Palach set himself on fire in protest at the Soviet invasion.

Soviets issued the **Brezhnev Doctrine**.

Some countries began to move away from the Warsaw Pact – Romania.

- The West condemned the invasion but sent no military force.

Key terms

- **Brinkmanship** - practice of pursuing a dangerous policy to the limits of safety before stopping
- **CIA** – Central Intelligence Agency. Foreign intelligence service for the USA.
- **Doctrine** – A belief or set of beliefs
- **Free City** – A city that is also an independent state.
- **Non-proliferation** - The prevention of an increase or spread of something
- **Socialism** – economic theory of social organisation that believes that the means of making, moving, and trading wealth should be owned or controlled by the community as a whole. In Marxist theory, it is a temporary state between capitalism and communism.
- **Summit conference** – A meeting of the heads of government.
- **Ultimatum** – A final demand

Big Questions

What was Détente and why did it occur?

Why did détente end in 1979?

What was the impact of Ronald Reagan on the Cold War?

How did Soviet thinking change under Mikhail Gorbachev?

Why did Soviet control of Eastern Europe end by 1991?

Timeline

1972 – SALT I signed
1974 – Nixon visits Moscow
1975 – Helsinki Agreements
1979 – Soviet invasion of Afghanistan
1980 – USA boycotts Moscow Olympics
1983 – Regan announces the Strategic Defence Initiative (SDI)
1984 – Soviet Union boycotts Los Angeles Olympics
1985 – Regan and Gorbachev meet for the first time at the Geneva Summit
1987 – Intermediate Nuclear Forces Treaty (INF)
1989 – Pulling down of the Berlin Wall
1990 – Collapse of the Soviet Union
1991 – Gorbachev resigns

Keywords

Détente – An attempt to reduce the tension between the USA and the Soviet Union

Glasnost – The name given to Gorbachev's policy of openness encouraging free expression and an end to censorship

Guerrilla War – Fighting in small groups against conventional forces, using methods of sabotage and sudden ambush

Helsinki Agreements – A series of agreements covering a range of global issues made by 35 countries in 1975

INF Treaty – An agreement to get rid of ground launched ballistic and cruise missiles by June 1991

MAD – Mutually Agreed Destruction The belief that nuclear weapons made each side feel more secure and less likely to attack.

Perestroika – The name given to Gorbachev's policy of economic restructuring.

What was Détente?

Causes

- The threat of war during the Cuban Missile Crisis and the hotline that was set up meant that there was no a desire to improve the relationship between the USA & the Soviet Union
- The Test Ban Treaty of 1963 also meant there was a willingness to look at nuclear weapons
- The USA's involvement in the Vietnam War meant that they could not afford to fight two wars

Key Events 1972 - 1975

- **Nixon visits Moscow** – Nixon agrees to take part in European Agreements and Brezhnev helped to ensure that peace was signed between USA and Vietnam in 1973.
- **SALT I** – Strategic Arms Limitation Talks seen as a key piece in nuclear arms control.
- Middle East: Yom Kippur War, 1973 – The USA and the Soviets worked together to ensure the war ended with a ceasefire in 1973
- **Nixon's visit to Moscow 1974** – It was agreed they would continue to work together to remove international tension and military conflict. Ultimate goal was disarmament.
- **The Helsinki Agreements** – SECURITY = recognition of Europe's borders and the existence of West Germany. COOPERATION = A call for closer economic, scientific and cultural links meaning closer political agreements. HUMAN RIGHTS = Each had to agree to respect basic freedoms such as thought, speech & religion.
- **SALT II** – The agreement was never ratified (made law) as there was increased concern over Soviet troops in Cuba. The Soviets invaded Afghanistan, worsening relations further.

Soviet Invasion of Afghanistan, 1979

Back ground

In 1978, a communist party in Afghanistan overthrew the government. Many members of the Muslim religious establishment were imprisoned, tortured or murdered. Lots of Muslims joined the *mujahideen* who wanted to overthrow the new communist government.

Causes

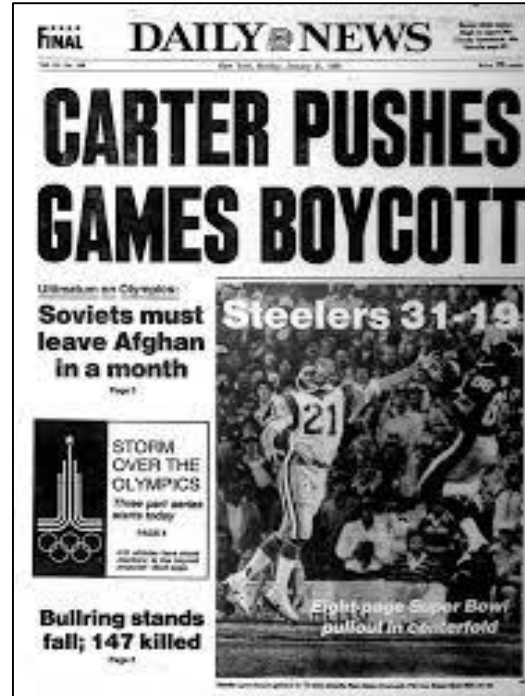
- Afghanistan didn't want to be dependent on the USSR and wanted a peace with the USA
- Brezhnev was concerned about Islamic fundamentalism and saw it as a threat to the Soviet Union
- The Soviets did not want to see the collapse of a neighbouring socialist state
- The Soviets did not want to see the growth of US influence on its borders

Main Events- Soviet invasion

- 50,000 Soviet troops were sent to Afghanistan to restore order and protect the communist government from the *mujahideen*.
- The leader of the Afghan government (Amin) was shot and replaced with Kamal who had been in exile in Moscow.
- Many Afghan soldiers deserted the government to join the *Mujahideen*
- The Kamal government needed 85,000 Soviet soldiers to keep it in power.

Consequences

- **The Carter Doctrine** – A policy that stated the USA would use military force if necessary to defend its national interests in the Gulf. It also promised US military aid to all the countries bordering Afghanistan. The USA cancelled all shipments of grain to the Soviet Union, US companies were forbidden to sell any technology equipment to them
- **End of Détente**. Relations were at their lowest point since the Cuban Missile Crisis.



Moscow Olympics, 1980

America pressured the Olympic Games Committee in the US to boycott the Moscow games in 1980. They agreed and 61 other countries followed the US's example. Some of these countries staged an alternative event called the 'Liberty Bell Classic'. In Russia the Soviet Union won 195 medals including 80 golds. The American press ridiculed the games and renamed the Russian mascot a gulag, a reference to Soviet prison camp inmates.

Gorbachev's New Thinking

The Cold War was draining the Soviet's wealth so it could not continue to develop economically. Combined with a falling standard of living for those living in the Soviet Union, there was unrest in the country. He wanted to create a 'NEW' modern style of Soviet socialism and brought in three main strategies:

- Initiating sweeping reforms in the Communist Party. Glasnost (openness, an end to censorship allowing free speech) and perestroika (restructuring all of the state owned businesses)
- Ending the Arms race with the USA and signing various arms reduction agreements
- Abandoning the Brezhnev Doctrine (The ability to invade countries that wanted to leave the Warsaw Pact) and stopping Soviet interference in European Satellite States like Poland and Czechoslovakia.

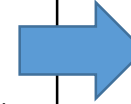
Regan and the 'Second Cold War'

Back ground

Following the end of Détente. Regan America's new president made it clear he intended to confront the Soviet Union when ever possible. He wanted to increase US defence spending and limit the increasing sphere of influence of the Soviets in Africa and Central America. Regan felt he could win a limited nuclear war against the Soviets using a strategy known as NUTS (Nuclear Utilisation Target Selection). This involved directing his weapons at the opponents warheads, not cities. Tension began to rise due to the acceptance of the MAD (Mutually Assured Destruction) theory, which was the belief that the more weapons each side had, the less likely they would be to attack.

The Strategic Defence Initiative (SDI or Sometimes called Star Wars)

- **SDI** was a plan for ground and space based , laser-armed anti-ballistic missile system. If deployed, this would shield against missiles launched at the US, destroying them in the process.
- Andropov, the Soviet leader accused the USA of preparing the first strike against them and inventing new ways to unleash a nuclear war.
- SDI would give the USA an advantage in any conflict and congress agreed more funds for the development of this programme.



Soviet response to SDI

- In order to compete, the Soviets would have to spend a lot of money they didn't have.
- Soviet economy already had problems, more spending could destroy it completely
- America had won the race to the moon in 1969 and in the 1980's developed the next generation of spacecraft – the space shuttle.
- The Soviets were behind America in computer technology. In the 1980s computer development boomed in the US but the Soviets had been concerned they could undermine the Communist Party.

The Collapse of the Soviet Union

Back ground

Gorbachev issued the Sinatra Doctrine in 1988. This meant that all countries in the Warsaw Pact could decide what path to take, with the Soviet Union accepting the rejection of Communist governments.

The break up of the Soviet Empire 1988 - 91

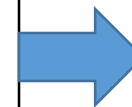
- Poland began their reforms first in 1989. A non Communist government was elected
- In Hungary they formed a range of political parties in 1989 and free elections proposed for 1990
- Gorbachev began to withdraw troops from Hungary
- Hungary opened it's border with Austria creating the first hole in the Iron Curtain.
- East Germans could now move freely into West Germany.

Fall of the Berlin Wall

- Demonstrations in East Germany in 1989 and calls to change the system of government as they had been slow to adapt to the changes allowed by Gorbachev
- 4 November mass demonstrations demanded democracy and free elections
- Germans moved through Hungary to get to West Germany which forced the East Germans announced greater freedoms of travel
- 9 November the government announced the opening of border crossing into West Germany
- The people began to dismantle the Berlin Wall
- West and East Germany were formally reunited on 3 October 1990

Consequences

- Tension in the world eased by the day
- The power of the Soviet Union was dwindling quickly
- The new Germany joined NATO IN 1991
- The Warsaw Pact was dissolved
- Gorbachev was widely respected for his willingness to reform and awarded the Nobel peace prize in 1990



End of the Warsaw Pact and the Cold War

As Soviet control of Eastern Europe fell away, it became clear that the Warsaw Pact could not survive. First Poland, then Hungary and finally East Germany all rejected communism and the pact no longer served any purpose. George Bush (USA) and Gorbachev announced at the Malta Summit that the Cold War was over. It was the fall of the Soviet Union in December 1991 that finally ended the rivalry between communism in the East and capitalism in the West.

BIG QUESTIONS

Paper 1: Physical

1. How do we compare the two earthquakes from a HIC and LIC?
2. Why was the damage in the Philippines from Typhoon Haiyan so bad?
3. Why is the UK's weather becoming so extreme?
4. When will the Amazon Rainforest become respected and protected?
5. Why is human activity in cold environments both opportunistic and disadvantageous?
6. What coastal management techniques work to protect the coastline?
7. What flood managements techniques work to prevent flooding?

Homework Links

1. GCSE pods
2. CGP revision guides
3. GCSE BBC Bitesize
4. Internet Geography
5. Seneca
6. Physicsandmathstutor.com
7. Quizzlets

Paper 2: Human

1. What are the social, economic and environmental challenges to living in Lagos?
2. How has Shoreditch in London gone through gentrification?
3. How did the Olympics change London?
4. How can tourism reduce the development gap in Jamaica?
5. How have trading relationships changed Nigeria's economy?
6. What are the impacts of sustainable industry in the UK?
7. What are the positives and negatives of growing food using a large-scale agricultural system?
8. Can food supply be made more sustainable?

Step Up Geography Exam Preparation

Unit 1: Physical Geography



This paper is divided into 3 sections.
You DO NOT answer all the questions.

Section A – The Challenge of Natural Hazards

- Tectonic Hazards
 - Examples: Nepal 2015 and Chile 2010 earthquakes
- Weather Hazards
 - Examples: Typhoon Haiyan 2013
- Climate Change
 - Example: Storm Gerrit 2023

Q.1

Section B – The Living World

- Ecosystems
 - Example: Blean Woods, Canterbury
- Tropical Rainforests
 - Case Study: Amazon Rainforest, Brazil
- Cold Environments
 - Case Study: Svalbard



DO NOT answer Hot Deserts

Q.2

Section C – Physical Landscapes in the UK

- Coastal Landscapes
 - Example: Swanage landforms
 - Example: Reculver Management
- River Landscapes
 - Example: River Severn Estuary
 - Example: Banbury Flood Management

Q.3

Q.4



DO NOT answer Q.5. Glacial Landscapes

Online Revision Links

[GCSE Geography - AQA - BBC Bitesize](#)
[AQA GCSE Geography - Internet Geography](#)
[Seneca - Learn 2x Faster \(senecalearning.com\)](#)
[AQA GCSE Geography Revision \(physicsandmathstutor.com\)](#)



Strategies

Key
word Flash
Cards

Example
Fact Files

Case Study
Mind Maps

AQA
practice
exams

Unit 2: Human Geography

This paper is divided into 3 sections.
You DO NOT answer all the questions.



Section A – Urban Issues and Challenges

- Urbanisation and Megacities
 - Case Study: LIC/NEE Lagos, Nigeria**
 - Example urban planning: Makoko, Lagos
 - Case Study: HIC London, UK**
 - Example regeneration: Olympic Legacy

Q.1

Sustainable Urban Living

Section B – The Changing Economic World

- Development Gap
 - Example tourism: Jamaica
- Case Study: NEE Nigeria**
- Economy of the UK
 - Example: Tor Quarry, Somerset

Q.2

Section C – The Challenge of Resource Management

- Global resource management
- Resource demand in the UK: Food, Water and Energy

> Food Option

- Food security and deficit
- Increase food supply
 - Example: IBIS
 - Example UK: Thanet Earth, Kent
- Sustainable food supplies
 - Example LIC: Makueni country, Kenya

Q.4

Q.3



DO NOT answer Option 5 Water
DO NOT answer Option 6 Energy

Paper 3 – Geographical Skills: Fieldwork Whitstable, Kent

Physical Enquiry

- The dominant direction of longshore drift is from east to west.
- Pebble roundness increases with distance from the sea.

Human Enquiry

- Whitstable high street is not a clone high street.
- The harbour area performs two functions (tourism and fishing) that are of equal importance.

- Geographical Skills and Issue Evaluation (Released April 2023)

Top tips for exam success

- Understand the specification
- Understand command words
- Understand the question types
- Deconstruct questions – BUG
- Understand the marking
- Make full use of the resources
- Learn and use your examples and case studies
- Write to the space and time available
- Think and plan before you write
- Look after yourself!

GCSE command words and what they mean

Assess...	Consider all the relevant factors/arguments, weigh them up and come to a conclusion
Calculate...	Work out the value of something
Compare...	Describe similarities and differences
Complete...	Finish the task by adding information
Describe...	Write what you can see in a figure (pattern, distribution or process) OR set out the main points of something.
Discuss...	Present key points about different ideas, or strengths and weaknesses of an idea
Evaluate...	Write about the good and bad points about something, and come to an overall conclusion about it.
Explain...	Give reasons why or how
Give...	Write an answer from recalling information
Identify...	Name/point out
Justify...	Give reasons for the validity of a view/idea and support with evidence
Outline...	Summarise the main points of something
State...	Write in clear terms
Suggest...	Give possible reasons
To what extent...	Form and express a view. What is the importance/success of a strategy, scheme, project etc.

KEY: A01 – Recall and knowledge
A02 – Explaining and linking
A03 – Applying knowledge
A04 – Geographical skills

BIG QUESTIONS

Can you identify words that link to your chosen exam question?

How can the study of other artists help you find your own direction in the development of ideas?

Explain why primary sources are the richest form of research.

How can Secondary sources enrich the development of ideas?

Can you list 5 different ways you could record your observations of the subject matter?

Why should you plan a wide range of ideas before selecting a final one?

How can the refining process help you to fully realise intentions?

Overarching Big Question

The externally set assignment provides students with the opportunity to demonstrate, through an extended creative response, their ability to draw together different areas of knowledge, skill and/or understanding from initial engagement with their selected starting point through to their realisation of intentions in the 10 hours of supervised time.



Key Skills

RECORD

I will independently record...

- images and information appropriate to my chosen exam question
- using wet, dry and digital media
- examples of artists work appropriate to my chosen exam question
- information about artists, showing appreciation of how they use media and techniques to create meaningful work.

DEVELOP

I will independently develop...

- my observation skills using a range of media, techniques and processes.
- artwork and ideas from primary sources
- my knowledge and understanding of artist styles and techniques
- my drawing and planning skills
- ideas in response to a given theme, linking to artists work
- my higher order thinking skills

REFINE

I will independently...

- experiment making the most of media and techniques relevant to my intentions
- select ideas to adapt and improve e.g. adjustments to size, colour and composition.
- develop a piece of work from one media into another

EVALUATE

I will independently...

- analyse and reflect on the development of my own work, through annotation making connections to artists and suggesting ways I could improve.
- evaluate artists using analytical writing skills and forming opinions.

PRESENT OUTCOMES

I will independently...

prepare a plan for a final piece to be completed during the 10-hour exam.



Homework Links

Develop preparatory work at home for a minimum of 2 hours per week...

- Research of artists *including studies, info, evaluation*
- Research of images (*using mind map*)
- Collect primary sources
- Drawings
- Annotation
- Ideas



Key Vocabulary

*Tone/Texture/Shape/
Colour/Form/Scale/
Media/Technique/
Composition/Research/
Primary source/
Secondary Source*

I will be expected to recall keywords learned in previous projects and use them in the appropriate context.

EVALUATING ARTISTS' WORK

1. Describe the piece of art you are looking at
2. What is the name of the artist or type of art?
3. What art movement or culture does the art link to?
4. Research and list 5 or more things about the artist or culture?
5. What important things have happened in the country that the art comes from?
6. What has influenced the art E.g. other artists, people, personal experiences, society, culture, politics, gender, colour, pattern, movement, religion, travel, places, objects etc.
7. Describe the materials used to make the art
8. How has the art been produced?
9. What is being communicated through the art?
10. Which of these words best describes the mood of the picture? EMOTIONAL/POWERFUL/BUSY/SLOW/PEACEFUL/WARM/COLD/HAPPY/SAD/CALM/INTENSE/SCARY can you think of any other words?
11. What do you like or dislike about the picture? Explain your reasons...

ANNOTATING YOUR OWN WORK

- In this artwork I was trying to...
- The artist/culture that has influenced my work is...
- The source I have used is...
- I found the source I used at...
- In this artwork I used the technique of...
- The media I have used is...
- I like/dislike this piece because...
- My idea links to the theme because...
- I can improve this piece by...
- I could develop this work further by...

Annotate means to explain your own creations

Artist evaluation is when you write about the artist

Project evaluation is written about the whole project at the end

END OF PROJECT EVALUATION

1. Describe each stage of the project from start to finish
2. What media did you use to produce your work? E.g. Paint/Pencil/Clay etc.
3. Describe how you used different techniques in your project? E.g. painting/drawing/modelling with clay etc.
4. Which artist's culture have you looked at?
5. Write down 2 or more similarities between your work and the artist's work.
6. Which piece of your work best shows the Artist's style or the influence of another culture and why?
7. Describe some of your own ideas...
8. Have you used a primary or a secondary source?
9. Have you included the secondary source in your work? Where did you find it?
10. Imagine your final piece was displayed in a public place.... Describe the effect looking at your work might have on people and society. E.g. relax them, make them feel sad, curious, happy, angry, thoughtful, surprised, confused, nostalgic etc. explain why e.g. because of your use of colour, images, content, arrangement? etc.
11. Explain any other influences on your work e.g. personalities (*including your own*), places, memories, objects, politics, events, activities, religion, fact, fiction etc.
12. Describe how your work links to the project theme?
13. Explain what you have done well...
14. Explain how you could improve...
15. What would you do differently, if you were to repeat any part of this project?

Big Questions

- 1) How do different extrinsic factors influence the risk and severity of injury?
- 2) How do different intrinsic factors influence the risk and severity of injury?
- 3) What are the key components of a warm up?
- 4) What are the physiological and psychological benefits of a warm up?
- 5) What are the key components and physiological benefits of a cool down?
- 6) What are the types and causes of acute injuries?
- 7) What are the types and causes of chronic injuries?
- 8) How can you reduce the risk and severity of an injury or medical condition?
- 9) What are common responses and treatments to medical conditions?
- 10) What are the common causes, symptoms and treatments of medical conditions?

Topic Area 1: Different factors which influence the risk and severity of injury**Key Terms:**

- ✓ **Extrinsic factors** – where the factor or risk of injury comes from outside the body
- ✓ **Intrinsic factors** – where the factor or risk of injury comes from within the body
- ✓ **Contact sports** – sports where physical contact between performers is an accepted part of play
- ✓ **Non-contact sports** – sports where participants compete alternately, or are physically separated, or the rules detail no contact.
- ✓ **Hypothermia** – a dangerous drop in body temperature below 35°C.
- ✓ **Veterans** – performers above a certain age that is specific to the sport.
- ✓ **Psychological factors** – mental factors that affect a performer.
- ✓ **Motivation** – the drive to do something.
- ✓ **Arousal** – level of activation or excitement.
- ✓ **Anxiety** – negative emotional state due to nervousness.
- ✓ **Stress** – the feelings we get when we find it difficult to cope with the demands placed on us.
- ✓ **Confidence** – belief in your own ability to master a situation.
- ✓ **Aggression** – Intention to cause harm.
- ✓ **Mental rehearsal** – going over a skill in the mind before performance.

Topic Area 2: Warm up and cool down routines**Key Terms:**

- ✓ **Warm up** - exercises to prepare the body for exercise so that the chances of injury or ill effects are reduced.
- ✓ **Dynamic stretches** – active stretching exercises.
- ✓ **Adrenaline** - hormone that prepares the body for exercise.
- ✓ Lactic Acid - waste product of anaerobic exercise; it causes fatigue.
- ✓ **Anaerobic** – without oxygen; oxygen is not used to produce energy during high-intensity, short-duration anaerobic exercise.
- ✓ **Cool down** - easy exercise done after a more intense activity to allow the body to gradually move to a resting condition.
- ✓ **Maintenance stretches** - stretches designed to just maintain flexibility.
- ✓ **Static stretches** – stretches where the stretched position is held for many seconds in an attempt to improve flexibility.
- ✓ **Proprioceptive neuromuscular facilitation (PNF)** - advanced form of flexibility training, involving both the stretching and contracting of the muscles being targeted.
- ✓ **Delayed onset muscle soreness** – muscle pain that starts a day or two after an exercise workout.

Topic Area 3: Different types and causes of sports injuries**Key Terms:**

- ✓ **Acute injuries** – injuries caused by impacts or collisions.
- ✓ **Chronic injuries** - injuries caused by continuous stress.
- ✓ **Soft tissue injuries** - injuries to muscles, tendons or ligaments.
- ✓ **Hard tissue injuries** – injuries to part of the skeletal system, such as fractures or dislocations.
- ✓ **Strains** - injuries to muscles.
- ✓ **Sprains** - injuries to ligaments.
- ✓ **Ligaments** - tissue that connects bone to bone and strengthens joints.
- ✓ **Abrasion** - surface damage to the skin; grazes.
- ✓ **Cut** - skin wound where the tissues of the skin become separated.
- ✓ **Laceration** - a torn or jagged wound caused by a sharp object.
- ✓ **Contusion** - bruise caused by blood leaking into the surrounding area.
- ✓ **Blister** - bubble on the skin caused by friction.
- ✓ **Fracture** - partial or complete break in a bone.
- ✓ **Dislocation** - when a bone is dislodged from its position in a joint.
- ✓ **Concussion** - head injury in which the brain is shaken inside the skull.
- ✓ **Tendonitis** - inflammation of the tendons.
- ✓ **Epicondylitis** - inflammation of an epicondyle of a bone.
- ✓ **Stress fracture** – tiny cracks in a bone caused by repetitive force, often from overuse.

Big Questions

- 1) How do different extrinsic factors influence the risk and severity of injury?
- 2) How do different intrinsic factors influence the risk and severity of injury?
- 3) What are the key components of a warm up?
- 4) What are the physiological and psychological benefits of a warm up?
- 5) What are the key components and physiological benefits of a cool down?
- 6) What are the types and causes of acute injuries?
- 7) What are the types and causes of chronic injuries?
- 8) How can you reduce the risk and severity of an injury or medical condition?
- 9) What are common responses and treatments to medical conditions?
- 10) What are the common causes, symptoms and treatments of medical conditions?

Topic Area 4: Reducing risk, treatment and rehabilitation of sports injuries and medical conditions

Key Terms:

- ✓ **Hazard** - something that can cause harm.
- ✓ **Risk** - the likelihood of danger.
- ✓ **Risk assessment** – careful examination of what, in relation to a sports activity, could cause harm to people.
- ✓ **Electrocardiogram (ECG)** - technology used to detect the rhythm and electrical activity within the heart.
- ✓ **Emergency action plan (EAP)** - written document identifying what action to take in the event of an emergency at a sporting event.
- ✓ **SALTAPS** - acronym for see, ask, look, touch, active, passive, strength.
- ✓ **DRABC** - acronym for danger, response, airway, breathing and circulation.
- ✓ **Recovery position** – position for an unconscious person that keeps their airway clear and open.
- ✓ **PRICE** - acronym for protection, rest, ice, compression, elevation.
- ✓ **Ultrasound** - use of high frequency sound waves to diagnose and treat injuries.
- ✓ **Electrotherapy** - use of electrical energy to treat injuries.
- ✓ **Hydrotherapy** - use of water to improve blood circulation, relieve pain and relax muscles.
- ✓ **Cryotherapy** - use of cold temperatures to treat injuries.
- ✓ **Contrast therapy** – use of quickly changing temperatures from hot to cold and back again to treat injuries.
- ✓ **Analgesics** – medication used to relieve pain.
- ✓ **Cast** - hard fibreglass or plaster casing designed to prevent broken bones from moving.
- ✓ **Splint** - plastic or fibreglass support for a limb injury.
- ✓ **Sling** - support, usually of folded cloth, designed to immobilise and rest the arm.

Topic Area 5: Causes, symptoms and treatment of medical conditions

Key Terms:

- ✓ **Asthma** - a condition in which the airways narrow and swell, which can make breathing difficult.
- ✓ **Inhaler** - device that allows medicine to be breathed in.
- ✓ **Nebuliser** - machine that allows medicine to be breathed in.
- ✓ **Glucose** - simple sugar found in blood used as an energy source.
- ✓ **Insulin** - a hormone that lowers blood glucose levels.
- ✓ **Diabetes** - condition in which blood sugar levels are not regulated by the body effectively.
- ✓ **Ketones** – chemicals produced by the liver during fat breakdown.
- ✓ **Diabetic ketoacidosis (DKA)** - a condition caused by excess ketones in the blood.
- ✓ **Insulin-dependent** - another name for Type 1 diabetes.
- ✓ **Insulin-resistant** – another name for Type 2 diabetes.
- ✓ **Hypoglycaemia** - low blood sugar level.
- ✓ **Hyperglycaemia** – high blood sugar level.
- ✓ **Epilepsy** – abnormal brain activity that causes recurring seizures.
- ✓ **Seizures** - bursts of electrical activity that temporarily affect how the brain works.
- ✓ **Triggers** - things that make epileptic seizures more likely.
- ✓ **Fatigue** - a feeling of overwhelming tiredness.
- ✓ **Anti-epileptic drugs (AEDs)** - medicine taken to help control seizures.
- ✓ **Ketogenic diet** - a diet high in fats and low in carbohydrates and proteins.
- ✓ **Sudden cardiac arrest (SCA)** - a condition in which the heart suddenly and unexpectedly stops beating.
- ✓ **Commotio cordis** – a sudden trauma, such as a blow to the chest directly over the heart at certain points in the heartbeat cycle, that can cause sudden cardiac arrest.
- ✓ **Electrolytes** – minerals found in blood, urine and sweat that carry an electric charge when dissolved in water.

Big Questions

- 1) How are components of fitness relevant to different sports?
- 2) Can you justify why different components of fitness are relevant for different sports?
- 3) What fitness tests are used for each component of fitness?
- 4) Can you apply the components of fitness to a skilled performance?
- 5) What are the principles of training?
- 6) What are SMART goals?
- 7) What are methods of training and their advantages/disadvantages?
- 8) What factors should you consider when designing a fitness training programme?
- 9) How do you apply the principles of training to a fitness training programme?
- 10) How do you plan a fitness training programme?
- 11) How do you record your results from a fitness training programme?
- 12) What are the strengths and areas for improvement for your fitness training programme?

Topic Area 1: Components of fitness applied in sport

Key Terms:

- ✓ **Cardiovascular endurance** - the ability of the heart and lungs to get oxygen to the working muscles for use by the body.
- ✓ **Muscular endurance** - the ability of a muscle to sustain repeated contractions.
- ✓ **Aerobic** - with oxygen; oxygen is used to produce energy during low intensity, long-duration aerobic exercise.
- ✓ **Speed** - the maximum rate at which an individual is able to perform a movement.
- ✓ **Strength** - the extent to which a muscle or muscle group can contract against resistance.
- ✓ **Power** - the exertion of rapid muscular strength; it can be remembered as strength x speed.
- ✓ **Agility** - the ability to move and change direction quickly while maintaining control.
- ✓ **Balance** - the ability to maintain a position; this involves maintaining the centre of mass over the base of support.
- ✓ **Flexibility** - the range of movement possible at a joint.
- ✓ **Co-ordination** - the ability to use two or more body parts together (simultaneously) smoothly and efficiently.
- ✓ **Reaction time** - the time taken from the onset of a stimulus to the start of the reactive movement.
- ✓ **Maximum oxygen uptake (VO2 Max)** – maximum volume of oxygen that can be consumed per minute / unit of time.
- ✓ **Protocol** - the accepted or established procedure for conducting a test.
- ✓ **Validity** - refers to how well a fitness test measures the component of fitness that it aims to test.
- ✓ **Reliability** - a fitness test is reliable if it can be repeated and gives similar results each time.
- ✓ **Maximal tests** – fitness tests that require maximal effort in order to produce a valid, comparable result.
- ✓ **Sub-maximal tests** - fitness tests that do not require maximal exertion.
- ✓ **PAR-Q** - physical activity readiness questionnaire.

Topic Area 2: Principles of training in sport

Key Terms:

- ✓ **SPOR** - principles of training: specificity, progression, overload and reversibility.
- ✓ **Specificity** - making training specific to the movements, skills and muscles that are used in the activity.
- ✓ **Progression** – gradually making training harder as it becomes too easy.
- ✓ **Overload** - working harder than normal.
- ✓ **Reversibility** – ‘use it or lose it’. If you stop training, you will lose fitness.
- ✓ **FITT** - principles of overload: frequency, intensity, time and type.
- ✓ **SMART** - principles of goal setting: specific, measurable, achievable, realistic and time bound.
- ✓ **Continuous training** - any activity or exercise that can be continuously repeated without suffering undue fatigue.
- ✓ **Aerobic training zone** – the optimal zone of training to make aerobic gains in the body to improve cardiovascular endurance and stamina.
- ✓ **Fartlek training** - ‘speed play’, which generally involves running, combining continuous and interval training with varying speed and intensity.
- ✓ **Interval training** – any training that involves periods of work and rest.
- ✓ **Circuit training** - a series of exercises performed at work stations with periods of work and rest.
- ✓ **Plyometric training** - repeated exercises such as bounding, hopping or jumping over hurdles, which are designed to create fast, powerful movements.
- ✓ **Eccentric contraction** - when a muscle contracts and lengthens.
- ✓ **Concentric contraction** - when a muscle contracts and shortens in length.
- ✓ **Resistance training** - training that involves working against some kind of force that ‘resists’ the movement.
- ✓ **Hypertrophy** - an increase in muscle size as a result of training.
- ✓ **High-intensity interval training (HIIT)** – training that involves periods of very high-intensity work and rest.

Big Questions

- 1) How are components of fitness relevant to different sports?
- 2) Can you justify why different components of fitness are relevant for different sports?
- 3) What fitness tests are used for each component of fitness?
- 4) Can you apply the components of fitness to a skilled performance?
- 5) What are the principles of training?
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- 9) How do you apply the principles of training to a fitness training programme?
- 10) How do you plan a fitness training programme?
- 11) How do you record your results from a fitness training programme?
- 12) What are the strengths and areas for improvement for your fitness training programme?

Topic Area 3: Organising and planning a fitness training programme

Key Terms:

- ✓ **One rep max** – the maximum weight that can be lifted once (one repetition).
- ✓ **Adaptability** - flexibility to adapt a programme if, for any reason, the session being performed cannot be followed precisely.
- ✓ **Objective measures** – facts that provide figures/ numbers, which can allow a performer to monitor improvement.



Figure 2.36 One rep max refers to the maximum weight that can be lifted once

Topic Area 4: Evaluate own performance in planning and delivery of a fitness training programme



Figure 2.38 Stretching forms a vital part of warm up and cool down routines

Target area	Suitable activity
Cardiovascular endurance/ stamina	Specific exercises: any aerobic activity, for example cycling, swimming, jogging, walking, rowing Overload intensity: 60–80 per cent of maximum heart rate (220 – age) Time: 20 minutes or more of activity, three to four times per week
Muscular strength	Specific exercises: use of high resistance, for example weights, resistance machines, body weight Overload intensity: 70 per cent or more of one rep max (maximum lift); three sets of six to eight repetitions Time: 30 minutes or more
Muscular endurance	Specific exercises: use of low resistance, for example weights, resistance machines, body weight Overload intensity: less than 70 per cent of one rep max (maximum lift); three to four sets of 10–15 repetitions Time: 30 minutes or more
Agility	Specific exercises: shuttles or circuits that involve speed work while changing direction, for example sprinting round cones, ladder running Overload intensity: work : rest ratio of 1 : 3 (30 seconds work with 90 seconds rest between different exercises) Time: 30 minute sessions, two or three times per week
Speed	Specific exercises: use speed ladders, sprints, interval sprints Overload intensity: work : rest ratio of 1 : 3 (30 seconds work with 90 seconds rest between different exercises) Time: 30 minutes or more
Power	Specific exercises: interval training – high-intensity, short sharp activities; acceleration sprint training; plyometric training, for example box jumping and hurdle jumps Overload intensity: for example, box jumps with three to six sets of 8–15 repetitions, depending upon the stress of the exercise being done; sprints with a work : rest ratio of 1 : 3 (30 seconds work with 90 seconds rest between sprints) Time: 30 minutes or more
Balance, flexibility, co-ordination or reaction time	Specific exercises: use of predesigned circuit to include flexibility stretches, co-ordination drills or balancing exercises Overload intensity: two to three sets of 12 reps with 30-second recovery intervals Time: 30 minutes or more

Big Questions

- 1) What is the function and role of the cardio-respiratory system?
- 2) How is technology used to inform us about the cardio-respiratory system?
- 3) What are the components and role of the musculo-skeletal system?
- 4) How is technology used to inform us about the musculo-skeletal system?
- 5) What are the short-term effects of exercise on the cardio-respiratory system?
- 6) What are the short-term effects of exercise on the musculo-skeletal system?
- 7) What are the long-term effects of exercise on the cardio-respiratory system?
- 8) What are the long-term effects of exercise on the musculo-skeletal system?

Topic Area 1: The cardio-respiratory system and how the use of technology supports different types of sports and their intensities

Key Terms:

- ✓ **Atria** - upper chambers of the heart that collect blood from veins.
- ✓ **Ventricles** – lower chambers of the heart that pump blood out through arteries.
- ✓ **Valves** - prevent the backflow of blood.
- ✓ **Deoxygenated** – venous blood (in veins) that does not carry oxygen.
- ✓ **Oxygenated** - arterial blood (in arteries) that carries oxygen.
- ✓ **Arteries** - blood vessels that mainly carry oxygenated blood away from the heart.
- ✓ **Capillaries** - tiny, thin walled blood vessels that join arteries (which carry blood away from the heart) and veins (which carry blood back to the heart).
- ✓ **Alveoli** - tiny air sacs in the lungs.
- ✓ **Veins** - blood vessels that mainly carry deoxygenated blood back to the heart.
- ✓ **Trachea** - tube connecting the mouth and nose to the lungs.
- ✓ **Lungs** - large spongy organs in chest; used for gas exchange.
- ✓ **Bronchi** - airways that lead from the trachea into the lungs.
- ✓ **Bronchioles** - air passages inside the lungs that connect the bronchi to the alveoli.
- ✓ **Diaphragm** - dome-shaped muscle causing inhalation and exhalation.
- ✓ **Radial pulse** - heart rate that can be felt at the wrist.
- ✓ **Carotid pulse** - heart rate that can be felt at the neck.
- ✓ **Vasoconstriction** – reduction in the diameter of a blood vessel to reduce blood flow through that vessel.
- ✓ **Vasodilation** - widening in the diameter of a blood vessel to increase blood flow through that vessel.
- ✓ **Cardiac output** – the volume of blood that the heart is able to pump out in one minute.
- ✓ **Stroke volume** – the volume of blood that leaves the heart during each contraction.

Topic Area 2: The musculo-skeletal system and how the use of technology supports different types of sports and their movements

Key Terms:

- ✓ **Clavicle** - the collarbone.
- ✓ **Scapula** - the shoulder blade.
- ✓ **Humerus** - bone in the upper arm.
- ✓ **Radius** - bone of the forearm; attaches to the thumb side of the wrist.
- ✓ **Ulna** - bone of the forearm; forms the point of the elbow.
- ✓ **Cranium** - skull bone, which surrounds the brain.
- ✓ **Ribs** - bones surrounding the heart and lungs, forming the chest cavity.
- ✓ **Sternum** - flat bone at the front of the chest, sometimes called the breastbone.
- ✓ **Vertebrae** - many single bones joined together to form the backbone.
- ✓ **Femur** - long bone of the thigh or upper leg, which extends from the hip to the knee.
- ✓ **Tibia** - the shin bone; forms knee joint with the femur.
- ✓ **Fibula** - bone in the lower leg that forms the ankle.
- ✓ **Patella** - the kneecap; covers the knee joint.
- ✓ **Deltoids** - muscles on shoulder joint that move the upper arm.
- ✓ **Trapezius** - muscle at the top of the back that moves the scapula and head.
- ✓ **Latissimus dorsi** – muscle at the side of back that moves the upper arm.
- ✓ **Pectorals** - muscles in the chest that move the upper arm.
- ✓ **Biceps** - muscles at the front of the upper arm.
- ✓ **Triceps** - muscles at the back of the upper arm.
- ✓ **Abdominals** – stomach muscles that protect internal organs.
- ✓ **Gluteals** - buttock muscles, which are used when running.
- ✓ **Hamstrings** - muscles at the back of the upper leg.
- ✓ **Quadriceps** - muscles at the front of the upper leg.
- ✓ **Gastrocnemius** - one of the calf muscles; used in walking.
- ✓ **Soleus** - one of the calf muscles; used in walking.

Big Questions

- 1) What is the function and role of the cardio-respiratory system?
- 2) How is technology used to inform us about the cardio-respiratory system?
- 3) What are the components and role of the musculo-skeletal system?
- 4) How is technology used to inform us about the musculo-skeletal system?
- 5) What are the short-term effects of exercise on the cardio-respiratory system?
- 6) What are the short-term effects of exercise on the musculo-skeletal system?
- 7) What are the long-term effects of exercise on the cardio-respiratory system?
- 8) What are the long-term effects of exercise on the musculo-skeletal system?

Key Terms (continued Topic 1):

- ✓ **Systolic blood pressure** - blood pressure when the heart is contracting.
- ✓ **Diastolic blood pressure** - blood pressure when the heart is relaxed.
- ✓ **Inhalation** - breathing in.
- ✓ **Exhalation** - breathing out.
- ✓ **Intercostal muscles** - muscles located between the ribs.
- ✓ **Diffusion** - the movement of a gas from an area of high concentration to an area of low concentration.
- ✓ **Wearable technology** - technology worn on the body during exercise to provide data.
- ✓ **Laboratory-based technology** - the use of technology inside a laboratory to provide data.
- ✓ **Field-based technology** - technology that can be used to provide data outside of a laboratory in the setting where sports take place, for example a football pitch.
- ✓ **Spirometer** - machine that produces a spirometry trace of breathing volumes.
- ✓ **Vital capacity** - amount of air expelled from your lungs when you take a deep breath and then exhale fully.
- ✓ **Pulse oximeter** - device used to measure how efficiently oxygen is being carried to the extremities by the heart (blood oxygen level).



Figure 3.18 Smartwatch

Topic Area 3: Short-term effects of exercise on the cardio-respiratory and musculo-skeletal systems

Key Terms:

- ✓ **Anticipatory rise** - slight increase in heart rate before exercise.
- ✓ **ROM** - range of movement.

Key Terms (continued Topic 2):

- ✓ **Synovial joint** - a freely moveable joint.
- ✓ **Ball and socket joint** - ball shaped end of bone fits into the socket of another, for example the hip.
- ✓ **Hinge joint** - end of bone fits against another bone allowing movement in only one direction, for example the knee.
- ✓ **Gliding joint** - one bone can slide over another, for example the carpals in the wrist.
- ✓ **Pivot joint** - rounded end of one bone fits into a ring formed by the other bone, for example the vertebrae of the neck, which allow head rotation.

Topic Area 4: Long-term effects of exercise on the cardio-respiratory and musculo-skeletal systems

Key Terms:

- ✓ **Fast twitch fibres** - muscle fibres that contract quickly and/or with high force; used during high-intensity work.
- ✓ **Slow twitch fibres** - muscle fibres that contract with a low force but do not fatigue quickly.
- ✓ **Bradycardia** - decrease in the resting heart rate because of training.
- ✓ **Goniometer** - device used to measure flexibility (range of movement at a joint).
- ✓ **Lung capacity** - the amount of air the lungs can hold.
- ✓ **Tidal volume** - the amount of air breathed in and out at rest.
- ✓ **Bone density** - the amount of bone mineral in bone tissue.
- ✓ **Capillarisation** - an increase in the number of capillaries as a result of endurance training.
- ✓ **Heart disease** - when the heart's blood supply is blocked or interrupted by a build-up of fatty substances in the coronary arteries that supply the heart with blood.
- ✓ **Heart attack** - medical emergency in which the supply of blood to the heart is suddenly blocked.

Big Questions

1. What guides Buddhists?
2. What is the Buddhist understanding of the Samsara?
3. What are the three marks of Existence?

What is the middle way?

The buddha believed that in order to achieve enlightenment you need to find a middle way. This means that you don't need to have loads of luxuries but do need to have your necessities. For example, you don't need a designer bag, but you do need food. The buddha believed that this helps you focus on the truth of life rather than getting distracted by materials.

What are the three Refuges? (three Jewels)

To take refuge means to find safety. So Buddhist can find comfort and safety in the 3 jewels:

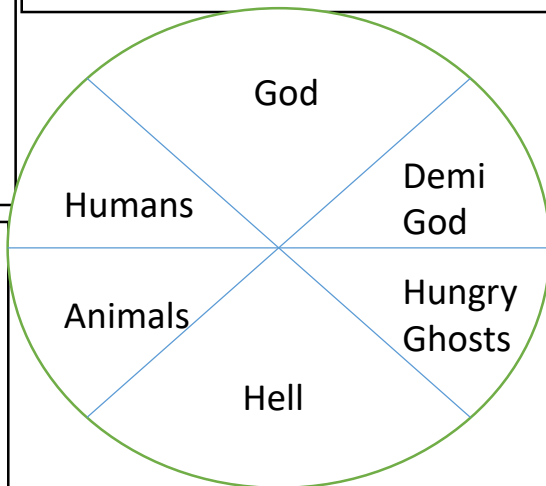
The Buddha – they can learn from his example.

The Sangha (community) they can get help and guidance from other in the community.

The Dharma – they can learn from the teachings in the scriptures.

What is Samsara?

The samsara is the cycle of life. All beings live on the samsara . The goal within Buddhism is to reach enlightenment and escape the samsara.



Quick facts!

Holy book – various – Vedas Dhammapada.
Age of religion- 2500 years old
Place of worship – Vihara
Name of followers – Buddhist
Number in the UK – 238,626

What is dependent arising?

This is the belief that everything that is in existence exists because other things are in existence. Therefore, everything is interconnected, and everything affects everyone.

A simple formula for understanding dependent arising is:

- when this is, that is
- from the arising of this comes the arising of that
- when this is not, that is not
- when this ends, that ends

What are the 3 marks of existence?

Mark of Existence	Meaning	Explanation
Dukkha	Frustration or dissatisfaction (often understood as suffering)	Life does not necessarily provide people with what they want and things are always changing. Therefore, people usually do not achieve complete satisfaction as everything has limitations, which causes them to be dissatisfied.
Anatta	No soul	There is no fixed sense of self because everything is constantly changing. Another way of expressing this is the idea that people have no soul.
Anicca	Impermanence	Things in life are always changing. Nothing stays the same as everything is subject to change.

Key words:

Enlightenment – to be awoken or become aware of reality.

Sangha – the Buddhist community

Dharma – nature of reality the buddhas teachings.

Meditation - Meditation is a practice where an individual uses a technique – such as mindfulness, or focusing the mind on a particular object, thought, or activity – to train attention and awareness, and achieve a mentally clear and emotionally calm and stable state.

Karma – word that means action – ever action has a consequence.

Reincarnation – the idea you are reborn into a new body when you die.

Precept – a rule.

Samsara – the life cycle within dharmic religions.

Asceticism – avoiding luxuries or pleasures for spiritual gain.

BIG QUESTIONS

What is characterisation?

How can physical performance skills and vocal skills be incorporated into a performance?

How can drama techniques be incorporated into a performance?

Why is discipline important in a performance?

What are the differences between the two styles – Naturalism and Abstract Theatre?

What is the difference between devising and a scripted performance?

Performance Skills

Planned Movement	Physical actions that are organised prior to the performance and then rehearsed.
Positioning	Arranging an actor in a place/way. Where the actor is facing.
Posture	How the body is held.
Body Language	Movements with the body, that communicate feeling.
Eye Contact	Where the actor is looking.
Space	How the environment is used.
Levels	How high or low an actor is positioned on stage.
Vocal Skills	How the voice is used to communicate emotion and character.
Gestures	Using your hands to further express meaning or emotion.
Facial Expressions	Showing mood through the movement of your face.

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Physical performance skills are the ways the use body can be used to communicate character or meaning.

Always remember to remain disciplined when performing.

Vocal Skills

Pitch	How high or low your voice is.
Pace	How fast or slow you speak.
Pause	A moment of silence.
Projection	How far and clearly you speak enable your voice to travel across the room.
Tone	Using your voice to show mood.
Emphasis	Exaggerating particular words or phrases in a sentence.
Accent	A distinctive pronunciation which shows location. This can be linked to country or area.
Volume	How loud or quiet you are speaking.

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The way in which the voice is used to communicate. Vocal skills can be used to communicate character. The more the audience can understand about a character, the greater the understanding of the narrative of the performance.⁴⁶

Drama Techniques	What would it look like on stage?
Thought Track	Character telling their thoughts to the audience
Monologue	A speech spoken by one character
Choral Speaking	A group of actors speaking at the same time
Slow motion	Slowing movement down
Flashback	A scene from the past
Cross Cutting	Mixing up the order of scenes
Narration	A spoken commentary for the audience about the action on stage
Organic Sound	A sound made by the actors (not recorded)
Synchronisation	Actors moving at the same time
Canon	Moving one after the other
Multi-role	One actor playing more than one role
Hot Seating	Questioning an actor in role
Still Image	A frozen moment in a scene
Physical Theatre	Using your body to create objects
Mime	Performing an action with no props
Mirroring	2 actors facing each other moving at the same time
Split Role	One role that is played by more than one actor
Flash forward	A scene from the future
Tableau	A still image that captures the whole scene/story
Repetition	A sound/movement that is repeated
Marking the Moment	When a moment in a scene is emphasised

Style: Naturalism

Naturalism uses realistic acting and in-depth characterisation.

- Subtext
- Relationships
- Personality
- Situation
- Motivation

Movement is planned carefully, making sure every action has a meaning behind it.

Set/costume/props/sound are used as part of a Naturalistic performance however drama techniques are NOT used!

Style: Abstract Theatre

Theatre that is non-naturalistic.

Drama techniques are included in performances to present a narrative or theme in an alternative or unconventional way.

Drama techniques are used to enhance an abstract performance, making it more engaging for the audience.



BIG QUESTIONS

How does the lighting contribute to the audience's understanding of the choreographic intent of A Linha Curva?

How does the costume contribute to the audience's understanding of the choreographic intent of A Linha Curva?

How does the set design contribute to the audience's understanding of the choreographic intent of A Linha Curva?

How does the music contribute to the audience's understanding of the choreographic intent of A Linha Curva?

How does the choreographic approach support our understanding of A Linha Curva?

Why has the choreographer made the decisions regarding each component? What is the impact of that decision?

Choreographer: Itzik Galili

Performed by: Rambert Dance Company

Performance: Originally performed by Balé da Cidade de São Paulo (Brasil), 2005. Rambert premiere Tuesday 12 May 2009 at Sadler's Wells, London.

Dancers: 28 – 15 male, 13 female

Dance Styles:

- Rhythmic pulses
- Samba - **Samba** is a fun, upbeat, lively dance that progresses counter-clockwise around the floor. It is characterized by its syncopated timing, bounce, rolling hip action and pelvic tilt and a great deal of rhythm is expressed throughout the torso.
- Capoeira - **Capoeira** is an Afro-Brazilian art that combines elements of dance, acrobats and music.
- Contemporary dance - Contemporary dance is a style of expressive dance that combines elements of several dance genres including modern, jazz, lyrical and classical ballet. Contemporary dancers strive to connect the mind and the body through fluid dance movements.

Structure: Narrative with large ensemble sections

Choreographic Approach:


- Task setting – creating a phrase restricted by squares
- Collaboration with dancers
- improvisation

When originally creating A Linha Curva, Itzik Galili worked collaboratively with the dancers and nearly all of the motifs were composed from improvisation. One of the tasks set by Galili was quite simple, he asked the dancers to choreograph a very short solo (2 – 3 counts of eight) of some of their favourite moves which stayed within the boundaries of their allocated square within a chequer-board grid (see lighting) that takes up the floor space of the stage. Galili believes that you can see essences of the dancers' personalities in these sequences. Each of these sequences was named after the dancer who made it and the dancers then learnt each other's sequences to form the basis of this large ensemble work.

Choreographic Intent:

- Having fun
- Men competing and show off in front of the women
- Carnival/ samba parades

The intention behind the choreography is simply to have fun - but there are also a few contradictions, as touched upon in the title. Large ensemble sections of vibrant Brazilian inspired movement are performed in regimental straight lines, creating a sense of samba parade. There are also a number of narrative sections that through the choreography present observations of how Brazilian men communicate with women, for example men in tribes hunting the girls as well as showing off and competing with each other.

<p>Stimuli:</p> <ul style="list-style-type: none"> - Brazilian Culture - Celebration of Brazilian Life - The title 'The Curved Line' 	<p>Costume:</p> <ul style="list-style-type: none"> • Designed by Itzik Galili • Brightly coloured lycra shorts. Each dancer has a different colour • Black sleeveless vest style top in mesh fabric – one side open. Bright coloured stripe/zip on the top in the same colour as the shorts. • The men wear the top with the opening at the front however women with it at the back • Men wear metallic discs around their neck at the start which reflect the light • Bare feet • This uniform look adds to the feeling of equality in the ensemble sections • Colours are carnival inspired • Minimal clothing; lack of clothing represents hot climate and allows dancers to move freely • complements lighting, set, music 	
<p>Lighting:</p> <ul style="list-style-type: none"> • Grid 49 coloured squares – red, yellow, green, blue, orange • Linear patterns: lines and squares • Restricts dancers' space • Highlights dancers • Contrast in showing of section: white wash • Timing and cues for the lighting is pre-programmed and so in a way dictates the speed and pace of the dancing and music 	<p>Aural Setting:</p> <ul style="list-style-type: none"> • Performed by Percossa • Percussion • Drums • Body Percussion • Vocal Chants - • Samba Rhythms • Mood created - fast, lively, fun and rhythmic speed • Contrast is shown through slow section • Berimbau: Brazilian instrument played in the slow section. 	
<p>Staging and Set:</p> <ul style="list-style-type: none"> • Props – In one section skateboards are used to propel 5 dancers across the stage • Performance Environment – End Stage • Black box set • Raised platform upstage – 4 live musicians • End stage • No set design • Skateboards – connection to carnival floats • Equality of musicians and dancers on stage represents the equality of the two art forms at a carnival • Large space allows for group unison sections and large formations 		

Homework Links

VLE – video links

<https://www.rambert.org.uk/explore/news-and-blog/news/linha-curve-ask-dancer/>



Key Vocabulary

Costume

Lighting

Set design / Physical Setting

Accompaniment

Choreographic intent

Choreographic approach

Stimulus

Artistic intention

Enhance

contributes

BIG QUESTIONS

How does the lighting contribute to the audience's understanding of the choreographic intent of Infra?

How does the costume contribute to the audience's understanding of the choreographic intent of Infra?

How does the set design contribute to the audience's understanding of the choreographic intent of Infra?

How does the music contribute to the audience's understanding of the choreographic intent of Infra?

How does the choreographic approach support our understanding of Infra?

Why has the choreographer made the decisions regarding each component? What is the impact of that decision?

Choreographer: Wayne McGregor

Performed by: The Royal Ballet

Performance: Originally performed on 13 November 2008 at The Royal Opera house, London

Dancers: 12 – 6 male, 6 female / brief appearance of a crowd

Duration: 28 minutes

Dance Styles: Contemporary Ballet

McGregor's dance style is distinctive for its speed and energy and for the dynamic, angular, sinuous and hyperextended movements that push dancers to physical extremes.

Structure: solos, duets and ensembles with many arresting moments, for instance 6 couples dance duets in six squares of light and a crowd surges across the stage, unaware of one woman's private grief.

Choreographic Intent:

- Human relationships
- Seeing below the surface of things

Infra is about seeing below the surface of things. Quite literally in this case, below Julian Opie's design. You can see people, walking in the street. Infra is about people and the choreography has found a pedestrian language which is recognizably human. When you look at a body on stage, you have some understanding of what that body is doing. The piece is about inferences. It infers particular types of relationships and therefore the emotional content implies itself. One of McGregor's choreographic aims is to help the audience's eye in watching a complex structure. But in Infra, McGregor has purposefully left open the full visual field to let the audience make their own selections.

Choreographic Approach:

- Showing a phrase and dancers adapt or copy
- Task setting
- Teaching movement to selected dancers

McGregor uses three methods to generate movement vocabulary for the piece: 1. SHOW a phrase to the whole or part of the cast – dancers watch and either recreate the phrase exactly or create a version. 2. MAKE a phrase on a target dancer or dancers – others watch and copy or develop. 3. TASK – set a choreographic task for dancers to complete or pose a choreographic problem for dancers to solve. Typically, the task or problem involves imagery as a stimulus for creating movement. The movement vocabulary is then structured into longer "sentences" and "paragraphs". Finally, he works musically with the structure and pieces it all together like a jigsaw.

Stimulus:

- 'Infra' means below in Latin
- Life beneath the surface of a city
- The Waste Land poem: TS Eliot
- The London Bombings

Lighting:

- Different lighting for each section
 - 1: white wash with blurred edged, mid intensity, downstage. Upstage in darkness.
 - 2: white wash opens out upstage
 - 3: green wash in ellipse shape upstage: blurred edges
 - 4: 6 rectangles of white light in a line on the floor
 - 5: orange/amber wash downstage with blurred edges.
 - 6: paler amber/yellow wash across full stage
 - 7: low intensity blue sidelights then white sidelights only for crowd
 - 8: white follow spot, stage in darkness
- Lighting design by Lucy Carter
- The lighting, which relates closely to the structure, lights the width of the stage and often focuses downstage.
- Occasionally dancers are lit by shafts of light and at one point 6 rectangles of light frame 6 duets
- Colours are used to highlight different sections

Costume:

- 10 out of 12 dancers wear tight black lycra shorts and a variety of different tops; vests, long sleeved, t shirt, thin straps
- All tops are grey, black and white however 1 flesh coloured
- Pointe shoes (females) and ballet shoes (males)
- 2 dancers different: Female – black mini skirt and white crop top / Male – long black trousers and bare chest
- Costume shows stimulus - Colour palette is urban, supporting the city idea stated in the stimuli.

Aural Setting:

- Soundscape fused with violin and piano
- Morse code, radio static, muffled speech, train whistles
- Violin/piano: brisk melodies often with rapid notes that run along
- Section 5 male solo is different: thundering, booming sounds with rumbling effects
- Contrast in Section 7 (trio). Soft and sorrowful piano melody

Staging and Set:

- Black box set
- Large LED screen hung upstage. White figures walk across screen
- Performance environment: proscenium arch
- No props
- No set
- Emptiness of stage creates large stage space
- Complements lighting, music and costume

Number of Dancers:

12: 6 male, 6 female + crowd in Section 7

Homework Links

VLE – video links

<https://www.roh.org.uk/productions/infra-by-wayne-mcgregor>



Key Vocabulary

Costume

Lighting

Set design / Physical Setting

Accompaniment

Choreographic intent

Choreographic approach

Stimulus

Artistic intention

Contribution

Enhances

Highlights

BIG QUESTIONS

How does the lighting contribute to the audience's understanding of the choreographic intent of Emancipation of Expressionism?

How does the costume contribute to the audience's understanding of the choreographic intent of Emancipation of Expressionism?

How does the set design contribute to the audience's understanding of the choreographic intent of Emancipation of Expressionism?

How does the music contribute to the audience's understanding of the choreographic intent of Emancipation of Expressionism?

How does the choreographic approach support our understanding of Emancipation of Expressionism?

Why has the choreographer made the decisions regarding each component? What is the impact of that decision?

Choreographer: Kenrick H20 Sandy
Performed by: Boy Blue Entertainment
Performance: May 2013
Dancers: : 17 dancers (8 female / 9 male)
Kenrick is one of the dancers in the performance and several of the dancers feature in key solos and have leading roles.
Structure: 4 sections

Stimulus:

- Til Enda [*the music for Section 4*]
 - Freedom of expression through hip hop movement
- The importance of being free to express ourselves both as individuals and through the use of hip hop movement vocabulary are central to Kenrick's initial ideas for the work.

Choreographic Approach:

- Exploring hip hop movement in a contemporary way
- Musicality and the relationship between movement and music
- Exploring and abstracting hip hop movement and 'signature' company movements in a contemporary way.
Working closely with the accompaniment and paying particular attention to musicality.
- Whilst the choreographer and the dancers created material for the work, Kenrick very specifically selects certain movement vocabulary and 'signature' motifs (Ninja Walk, Ninja Glide, Ninja Static and Chariots of Fire), choreographic devices, formations and use of space.

Choreographic Intent:

- An emotional journey
- Order and chaos
- Kenrick seeks to express himself by using hip hop as a tool to create art that affects an audience in a theatrical setting. He wants the audience to feel that they are witnessing and sharing an emotional journey through the piece and appreciating hip hop dance as an art form. Each section is a scene, a moment in life, and the whole work is a journey. The theme of order and chaos highlights the restrictions of an individual style of hip hop dance. Kenrick seeks to create variations within these parameters in order to create a sense of chaos in contrast with the potential limitations of set styles. Often individual dancers split from the ensemble and at other times the ensemble are all in unison. Kenrick uses these contrasts to show different relationships between order and chaos.

Dance Style:

Hip hop including popping, locking, krumping, animation, waving, waacking, breaking

Hip hop dance is closely associated with hip hop music and has a very specific vocabulary of dance moves, which fall under a range of styles known as breaking, locking and popping. It appeals to many people because it is both fun and physically demanding. Hip hop dance evolved along with hip hop music, in the 1970s within groups of African American street gangs from the streets of South Bronx and Brooklyn, NY.

<p>Costume:</p> <ul style="list-style-type: none">• Pale blue T shirt• Stonewashed denim jeans• Grey hi top trainers with white sole• The costume was designed to represent the company – casual, enhance the shape of the dancers and create a ‘clean’ look. Kenrick wanted the dancers’ hair tied back where necessary to ensure facial expressions were clearly visible. Some dancers wear everyday jewellery to enhance both the individuality and everyday qualities of the piece.	<p>Aural Setting:</p> <p>Genesis: music in two parts. 1: laser sounds & electronic rhythms with ‘heartbeat’ pulse 2: strong repetitive beat with scratching sounds [Ninja Walk.]</p> <p>Growth & Struggle: a peaceful song with the lyric ‘I feel you’re the one’. Pulsating electronic drum rhythm.</p> <p>Flow & Connection : 2 melodies: 1: rapid running violin notes underneath 2: high pitched violin playing long piercing notes over the top.</p> <p>Empowerment: Soft piano begins - then harsh, ‘gun like’, aggressive electronic rhythm. Two violin melodies: 1: punchy, staccato accents 2: smoother & fluid</p>	<p>Staging and Set:</p> <p>A black backcloth lifts to reveal a white cyclorama behind</p> <p>Smoke/fog is used</p> <p>Proscenium arch</p> <p>No set</p>	<p>Homework Links</p> <p>VLE – video links</p> <p>http://boyblueent.com/?page_id=16352</p> 
<p>Lighting:</p> <ul style="list-style-type: none">• <i>Genesis:</i> Pale blue circles of light on the floor, snapping to intense blue wash.• <i>Growth & Struggle:</i> White side- light offstage right. Low intensity blue wash upstage left.• <i>Flow & Connection Between People:</i> Pale blue wash fading to low intensity white sidelighting.• <i>Empowerment:</i> Blue wash• Co-Designed by Kenrick Sandy with the Sadler’s Wells Theatre lighting team. <p>A prominent feature is the lighting from above the stage casting an intense blue colour on the dancers. Some are spotlights from above the stage used to highlight individual dancers and groups of dancers (each in their own light) and some create a wash of blue across the stage. The edges of the stage are not lit creating a very central focus. The lighting is designed to create moods and different moments as well as work with both the formations and the accompaniment. It is also used to highlight particular transitions. A pair of white lights from off-stage right feature in the second section and are significant in the focus of the dancers and relationship between the soloist, the group entering the stage space and the ideas of adversity and confronting the trials and tribulations of life.</p> <ul style="list-style-type: none">• Sometimes the lighting fades and at other times snaps to black out for dramatic effect and to create distinction between sections and transitions. The intensity of the lighting varies considerably in the different sections.			<p>Key Vocabulary</p> <p>Costume</p> <p>Lighting</p> <p>Set design / Physical Setting</p> <p>Accompaniment</p> <p>Choreographic intent</p> <p>Choreographic approach</p> <p>Stimulus</p> <p>Artistic intention</p>

Structure:

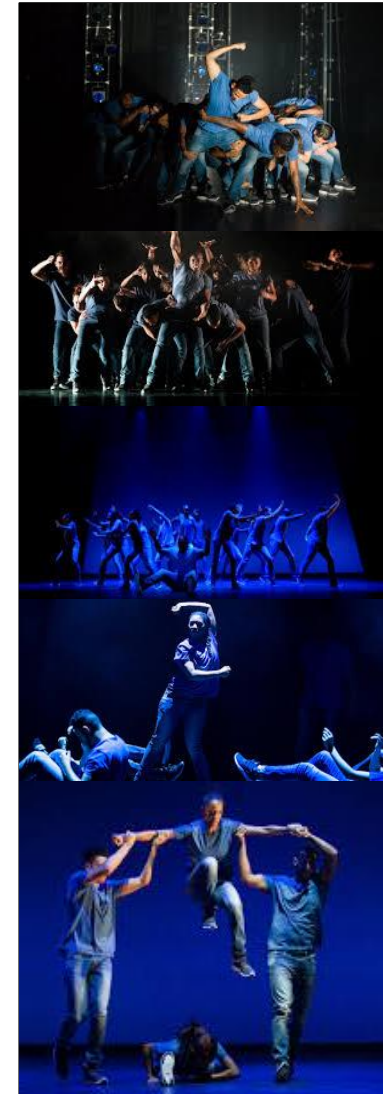
The dance is in 4 sections and although not titles, Kenrick describes them as being based around the following ideas:

1. Genesis (start - 2min 12sec) - the start of life and a feeling starts to grow and create from the womb of expressionism. There is a sense of an electrical current affecting the dancers. He explores ideas of struggling to be free, find individual expression, conformity and order. Kenrick says 'section one I would say is.... the birth or maybe the genesis. It is the start. It is that moment where the impulse of a feeling or a movement starts to grow and create. So at the very beginning when you see the guys in the spot lights they are all moving like an electrical current is hitting them and that to me is like them back in the womb, the womb of... Expressionism'.

2. Growth and struggle (2min 12sec - 3min 21sec) - starting with an individual dancer's expression contrasted by others entering from stage right. What may appear aggressive suggests the struggle for the recognition of individual passion and expression. It ends in a rugby scrum inspired formation with an ensemble supporting the individual dancer. Kenrick says 'section two, for me is about growth and about struggle. It's about... in that piece where you see the people walking past and one guy is expressive into the light. To me that was about everyday life, we tend to want to express ourselves and people just walk by and we're just living our life, but sometimes there is a bit of a struggle and people want to hold you back or stop you from what it is, so there is a level of aggression that comes out within your passion. And that piece was about, you know, how passion can grow and become very, very, very strong to a point where it does look aggressive. But what it is, is that you are just really, really passionate about what you do'.

3. The connection and flow between people (3min 21sec - 6min 30sec) - developing from a duet to a full ensemble. There are aspects of memory, manipulation, flow, merge and play between individuals in a relationship. An energy flows through the dancers, sometimes controlled by an individual and sometimes in group unison. Kenrick says 'section three is about flow, it's about relationships it's about connection. The duet at the beginning is about this energy and it flows from one person to another. That's what happens sometimes in a relationship where you express yourselves, you know, you may have an argument where you express yourself, you may have a memory or a moment where you express yourself. It's also about how the relationship can easily manipulate each other... as well as ... gel, merge, play that's that first section'.

4. Empowerment (6min 30sec - 10min 39 sec) - The energy is captured and released with a new found raw, super human power. The release of individual energy (now more chaotic) continues to contrast with the powerful order of group unison. Within the idea of empowerment, this section also showcases the individual skills and expressionism of the core dancers. The contrasting lyrical qualities and frenetic percussive elements of the accompaniment are echoed in the contrasting actions and dynamics. There is an incessant quality as the section builds to a crescendo where the dancers are fully empowered. The section finishes with the dancers huddling together in unity before a final black-out and bow. The last section, which is *Til Enda*, is about empowerment, it's about ... superpowers, super human powers it's about letting yourself go to the fullest. That is where the true feeling of the emancipation of expressionism is for me. I am always about empowerment, pushing people, motivating people. I don't believe that all dancers should just do choreography, and just "five, six seven, eight". You also need to have an individualisation within our work and in that piece you see that the core dancers are all showcasing their skills... and to me it is important that they do that because it's growth, it grows them as a dancer. So that last section is about empowerment which then creates the whole piece to have a journey, from the beginning up until the point, the crescendo, that moment where you feel fully empowered.



BIG QUESTIONS

How does the lighting contribute to the audience's understanding of the choreographic intent of *Within Her Eyes*?

How does the costume contribute to the audience's understanding of the choreographic intent of *Within Her Eyes*?

How does the set design contribute to the audience's understanding of the choreographic intent of *Within Her Eyes*?

How does the music contribute to the audience's understanding of the choreographic intent of *Within Her Eyes*?

How does the choreographic approach support our understanding of *Within Her Eyes*?

Why has the choreographer made the decisions regarding each component? What is the impact of that decision?

Choreographer: James Cousins

Performed by: James Cousins Dance Company **Performance:**

February 2016 (launch of *Within Her Eyes*)

7th September 2012 (date of first performance of *There We Have Been*).

Dancers: 2 dancers – 1 male, 1 female

Duration: 17 minutes

Dance Styles: Contemporary / contact work.

Choreographic Intent:

- An abstract tragic love story.
- The pull back towards the girl's late lover contrasted with the desire to move on.
- The intention behind *Within Her Eyes* was to create a dance film that maintained the emotional intensity and visceral energy of the live stage performance of *There We Have Been* and to portray an abstract tragic love story that is open for interpretation.
- The female dancer is constantly reaching, wrapping, balancing and falling on and around the male dancer. The choreography contrasts the folding in to him with the pulling away to highlight the pull she feels to her late lover whilst trying to allow herself to move on with the man who cares so much for her. The male dancer never initiates or manipulates, he merely responds to her every move, devoted to her. He needs her as much as she needs him.
- The mood is very tender, emotional and somber. Intensity is also achieved by having the dancers perform in complete contact, totally dependent on each other, with the female dancer never once touching the floor throughout the entire duet. This creates a very unique vocabulary and style both physically and emotionally.

Stimulus:

- A Love Story with a Twist
- The dancers can never be together.
- Love and loss
- Longing and memory Dependency and loyalty

Inspired by both personal experiences and well known narratives, Cousins wanted to portray a unique narrative combining themes of love and loss, dependency and loyalty, longing and memory. Rather than a conventional love story where, despite the bumpy road, the characters end up together; Cousins wanted to flip it around to portray a story where, no matter what happened, ultimately they could never be together.

Choreographic Approach:

The film uses the choreography from Cousins' critically acclaimed stage production *There We Have Been* and sets it outdoors in a bleak landscape. For the original choreography James worked from two starting points; narrative and emotional themes and the physical idea of keeping the female dancer off the floor.

The movement was created in collaboration with the dancers through improvisation, which was all filmed and then learnt back from the video. James then pieced these segments together into a structure that reflected the narrative arc of the story.

Costume:

Man: dark, earthy colours. Trousers, long sleeved top, shoes.

Girl: Cream thigh length skirt with central pleat, cream undershorts, long sleeved cream blouse in delicate chiffon like fabric, buttoned up to the neck. No shoes. Hair in pony- tail.

Girl also wears a beige/brown cardigan in the Prologue.

Costumes are stylised everyday clothes

Structure: A prologue followed by 6 continuous sections, defined by changing locations, physicality and music that reflect the developing relationship. The overall effect is one seamless journey.

Aural Setting:

1. *Prologue:* ominous soundscape
2. *Beginning:* peaceful piano melody over wind sounds. Wind increases in volume & shaking strings join in.
3. *Moving Closer:* slow, warm and graceful section for strings over wind sounds.
4. *Flow One:* contradictions: calm piano, but nervous trembling strings stab the air. Builds to climax.
5. *Kneeling:* wind & echoing piano with pauses and silences.
6. *Flow Two:* a development of the music from Flow One.
7. *Floor:* long, electronic notes with a few faint piano notes

The accompaniment is a composition created specifically for the work, which evolved alongside the choreography, created by composer Seymour Milton in collaboration with James. The music combines electronic elements with strings and piano creating a haunting and emotive accompaniment that blends seamlessly with the choreography, flowing as one

Staging and Set:

A variety of outdoor spaces: deserted street, graveyard, open field, cloudy sky, cliff top, forest, quarry.

The film is set in remote locations to give the feeling of isolation and highlight the characters separation from society. The locations progress from very open landscapes to more intimate settings to show a passage of time and to reflect their relationship getting more intimate and restricted as it progresses.
Site sensitive; dance for camera. Filmed by Scratch.

The film is shot and graded to reflect the dark atmosphere of the inspiration. After the prologue the camera starts very far away from the dancers giving the feeling that they are completely isolated and in their own world; the viewer is a secret observer. Gradually as the dancers' relationship grows closer, the camera moves in closer but still keeps distance until the first time the dancers look at each other when it moves right in to close up on their faces.

The majority of the film is shot with the camera on a track, giving a very smooth quality. For the penultimate section it switches to a hand held camera giving a much more raw and unstable feeling reflecting the female character's heightened emotional state.

Lighting:

- Natural lighting.
- Begins with a night time sky and then moves through daylight to dusk, finally ending at night.

Homework Links**VLE – video links**

<https://www.youtube.com/watch?v=5ZjCN86I-rc>

**Key Vocabulary**

Costume

Lighting

Set design / Physical Setting

Accompaniment

Choreographic intent

Choreographic approach

Stimulus

Artistic intention

Contribution

Enhances

Highlights

BIG QUESTIONS

How does the lighting contribute to the audience's understanding of the choreographic intent of Shadows?

How does the costume contribute to the audience's understanding of the choreographic intent of Shadows?

How does the set design contribute to the audience's understanding of the choreographic intent of Shadows?

How does the music contribute to the audience's understanding of the choreographic intent of Shadows?

How does the choreographic approach support our understanding of Shadows?

Why has the choreographer made the decisions regarding each component? What is the impact of that decision?

Choreographer: Christopher Bruce

Christopher Bruce trained at the Ballet Rambert School, joining Ballet Rambert in 1963. He is the last major choreographer to have been nurtured by Marie Rambert.

Performed by: From Leeds, Phoenix Dance Theatre is one of the UK's leading contemporary dance companies. Founded in 1981 Phoenix Dance Theatre began by performing work created within the company.

Performance: Premiered 26th November 2014

Dancers: 2 male / 2 female = 4 in total

Duration: 12 minutes.

Dance Styles: 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".

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

Choreographic Intent:

Christopher Bruce's works are often 'politically aware', in reference to **past or current political events happening across the world**, exploring their effect on human life. In this piece, Bruce invites the audience into the world of a small family, **possibly set in Eastern Europe (though this is left up to individual interpretation)** coming to terms with deprivation, poverty, and the realities of what lies outside their intimate family home. Bruce describes this piece as "a darker work, with a sort-of narrative", allowing the audience to apply their own context to the material danced on stage.

Stimulus:

- Arvo Part's *Fratres* for violin and piano was the starting point for the work.
- For Bruce, the music "evokes images of a European history and tradition steeped in over a thousand years of suffering and human experience."
- In *Shadows*, Bruce translates this vision into an exploration of a family dynamic, examining the relationships between each member (son, daughter, mother and father) as they deal with an unseen but ever-present outside force.

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. For Bruce, as well as being appropriate to the piece, the movement must also sit well on the dancers. He started *Shadows* with the idea of a family unit sitting around the hearth or around a dinner table and knew that the furniture would become an intrinsic part of the choreography as opposed to being a static set. The "anxiety of the music" greatly influenced the movement content, with the form of the piece allowing each member of the family to have a voice and tell their story.

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.

- Theme and variation.
- Harsh, rapid violin at high pitch with notes running this way and that - especially for the children
- Softer, more fluid piano and violin melody for the parents
- Low booming piano notes mark the end of each section
- The ending is much quieter and slower, the whole dance finishing on the low piano notes.

Staging and Set:

- End stage
- Staging/set Designed by Christopher Bruce.
- Minimal set within a black-box
- 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.
- Set and lighting work together - empty black box allows lighting squares to stand out.

Costume:

Designed by Christopher Bruce. 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.

- Mother: floral 1940's tea dress, pink flowers, short puffed sleeves, calf length flared skirt, fitted waist, hair in bun
- Father: collarless cotton white shirt with faint stripes, rolled up sleeves, grey trousers, brown waistcoat
- Son: collarless white shirt, untucked, buttons undone at top, rolled up sleeves, grey trousers.
- Daughter: delicate pastel cotton blouse, puffed short sleeves, pleated front, grey below the knee A line skirt, hair in ponytail

Lighting:

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.

- White sidelighting from stage right and left
- One white sidelight shining from downstage right corner, throwing a shaft of light on a diagonal pathway towards upstage left

Homework Links

VLE – video links

<https://www.phoenixdance theatre.co.uk/production/shadows/>



Key Vocabulary

Costume

Lighting

Set design / Physical Setting

Accompaniment

Choreographic intent

Choreographic approach

Stimulus

Artistic intention

Contribution

Enhances

Highlights

BIG QUESTIONS

How does the lighting contribute to the audience's understanding of the choreographic intent of *Artificial Things*?

How does the costume contribute to the audience's understanding of the choreographic intent of *Artificial Things*?

How does the set design contribute to the audience's understanding of the choreographic intent of *Artificial Things*?

How does the music contribute to the audience's understanding of the choreographic intent of *Artificial Things*?

How does the choreographic approach support our understanding of *Artificial Things*?

Why has the choreographer made the decisions regarding each component? What is the impact of that decision?

Choreographer: Lucy Bennett
Performed by: Stopgap Dance Company
Performance: 5 February 2014, UK premiere
Dancers: 4 – 2 male, 2 female
Duration: 20 minutes
Dance Styles: Inclusive Contemporary Dance

Stimulus:

- An isolated figure perched on a collapsed wheelchair, in a snow covered landscape - viewed from afar as if through a snowglobe.
- Paintings by Goran Djurovic.
- The dancers' personal experiences.

Choreographic Intent:

Scene three is the final scene of *Artificial Things*. The undertone of the scene is about the characters coming to terms with life's limitations - we all live within certain confinements, and we are subject to the gaze of 'the other'. The characters acting out this sorrowful but peaceful scene are still constricted within a snow globe that signifies these ideas. Within the scene however, the characters find a resolution by coming together, and as the scene comes to a close, they surrender to the fact that we all have to live with individual regrets.

Choreographic Approach:

- Laura is the source of the movement, adapted by David and Amy.
- Collaboration with the dancers.
- Task setting.

Structure:

Artificial Things consists of three scenes.

The first scene depicts the underlying tension between the characters, and the second scene is exciting but violent, where the characters seek liberation from the suffering austerity. This leads to a tragedy, and scene three is its aftermath, where the characters are more pensive.

Scene three opens with two duets. The first is ground-based contact work involving a dismantled wheelchair. The second duet was influenced by the dancers improvising around the idea of inviting touch, and leading and following,

The group then unites and use ground-based contact work to stay connected whilst manipulating the dismantled wheelchair.

The trio of Amy, David Willdrige and Laura begins to find harmony whilst dancing with one another and Laura's wheelchair. Following Laura's lead they explore the movement of the chair, and each dancer takes responsibility for the wheelchair. The trio eventually gathers around David Toole, who has been watching from the vitrine (glass display cabinet), and they re-enact portraits of past family photos influenced by the paintings of Djurovic. They find stillness as if frozen in the snow globe.

David Toole leaves the group as the music '*The Sunshine of Your Smile*' begins and finds a lonely spotlight. He dances a simple solo focusing on facial expression and physical storytelling to the song that his father used to sing when he was young This solo is a tribute to his father. David returns to the group and is frozen in time with the other characters as the scene comes to a close.

Costume:

Amy: Green, thigh length, sleeveless dress with streaks of blue and grey. Side vents. Peter pan collar.

Laura: White sleeveless top with bright blue streaks. Grey trousers with pleats. Blue belt. Black heeled shoes.

David: White collared short sleeved shirt with streaks of blue and green. Blue/grey trousers.

Dave: Pale green collared, short sleeved shirt with pocket and darker green streaks. Grey trousers.

Designed by Anna Jones, the costumes are a wash of blue and green, merging with the backdrop. It looks as if paint is running from the garments, which is a reference to being stuck in one of the paintings by Djurovic. Outer garments worn in previous scenes, such as jackets and jumpers, are removed in this scene to depict that time has

Aural Setting:

The Sunshine of Your Smile - old fashioned love song sung by a tenor with orchestra: Dave's Solo. For scene three Andy Higgs wanted to create a futuristic atmosphere acknowledging that time had passed and that the old ways had broken down. He used the whole of the piano both inside and out to create a cold, ambient sound. He also used the sound of the paper snow and incorporated other sound effects such as a distant rumble, wind and footsteps through snow. Elements of the song '*The Sunshine of Your Smile*' were mixed into the atmosphere often sounding distorted or as if drifting in on the wind. The final section uses the full version of the song.

Staging and Set:

- Grey floor with wide wooden border.
- Cream coloured backdrop with streaks of paint in blue, green, brown.
- Vitrine [display cabinet] upstage left on its side, full of snow.
- 3 stools in front of the vitrine with a headless mannequin seated in a brown suit.

Designed by Anna Jones. The set is influenced by several paintings from the '*Unknown Secrets*' collection by Goran Djurovic. It consists of a crudely painted heavy backdrop in which paint looks as if it is running down the canvas. In scenes one and two this is painted with brightly coloured strips, which are removed for scene three to create calmer visuals. This scene change signifies the change of mood. The vitrine is on its side with a snowdrift inside the cabinet. Paper snow is scattered on the ground in a diagonal from the vitrine to Laura who is downstage right. In front of the vitrine there are two stools and a headless suit on mannequin legs perched on a third stool.

The dance floor is a light grey and around the edge is a wooden frame reflecting the colour, shape and restriction of the vitrine. This emphasises the fact that

Lighting:

- 2 white spotlights downstage right & centre stage [Dave & Laura].
- Amber upstage sidelights [David & Amy].
- Blue wash [trio].
- Deep blue central spotlight [Dave's solo] & amber sidelighting on the group.
- Designed by Chahine Yavrovan.
- For much of the piece the lighting focuses in on one or two spots.

Homework Links**VLE – video links**

<https://www.stopgapdance.com/artificial-things--the-film>

**Key Vocabulary**

Costume

Lighting

Set design / Physical Setting

Accompaniment

Choreographic intent

Choreographic approach

Stimulus

Artistic intention

Contribution

Enhances

Highlights

BIG QUESTION S

- Can you explain the difference between 'Quality Control' and 'Quality Assurance'?
- Can you explain the benefits to a business of providing 'quality' products or services?
- Can you evaluate methods of ensuring quality?

Quality is:

about a product being fit for purpose and working in a way that it is supposed to

Homework: Sample Assessment Material
Question 4 and 16a
<https://www.ocr.org.uk/Images/304218-unit-j204-02-business-2-operations-finance-and-influences-on-business-sample-assessment-material.pdf>

Importance of providing quality products

Quality control

A system for inspecting the quality of goods and services

Quality assurance

An approach that involves the whole business focusing on quality

Returns

Goods which customers take back to the shop because of problems

Recalls

The business asks for products to be returned because of faults

It avoids waste

If goods are not of a good quality they may not be able to be sold and so the producer has wasted money

It avoids recalls

If unsatisfactory products are made and sold they will then have to be recalled and the issue resolved at a cost to the manufacturer

Reputation and sales

Customers will not be happy with poor quality products and may shop elsewhere in the future

Disrupted production

Production may be disrupted if quality is poor from the start

BIG QUESTION S

- Can you list at least two benefits and two drawbacks to a business of using batch production?
- Can you list as many different products as you can that you believe would be produced by job, batch and flow production?

Job production

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Products are usually high-quality ▪ Products can be made to meet the needs of individual customers ▪ Workers often get more satisfaction 	<ul style="list-style-type: none"> ▪ Costs of production will be high ▪ Labour costs may be high because job production often requires skilled labour

Technology is being used more and more in the production of goods and services.

Technological development is making it possible for technology to perform skilled work and reducing the need for human resources

Flow production

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ Large amounts can be made ▪ Costs of production for each unit is low ▪ Machinery can be used, helping to reduce costs ▪ Technology can be used to change the products slightly to more are available for customers to choose from 	<ul style="list-style-type: none"> ▪ Goods are mass-produced so quality may be low ▪ Expensive to set up a production line ▪ Large stocks of materials need to be kept which can be expensive ▪ If production stops at any point then production stops everywhere ▪ Jobs can be repetitive and boring

Batch production

Advantages	Disadvantages
<ul style="list-style-type: none"> ▪ The needs of different customers can be met by making batches of different goods ▪ Batches are made to meet specific orders from customers ▪ It may be possible to use specialist machines to automate production 	<ul style="list-style-type: none"> ▪ It takes time to switch production from one batch to another - costly ▪ May have to keep stock of raw materials to be able to switch production ▪ Less choice of products for customers ▪ Tasks are repetitive for workers

Production is:
the process of turning raw materials into saleable products and services

Job production

Making products individually

Batch production

Making one type of product then switching to make a different product

Flow production

The production of one product on a continuous assembly line

Automation

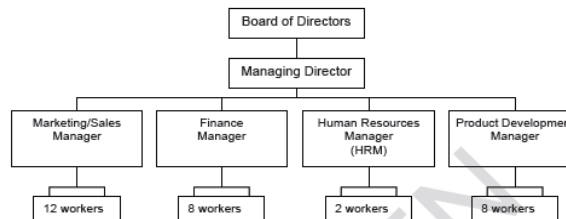
Production involving machinery not controlled by a person

BIG QUESTION S

- Do you know the difference between a flat and a tall structure?
- Why do you think businesses choose to delay?
- Can you explain the benefits and drawbacks of having a tall structure?
- Can you explain the benefits and drawbacks of having a flat structure?

(b) Fig. 1 shows the organisation chart for AP plc.

Fig. 1 Organisation chart for AP plc



- (i) What is the Managing Director's span of control?
..... [1]
- (ii) Explain what is meant by delegation. Use an example from Fig. 1 to support your answer.
.....
.....
..... [2]

Organisational Charts Key terms: Match up the key term to the definition

Delegation

The route that a message travels between the sender and the receiver

Accountability

The link between the layers of authority from those at the top to those at the bottom

Line manager

Giving an order to a subordinate to make a decisions, but keeping responsibility of the consequences

Lines of communication

The responsibility someone has for a job meaning that they take the blame if it goes wrong

Chain of Command

This person is **directly** responsible for other workers in the organisation

Homework:

Using the Phones R U organisational chart, answer the following questions in full sentences;

Is this a tall or a flat structure?

How many levels of hierarchy are there?

Who is the most important in Phones R Us?

How many people are in the managing Director's span of control?

Who would Teresa delegate work to?

Describe the impact of this organisational structure on communication.

BIG QUESTIONS

- How do I answer the 9 mark GCSE question?

THINK DACE!

Definition - Is there a term in the question that can be defined? (if no, do not force a definition, go straight into Application.)

Example – Analyse the effectiveness of a partnership as a form of business ownership?
‘A partnership is when two or more people come together to start a business.....’

- Apply your understanding/knowledge
Application - Link the answer to the case study **(A02)**
- What are the **advantages**?
- Make sure to **explain** all knowledge applied

Example – One advantage of a business taking the form of a partnership would be.....This is an advantage because.....

- Are there **disadvantages**?
Counter-argument (A03a) - Link answer to counteract the advantages. **(A02)**
- No disadvantages? What would happen to the business without it?

Example – However, a disadvantage of this business ownership would be.....This is a disadvantage because.....

Evaluation (A03b) - Summarise the advantages against the disadvantages! State your opinion, make sure you explain why you have come to this decision? Relate back to the business and the effects it would have.

Example – In conclusion, I think a partnership is an effective form of ownership because...

Big Question – How do I achieve A02 (application) marks?

A number of questions in the exam will ask you a direct question about a particular business from the case study. You need to make sure that you always **APPLY** your knowledge to that particular business in your answer. This will allow you to achieve an additional A02 mark (APP) every time.

Here's an example....

Question - Analyse one way in which Redrow Homes could use Group Activities when selecting new apprentices? (3 marks)

Answer 1 - Redrow Homes could use group activities as it would allow them to see how well potential apprentices work together on a task. ✓ This will highlight if they have good communication skills. ✓ (Only 2 marks have been awarded here as the answer was not applied specifically to the business).

Answer 2 - Redrow Homes can assign a task where all the applicants work together ✓ to solve a problem relating to a scenario on a building site. ✓ This allows the interviewers to observe candidates' interpersonal skills ✓ (3 marks have been awarded as the answer is applied to Redrow Homes and a scenario using a building site).

Don't forget the TESCO TEST!



Remember that the application mark (A02) is more than just writing the name of the business. If you can put TESCO in your answer and it still makes sense, you have not specifically applied it to the business from the case study.

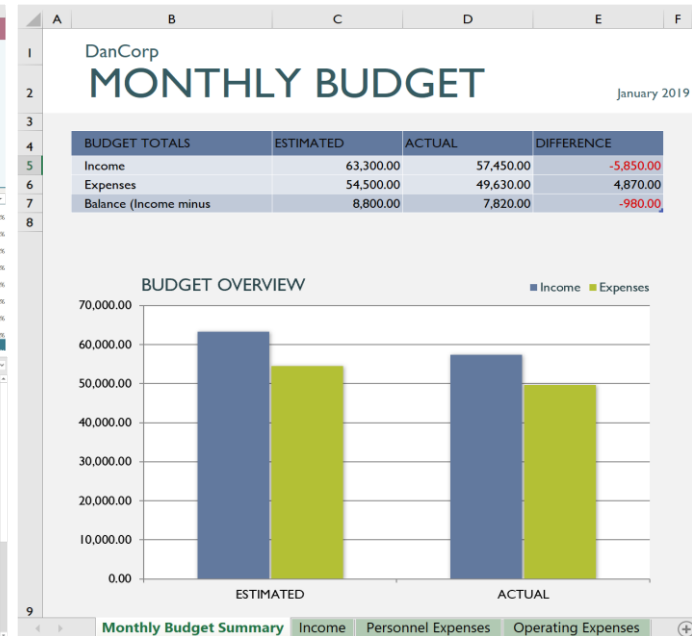
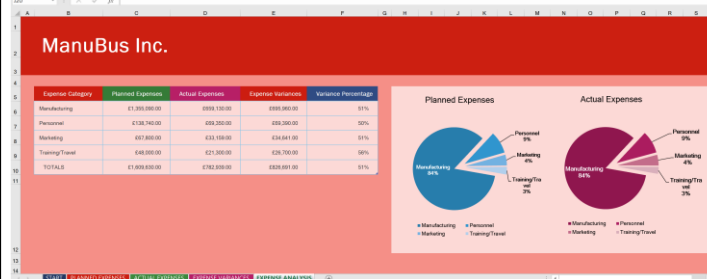
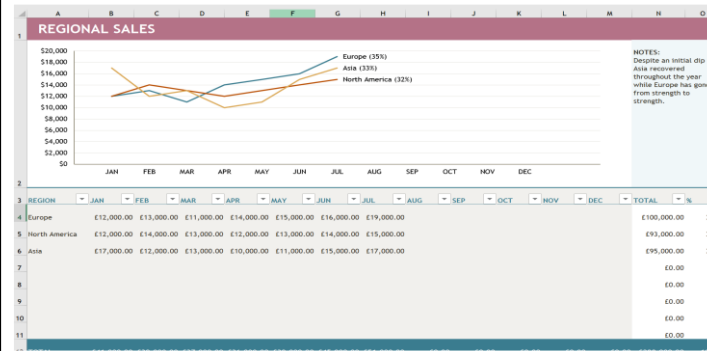


**Answer 2 would not make sense if you replaced Redrow Homes with Tesco. This is because the answer specifically talks about a building site. Application mark secured! ✓*

BIG QUESTIONS

1. What is the purpose of a spreadsheet dashboard?
2. How are functions different to formulae?
3. Why would you use a graph/chart instead of large datasets?
4. How can spreadsheets be used to make decisions?
5. How a spreadsheet be automated?
6. What is the purpose of a data summary?

Data Summaries



Data Manipulation Methods

An important part of a data model is manipulating data. | Below are common types of data manipulation.



Decision-Making Functions

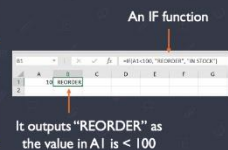
Certain functions allow us to perform different actions in different situations.

IF function – checks a condition & returns one value if true, another if not.

• =IF(A1<100,"REORDER","IN STOCK")

SUMIF function – adds up a range of cells if a condition is true.

• =SUMIF(A1:A4,"<50")

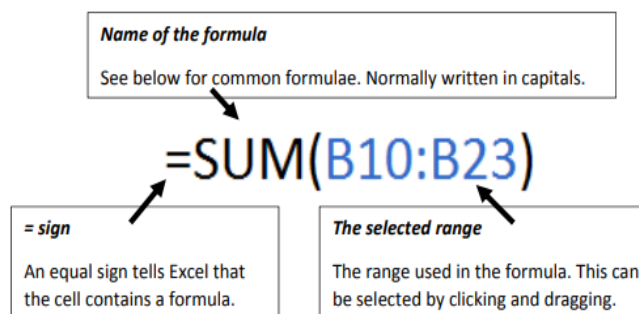




Spreadsheet formatting tools		
	Fill cell	Fills a cell with a selected colour.
	Font colour	Changes font colour to a selected colour.
	Alignment	Moves the text within a cell to the top, centre or bottom – or left, middle or right of a cell.
	Orientation	Rotates text either diagonally or vertically. Can be used for heading of columns.
	Wrap text	Wraps long lines of text into a cell, making the cell taller so that all text can be seen.
	Merge & Centre	Combines the contents of multiple selected cells and centres the content in the new cell.
	Accounting	Used to convert numbers into currency so that the data can be calculated as money .
	Percentage	Formats a number as a percentage .
	Change decimal	Changes the decimal places of a number so that the number is more/less accurate.
	Change data type	Changes the type of data contained in a cell.
	Format painter	Copies all of the formatting of a cell so it can be used in another.

Operators	
+	Adds two numbers / cells
-	Subtracts one cell or number from another
*	Multiplies two numbers/cells
/	Divides one number / cell from another one
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to

Golden rule: every formula always starts with an =



Common formulae		
Formula name	Example (with range)	What it does
Sum	=SUM(A1:A10)	Adds together all numbers within the given range.
Count	=COUNT(B2:B14)	Counts up all of the cells within a range that have numbers in.
Average	=AVERAGE(A1:A10)	Finds the average number within a range.
Maximum	=MAX(A1:A10)	Finds the largest number within a range.
Minimum	=MIN(A1:A10)	Finds the smallest number within a range.

Homework Links

Links on Teams

Use this link for all tasks:

<https://support.office.com/en-gb/article/excel-for-windows-training-96c05390-e94c-46af-a5b3-d7c22f69906b>

Homework 1: Tasks – Intro to Excel, Rows & Columns and Cells.

Homework 2: Tasks – Formatting

Homework 3: Tasks – Formulas & Functions Charts, Pivot table

Homework 4: Task - Charts,

Homework 5: Tasks - Pivot tables

Key Vocabulary

Dashboard

Delimiting

Worksheet

Cell

Pivot table

Pivot chart

Spinners

Functions

Formula

decision making

Cell reference

Datatypes

LOOKUP

Media: Component 3 –Exam

Big Questions

What is an exam brief?

What elements make up a magazine page?

What are some of the current trends in Magazine Publishing?

What are Mainstream, niche and alternative media products?

What are the key magazine terms?

What is Primary research?

What is secondary research?

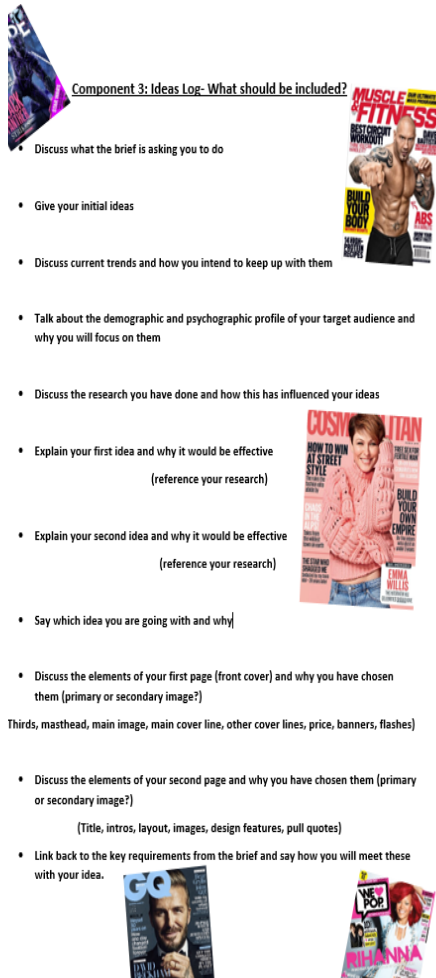
What do you need to include in an ideas log?

How do you develop your ideas from an ideas log to a design?

How can you develop your designs into a final product?

Component 3: Ideas Log- What should be included?

- Discuss what the brief is asking you to do
- Give your initial ideas
- Discuss current trends and how you intend to keep up with them
- Talk about the demographic and psychographic profile of your target audience and why you will focus on them
- Discuss the research you have done and how this has influenced your ideas
- Explain your first idea and why it would be effective (reference your research)
- Explain your second idea and why it would be effective (reference your research)
- Say which idea you are going with and why
- Discuss the elements of your first page (front cover) and why you have chosen them (primary or secondary image?)
- Discuss the elements of your second page and why you have chosen them (primary or secondary image?) (Title, intros, layout, images, design features, pull quotes)
- Link back to the key requirements from the brief and say how you will meet these with your idea.



Set Brief

Give Back is a new national organisation. The aim of the organisation is to highlight volunteering opportunities and promote the benefits of volunteering to teenagers.

Give Back has asked you to produce a media product. Your product should promote at least one way that 14–18 year olds can gain experience and develop their own skills while undertaking formal or informal volunteering within their local communities.

Your media product should:

- be informative and appealing
- use language that will engage the target audience
- promote the benefits of volunteering
- demonstrate a wide range of practical skills.

You must create a product from **one** of the following sectors: Audio/Moving Image, Publishing or Interactive.

Publishing sector

Produce pages for a media publishing product. You should:

- create three pages
- include original images and graphics
- make appropriate use of page layout and design techniques
- include written content appropriate to the brief
- save the final media product in an appropriate digital format.

Exam Dates- >

Year 11
Term 4



Part 1 - 2 hrs

11C/Me1 2nd March period 4 & 5 in C10

11B/Me1 3rd March Period 1 & 2

Part 2 - 3hrs

11B/Me1 21st March Periods 1,2 & 3a in C10

11C/Me1 22nd March Periods 1,2 & 3a in C10

Part 3 - 4hrs

11C/Me1 3rd May Periods 2, 3a, 4 & 5 in C10

11B/Me1 6th May Periods 2, 3a, 4 & 5 in C10

BIG QUESTIONS

1. Qu'est-ce qui est important pour toi dans la vie?

What's important for you in life?

2. Qu'est-ce qui te préoccupe?

What concerns you?

3. Comment peut-on aider?

How can we help?

4. FUTURE: Quel seront les conséquences du changement climatique?

What will be the consequences of climate change?

5. Quel est le plus grand problème pour la planète?

What is the biggest problem for the planet?

6. Qu'est-ce qu'on doit faire pour protéger l'environnement?

What must we do to protect the planet?

7. Que fais-tu pour protéger l'environnement?

What do you do to protect the environment?

Ce qui est important pour moi

Ce qui est important pour moi, c'est ...
l'argent (m)
le sport
la musique

What's important to me

What's important to me is ...
money
sport
music

ma famille
ma santé
mes amis
mes animaux
mes études

my family
my health
my friends
my animals
my studies

Ce qui me préoccupe

Ce qui me préoccupe, c'est ...
l'environnement
l'état (m) de la planète
le racisme
la cruauté envers les animaux

What concerns me

What concerns me is ...
the environment
the state of the planet
racism
cruelty to animals

la faim
la guerre
l'injustice (f)
la pauvreté
la violence

hunger
war
injustice
poverty
violence

Qu'est-ce qu'on peut faire pour aider?

On peut faire du bénévolat.
On peut parrainer un enfant.
On peut donner de l'argent à une association caritative.
On peut recycler.
Il faut agir.

What can we do to help?

You can do voluntary work.
You can sponsor a child.
You can give money to a charity.
You can recycle.
You/We have to act.

Il faut lutter contre la faim.
Il faut signer des pétitions.
Il faut participer à des manifestations.
Il faut éduquer les gens.

You/We have to fight against hunger.
You/We have to sign petitions.
You/We have to take part in demonstrations.
You/We have to educate people.

Quel temps fera-t-il?

Il y aura ...
de la pluie
de la neige
du vent
du tonnerre
des averses
des éclairs
des éclaircies

What will the weather be like?

There will be ...
rain
snow
wind
thunder
showers
lightning
sunny intervals

Il fera ...
beau
mauvais
chaud
froid
frais

It/The weather will be ...
nice/good
bad
hot
cold
chilly

Le temps sera ...
ensoleillé
nuageux

The weather will be ...
sunny
cloudy

Les problèmes environnementaux

Le plus grand problème environnemental, c'est ...
le changement climatique
le manque d'eau potable
la disparition des espèces
la destruction des forêts tropicales
la surpopulation
la pollution de l'air
la sécheresse
les inondations

Environmental problems

The biggest environmental problem is ...
climate change
the lack of drinking water
the extinction of species
the destruction of the rainforests
overpopulation
air pollution
drought
flooding/floods

les incendies
Les arbres nous donnent de l'oxygène et nous les coupons tous les jours.
Beaucoup de personnes n'ont pas accès à cette ressource vitale.
On détruit la planète.
C'est très inquiétant.
C'est catastrophique.

fires
Trees give us oxygen, and every day we cut them down.
Lots of people don't have access to this vital resource.
We are destroying the planet.
It's very worrying.
It's catastrophic.

Que doit-on faire pour sauver notre planète?

On doit/On peut ...
recycler
trier les déchets
faire du compost
consommer moins d'énergie
éteindre les appareils électriques
et la lumière
mettre un pulllover au lieu
d'allumer le chauffage
faire des achats responsables
utiliser du papier recyclé
acheter des produits verts et des
produits bio
voyager autrement

What should we do to save our planet?

You/We should/can ...
recycle
separate the rubbish
make compost
consume less energy
turn off electrical appliances and
the light
put on a jumper instead of
turning on the heating
make responsible purchases
use recycled paper
buy green and organic products
travel differently

utiliser les transports en commun
aller au collège à vélo
réutiliser
refuser les sacs en plastique
avoir une bouteille d'eau au lieu
de prendre un gobelet jetable
économiser l'eau
boire l'eau du robinet
prendre une douche au lieu de
prendre un bain
tirer la chasse d'eau moins
fréquemment
fermer le robinet en se lavant
les dents
installer des panneaux solaires

use public transport
go to school by bike
reuse
turn down plastic bags
have a bottle of water instead of
taking a disposable cup
save water
drink tap water
take a shower instead of a bath
flush the toilet less frequently
turn off the tap while brushing
your teeth
install solar panels

The future tense is formed with the future stem of the verb + the future tense endings.

future tense stem		future tense endings
-er/-ir verbs	the infinitive	je travailler ai (I will work)
-re verbs	the infinitive without the final -e	tu travailleras (you will work) il/elle/on travaillera (he/she/we will work)
avoir	aur-	nous travailler ons (we will work)
être	ser-	vous travaillez (you will work)
aller	ir-	ils/elles travailler ont (they will work)
faire	fer-	

When you use the **simple future tense** to talk about the weather, you are mostly using the third person singular (il form) of *faire*, *avoir* and *être*. The *il* form ending is -a.

Il **fera** frais. It will be chilly.
Il y **aura** du vent. There will be wind./It will be windy.
Le temps **sera** orageux. The weather will be stormy.

• **qui** means 'who'
• **ce qui ...** means 'that which/what ...'
Ce qui est important pour moi, c'est ...
What's important to me is ...

Link your ideas together using phrases like *en plus* and *ensuite* – don't just write a long list! Use time and place phrases like *à la maison*, *à l'école/au collège*, *actuellement* and *à l'avenir* to add interest.

pouvoir (to be able to)	devoir (to have to)	vouloir (to want to)
je peux (I can) tu peux il/elle/on peut nous pouvons vous pouvez ils/elles peuvent	je dois (I must) tu dois il/elle/on doit nous devons vous devez ils/elles doivent	je veux tu veux il/elle/on veut nous voulons vous voulez ils/elles veulent

The present participle is a special form of the verb that ends in **-ant**. It is often used after *en*, when it can mean one of three different things:

on doing J'éteins la lumière **en quittant** une pièce.
I turn the lights off **on leaving** a room.
by doing J'économise l'eau **en prenant** une douche au lieu d'un bain.
I save water **by taking** a shower instead of a bath.
while doing Je ferme le robinet **en me lavant** les dents.
I turn off the tap **while brushing** my teeth.

Homework Links

Most of your homework in MFL will require you to revise vocabulary and grammar to effectively understand and produce high quality language.

Skills

Aiming to add the following skills to your language will help you hugely with this topic and the exams:

- Using *qui* and *ce qui*
- The simple future tense to talk about the weather
- Using cognates to understand meaning
- Using *on doit* and *on peut* + the infinitive
- Using *en* + the present participle
- Linking ideas together

Writing

Below is an example of the kind of points you will need to address in written tasks for this topic:

- Qu'est-ce qui est important pour toi dans la vie?
- Quel est le plus grand problème pour la planète?
- Qu'est-ce qu'on doit faire pour protéger l'environnement?
- Quel seront les conséquences du changement climatique?

Key Vocabulary

Please note: The pupils cover an enormous range of vocabulary in MFL. Every word is a key word.

This term: **Module 8 – Studio Edexcel GCSE French (foundation)**

Use Memrise the day before your lesson to prepare!

<https://www.memrise.com/course/1797879/module-8-studio-edexcel-gcse-french-foundation/>

BIG QUESTIONS

- ¿Dónde vives?
Where do you live?
- ¿Te gusta donde vives?
Do you like where you live?
- ¿Cómo cuidas el medio ambiente en casa?
How do you look after the environment at home?
- ¿Qué haces para ser verde?
What do you do to be green?
- ¿Cuál es el problema global más serio?
What is the most serious global problema?
- ¿Qué hay que hacer?
What do we need to do?
- FUTURE: ¿Qué se debería hacer?
What should we do?
- FUTURE: ¿Qué se debería hacer para ayudar?
What should we do to help?

¿Cómo es tu casa?

Vivo en...

un bloque de pisos
una casa individual
una casa adosada
un piso / apartamento
una granja

Está en...

el centro de la ciudad
un barrio en las afueras
las afueras
el campo
un pueblo en la costa
la montaña
abajo / arriba
en la planta baja

¿Cómo cuidas el medio ambiente en casa?

Apago / Apagamos

la luz
la lámpara

Desenchufo / Desenchufamos

los aparatos eléctricos
el equipo de música
el ordenador
la televisión

Prefiero usar...

la ducha / la bañera

Ahorramos agua.

Separamos...

Reciclamos...

la basura

What is your house like?

I live in...

a block of flats
a detached house
a semi-detached / terraced house
a flat / apartment
a farmhouse

It is in...

the centre of city
a district in the suburbs
the outskirts / suburbs
the country
a village on the coast
the mountains
downstairs / upstairs
on the ground floor

How do you look after the environment at home?

I turn off / We turn off

the light
the lamp

I unplug / We unplug

electric devices
the stereo
the computer
the television

I prefer using...

the shower / the bath

We save water.

We separate...

We recycle...

the rubbish

en la primera planta

en el primer piso

fuera...

hay...

un aseo
un comedor
un cuarto de baño
un despacho / estudio
un dormitorio
un salón
un garaje
un jardín
una cocina
una terraza
una mesa
unas sillas

on the first floor

on the first floor

outside...

there is...

a toilet
a dining room
a bathroom
a study
a bedroom
a living room
a garage
a garden
a kitchen
a terrace / balcony
a table
some chairs

el papel

el plástico

el vidrio

los cubos de basura

Cerramos...

las ventanas

la puerta

Compramos productos verdes.

el armario

el sofá

la cama

la lavadora

la calefacción

Malgastamos energía.

hacer todo lo posible

ser verde

paper

plastic

glass

rubbish bins

We shut...

the windows

the door

We buy green products.

the cupboard

the sofa

the bed

the washing machine

the heating

We waste energy.

to do everything possible

to be green

¡Actúa localmente!

Hay demasiada basura.

El aire está contaminado.

la sequía

el calentamiento global

la destrucción de los bosques

Para...

limpiar las calles

proteger el medio ambiente /

los ríos y mares

reducir la contaminación

luchar contra el calentamiento

global

Se debería...

ducharse

plantar más árboles

Act locally!

There is too much rubbish.

The air is polluted.

drought

global warming

destruction of woodland / forest

In order to...

clean (up) the streets

protect the environment /

the rivers and seas

reduce pollution

combat global warming

You should...

shower

plant more trees

usar productos ecológicos

ahorrar energía en casa

usar el transporte público

reciclar todo lo posible

usar energías renovables

hacer proyectos

medioambientales

apagar la luz

reciclar el papel y el vidrio

desenchufar los aparatos

eléctricos

No se debería...

tirar basura al suelo

usar bolsas de plástico

malgastar el agua / la energía

use environmentally-friendly products

save energy at home

use public transport

recycle everything possible

use renewable energies

do environmental projects

switch off the light

recycle paper and glass

unplug electronic devices

You should not...

throw rubbish on the ground

use plastic bags

waste water / energy

¿Cuál es el problema global más serio?

El mayor problema global es...
el paro / desempleo
el medio ambiente
el hambre
los sin hogar / techo
los animales en peligro de extinción
la desigualdad social

What is the most serious global problem?

The greatest global problem is...
unemployment
the environment
hunger
the homeless
the animals in danger of extinction
social inequality

la salud
la crisis económica
la contaminación... de los ríos / mares
la pobreza
la drogadicción
los drogadictos
los obesos
los animales amenazados
la tasa de desempleo

health
the economic crisis
the pollution... of the rivers / seas
poverty
drug addiction
drug addicts
obese people
endangered animals
the unemployment rate

¿Qué hay que hacer?

Hay que...
cuidar el planeta
crear más empleos
reducir el consumo
apoyar a proyectos de ayuda
usar productos verdes
hacer campañas publicitarias
Me quedé sin hogar
Perdí mi trabajo

What must be done?

One / We must...
look after the planet
create more jobs
reduce consumption
support aid projects
use green products
do publicity campaigns
I ended up homeless
I lost my job

Sufrió agresiones
Pasé una semana...
Encontré un centro de ayuda
el alquiler
Si tengo éxito...
una organización humanitaria
actualmente
por ciento
la edad media

I suffered attacks
I spent a week...
I found a help centre
the rent
If I am successful...
humanitarian organisation
currently
per cent
average age

Use **se debería** followed an **infinitive** to mean 'you/one should'. It is the conditional form of **se debe** (you/one must).

Se debería ahorrar energía. You/One should save energy.

No se debería tirar basura al suelo. You/One should not throw litter on the ground.

Para ser verde... Para cuidar el medio ambiente...

siempre
usamos la ducha
reciclamos todo lo posible
vamos en bici / a pie
separamos la basura

(casi) nunca
usamos bolsas de plástico
ponemos la calefacción
vamos en coche

When listening for higher numbers keep calm and don't assume you'll hear the answer immediately. Listen the second time to be sure.

1.000.000 = un millón

1.000 = mil

3.574 = tres mil quinientos setenta y cuatro

95% = el noventa y cinco por ciento

Use a **full stop** to separate thousands and a **comma** for decimals.

Use the **superlative** to say 'the (poor)-est', 'the most / least (serious)', etc.

The adjective *usually* goes after the noun and agrees with it.

el / la / los / las + noun + *más / menos* + adjective

el lago más limpio

the cleanest lake

la montaña más alta

the highest mountain

Some superlatives are formed differently and go in front of the noun:

el mayor / menor problema

the greatest / smallest problem

la mejor / peor solución

the best / worst solution

Homework Links

Most of your homework in MFL will require you to revise vocabulary and grammar to effectively understand and produce high quality language.

Skills

Aiming to add the following skills to your language will help you hugely with this topic and the exams:

- Using the *we* form
- *Para* + infinitive
- The superlative
- High numbers
- *Se debería* + infinitive
- Synonyms

Writing

Below is an example of the kind of points you will need to address in written tasks for this topic:

- ¿Dónde vives?
- ¿Cómo cuidas el medio ambiente en casa?
- ¿Cuál es el problema global más serio?
- ¿Qué se debería hacer?

Key Vocabulary

Please note: The pupils cover an enormous range of vocabulary in MFL. Every word is a key word.

BIG QUESTIONS

To be able to adapt provision for learning to take place

- ✓ What are the risks of outside play for young children
- ✓ How can play be adapted to support children's individual needs
- ✓ How can we adapt play to promote inclusive learning



C2 Adapting activities/resources to support a child with physical needs (as appropriate to the age group)

- Make adjustments to the environment - sufficient space is available to carry out the activity, adjust the amount of lighting available to improve visibility.
- Choose resources that are age and stage appropriate.
- Select appropriate resources that all children can use, including resources for grasping, holding, releasing and transferring.
- Secure movable objects so they do not move - use tape to secure paper, mixing bowls or wood blocks to the table or floor so they remain in place as the child paints, draws, stirs or hammers.
- Adjust the level of activities and resources to suit the child's needs.
- Provide materials and resources for sensory needs, including use of contrasting colour schemes, 3D art materials, use of scents and textures

C3 Adapting activities to support a child with cognitive and intellectual or communication and language needs (as appropriate to the age group)

- Provide opportunities to learn and play near to other children doing the same activity -encourage sharing of ideas.
- Shorten activities to suit concentration span.
- Use peers or other adults to model activities.
- Break activities down into short steps - repeat steps as necessary.
- Modify toys and equipment to suit individual needs - reduce number of parts, remove items that are too small, use specific colours.
- Limit the number of materials available to avoid overwhelming the child.
- Use technological/digital resources as appropriate.

C4 Adapting activities to support a child with communication and language needs (as appropriate to the age group)

Use group and/or team activities to promote social inclusion - encourage friendships with other children, build bonds and trust with adults.

- Build confidence in own skills.
- Use alternative communication:

Picture Exchange Communication System® (PECS) - starting with simple words, building to sentence structures

Makaton - signs and symbols to support speech or be used in place of speech.

- Use nursery rhymes with actions to promote identification of words, including songs where words and actions are repeated.
- Label equipment - use picture cards to encourage independence and choice.
- Display routines and activities as pictures.

C5 Adapting activities/resources to support a child experiencing social and emotional needs

- Promote self-resilience - limit the choices of activity available so a child does not feel overwhelmed, provide activities that will help the child feel capable.
- Provide a structured approach - assign specific tasks to the child during the transition to reduce their worry.
- Maintain engagement of the child by filling tidying-up periods with short activities.
- Set out activities that focus on a child's areas of interest - choosing books and games that include the issue that is worrying the child.
- Promote choice and control over the environment by providing a range of materials and resources that can be used to complete an activity.
- Encourage expression of thoughts, feelings and ideas - use pretend play activities, including dressing-up clothes and role play, cooking materials, use of puppets and dolls.
- Encourage group activities - builds confidence in participating with other children; encourages sharing and turn taking

Homework Links

Research from the following websites-

- ✓ www.education.gov.uk
- ✓ http://www.eclre.org/media/84761/adaptingactivitiesand_materialsec-1.pdf
- ✓ <https://www.earlyyearscreers.com/eyc/send-support/identifying-and-supporting-all-childrens-individual-needs/>

Key Terms LA-A/B

Inclusive practice- provide them with opportunities to overcome these difficulties

Self-image- the idea one has of one's abilities, appearance, and personality:

Key person- named person who has responsibility in a setting for working with you and meeting your child's individual needs.

Self-efficacy- the set of beliefs we hold about our ability to complete a particular task. -

Nurtured- help or encourage the development of: care for and protect (someone or something) while they are growing: /

BIG QUESTIONS

What are care values and why are they important?

Why is it important to apply care values in a compassionate way?

Why is it important for Health and Social Care professionals to reflect on their own practice?



Health and Social Care

B1-Care Values

Explore and practise applying the different care values that are key to the delivery of effective health and social care services.

- Empowering and promoting independence by involving individuals, where possible, in making choices, e.g. about treatments they receive or about how care is delivered
- Respect for the individual by respecting service users' needs, beliefs and identity
- Maintaining confidentiality (when dealing with records, avoiding sharing information inappropriately, e.g. gossip)
- Preserving the dignity of individuals to help them maintain privacy and self-respect
- Effective communication that displays empathy and warmth
- Safeguarding and duty of care, e.g. maintaining a healthy and safe environment, keeping individuals safe from physical harm promoting anti-discriminatory practice by being aware of types of unfair discrimination and avoiding discriminatory behaviour.

Application of care values

Reflect on own application of care values, including using teacher or service-user feedback.

B2 Reviewing own

Key aspects of a review:

- Identifying own strengths and areas for improvement against the care values
- Receiving feedback from teacher or service user about own performance
- Responding to feedback and identifying ways to improve own performance.



Tasks that need to be completed for this assignment

Learners must be given the opportunity to demonstrate care values in one or more simulated or real situations (one situation may not provide sufficient opportunities for learners to demonstrate all of the care values, in which case additional situations could be used). The situation(s) could relate to health or social care.

Learners then review their own performance.

Example task

Demonstrate each care value listed

- Firstly, review how well you did
- Respond to feedback received from the teacher and/or service users, making suggestions for improvement.

Evidence

Evidence must fully meet the requirements of the assessment criteria and could include:

- Signed observation records, accompanied by a checklist of the values demonstrated
- Written review of own performance, along with feedback received.

Homework Links

Research from the following journals-

- ✓ Community Care Magazine
- ✓ The Nursing Times

Key Terms LA-B

Self-respect- is valuing yourself

Person-centred approach- is respecting and empowering individuals

Dignity- is being respectful and treated with care.

Empathy- is being able to understand and share the feelings and views of another person.

Task:

You are a volunteer in two health and social care settings; you work Tuesday, Wednesday and Thursday at one setting and Monday and Saturday at the other setting.

You will need to-

- Describe how care values support users of services, using relevant examples
- Demonstrate the use of care values in selected health and social care contexts.
- identify how care values are used to support users of services
- Demonstrate the use of care values in a selected health and social care context

Subject: 3D Design
Year / Group: 11
Topic: Exam Prep
Term: 3-5

BIG QUESTIONS

How can the study of other artists help you find your own direction in the development of ideas?

Describe the process of development in artists work.

Compare similarities and differences in artists work.

Explain why primary sources are the richest form of research.

How can Secondary sources enrich the development of ideas?

List different ways of recording your observations of the subject matter.

Why should you plan a wide range of ideas before selecting a final one?

How can the refining process help you to fully realise intentions?

Controlled Assessment The externally set assignment provides students with the opportunity to demonstrate, through an extended creative response, their ability to draw together different areas of knowledge, skill and/or understanding from initial engagement with their selected starting point through to their realisation of intentions in the 10 hours of supervised time.



Key Skills

RECORD

I will independently record...

- images and information appropriate to my chosen exam question
- using wet, dry and digital media
- examples of artists work appropriate to my chosen exam question
- information about artists, showing appreciation of how they use media and techniques to create meaningful work.

DEVELOP

I will independently develop...

- my observation skills using a range of media, techniques and processes.
- artwork and ideas from primary sources
- my knowledge and understanding of artist styles and techniques
- my drawing and planning skills
- ideas in response to a given theme, linking to artists work
- my higher order thinking skills

REFINE

I will independently...

- experiment making the most of media and techniques relevant to my intentions
- select ideas to adapt and improve e.g. adjustments to size, colour and composition.
- develop a piece of work from one media into another

EVALUATE

I will independently...

- analyse and reflect on the development of my own work, through annotation making connections to artists and suggesting ways I could improve.
- evaluate artists using analytical writing skills and forming opinions.

PRESENT OUTCOMES

I will independently...

prepare a plan for a final piece to be completed during the 10-hour exam.



Homework Links

Develop preparatory work at home for a minimum of 2 hours per week...

- Research of artists *including studies, info, evaluation*
- Research of images (*using mind map*)
- Collect primary sources
- Drawings
- Annotation
- Ideas



Key Vocabulary

*Research/Record/
Analyse/Experiment/
Develop/Design/
Technique/Process/Refine
Realise/Evaluate*

I will be expected to recall keywords learned in previous projects and use them in the appropriate context.

EVALUATING ARTISTS'/DESIGNERS' WORK

1. Describe the piece of art/design you are looking at
2. What is the name of the artist/designer or type of art/design?
3. What part of the world does the art/design come from?
4. Research and list 5 or more things about the artist/designer?
5. Describe the materials used to make the art/design
6. How has the artist/designer made the work?
7. What is being communicated through the art/design?
8. Which of these words best describes the mood of the picture/artefact?
EMOTIONAL/POWERFUL/HUMEROUS/USEFUL/SERIOUS/BUSY/SLOW/PEACEFUL/WARM/COLD/HAPPY/SAD/CALM/INTENSE/ SCARY can you think of any other words?
9. What do you like or dislike about the picture/artefact? Explain your reasons...

ANNOTATING YOUR OWN WORK

- In this piece of work I was trying to...
- The artist/designer that has influenced my work is...
- In my work I used the technique of...
- The source I have used is...
- The media I have used is...
- I like this piece because...
- My idea links to the brief because...
- I can improve this piece by...
- Next, I'm going to.....

Annotate means to explain your own creations
Artist evaluation is when you write about the artist
Project evaluation is written about the whole project at the end

END OF PROJECT EVALUATION

1. Describe each stage of the project from start to finish
2. What media/materials did you use to produce your work? E.g. Paint/Pencil/Clay etc.
3. Describe how you used different techniques in your project? E.g. painting/drawing/modelling with clay etc.
4. Which artist/designer/culture have you looked at?
5. Write down two or more similarities between your work and the artist/designers' work.
6. Which piece of your work best shows the Artist/Designers' style or the influence of another culture and why?
7. Describe some of your own ideas...
8. Have you used a primary or a secondary source?
9. Have you included the secondary source in your work? Where did you find it?
10. Imagine if your final piece was displayed in a public place.... Describe the effect looking at your work might have on people and society. E.g. relax them, make them feel sad, curious, happy, angry, thoughtful, surprised, confused, nostalgic etc. explain why e.g. because of your use of colour, images, content, arrangement? etc.
11. Explain any other influences on your work e.g. personalities (*including your own*), places, memories, objects, politics, events, activities, religion, fact, fiction etc.
12. Describe how your work links to the project brief?
13. Explain what you have done well...
14. Explain how you could improve...
15. What would you do differently, if you were to repeat any part of this project