THE ABBEY SCHOOL
A BUSINESS & ENTERPRISE ACADEMY

Knowledge Organiser

Year 9

Term 3

CONTENTS

English
Unseen Poetry

BIG QUESTIONS

How has the poet presented……?

Analysis Words

- Conveys - makes (an idea, impression, or feeling) known or understandable.
- Suggests – causes someone to think that's the case.
- Implies – indicates something by suggestion rather than explicitly.
- Portrays – describes something in a particular way.
- Indicates – be a sign of; strongly suggests.

Steps to analyse an Unseen Poem

(Before you read the poem, make sure you know what the question is asking you.)

1. **Look at the title.** What does it suggest?
2. **Read through the poem.** Write down 1-2 sentences that sum up what the poem is about. (This could be your introduction)
3. **Explore the structure.** Identify the rhyme scheme – is it interesting? Are the verses different lengths? Is the poem in a specific form?
4. **Explore the language.** Pick out any interesting words/phrases. What techniques are being used? What is the effect?
5. **Plan your response.** How does what you have picked out link to the question? What points could you make?

Sentence starters

(to help you structure an answer)

The poet has presented ……..as……
This can be seen in…….
The use of the …… suggests……
This is effective because……

Linking Connectives

(to add more evidence)

In addition,…..
Furthermore,…..
Moreover,……
Also,…..
Similarly,…….

Language Technique	Definition
Simile	A way or comparing things using 'LIKE' or 'AS' e.g. "the world overflowing/like a treasure chest"
Metaphor	A way of comparing things by saying one thing 'IS' something else e.g. "the loose silver whitebait".
Plosive	A short burst of sound made when you say a word containing the letters b, d, g, k, p or t.
Onomatopoeia	When words mimic the sound of the object they are describing e.g. "rumbles" and "jingle".
Personification	Describing a non-living thing as if it has human qualities and feelings, or behaves in a human way. E.g. "My city hides behind me".
Alliteration	Where words that a close together start with the same sound, e.g. "flowing flakes that flock".
Repetition	Using the same word, phrase, line, or stanza two or more times in a poem.
Sibilance	Repetition of 's' and 'sh' sounds "sentries whisper, curious, nervous"
Assonance	When words share the same vowel sound but their consonants are different, e.g. "might fly our lives like paper kites"
Consonance	The repetition of the consonant sound in nearby words, e.g. "numb as a smashed arm"
Oxymoron	A figure of speech in which opposite or contradictory ideas or terms are combined E.g. "marriage hearse", thunderous silence or sweet sorrow.
Colloquial	Sounding like every day spoken language, e.g. "one of my mates goes by"
Emotive	Something that makes you feel a particular emotion.
Empathy	When someone understands what someone else is experiencing and how they feel about it.
Imagery	Language that creates a picture in your mind. It includes similes, metaphors and personification.
Symbolism	When an object stands for something else. E.g. the statue of Ozymandias symbolises human power, and the dove in 'Poppies' symbolises mourning.
Irony	When words are used to imply the opposite of what they normally mean. It can also mean when there is a difference between what people expect and what usually happens.
Rhetorical Question	A question that doesn't need an answer but is made to emphasise a point.

Structural Technique	Definition
Stanza	A group of lines in a poem – like a paragraph.
Syllable	A single unit of sound within a word. E.g. "all" has one syllable, "always" has two.
Rhyme scheme	A patter of rhyming words e.g. London has an ABAB rhyme scheme which means the first and third line rhyme.
Rhythm	A pattern of sounds created by the arrangement of stressed and unstressed syllables.
Metre	The arrangement of stressed and unstressed syllables to create rhythm in a line of poetry.
Blank verse	Poetry written in iambic pentameter that does not rhyme.
Free verse	Poetry that doesn't rhyme and has no regular rhyme or line length
Caesura	A pause in a line of poetry. E.G around the full stop in "Maps too. The sun shines through".
Enjambment	When a sentence or phrase runs over from one line or stanza to the next.

Homework Links

You will continue to look at your creative writing for homework, so keep using your Literacy Knowledge Organiser to practice those skills.

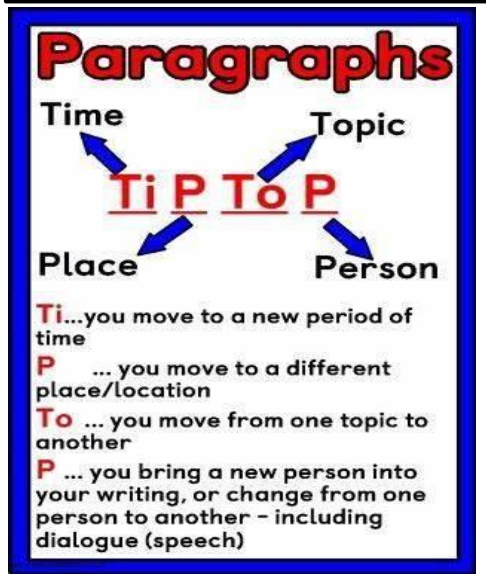
Literacy

Sentence Structures

1. 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.
2. Subordinate Clause: A clause that depends on an independent clause to make sense. E.g. Without turning around, the cat sat on the mat.
3. Simple Sentence: Contains just one clause (subject + verb) E.g. Tom went to the shops.
4. 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.
5. 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.
6. Exclamatory: A sentence that shows great emotions. E.g. I am appalled by your behaviour!
7. Imperative: A sentence that gives commands. E.g. Get out!
8. Interrogative: A sentence that asks a question (not rhetorical questions). E.g. How much is that?
9. Declarative: A sentence that makes a declaration. E.g. She sells sea-shells.

Sentence Openers

Paragraphs



Homophones: words that sound the same but have different meanings

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

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".*

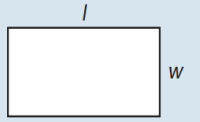
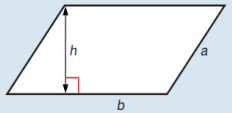
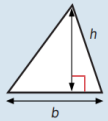
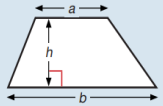
6.) Use a comma with phrases that present a contrast.
E.g. *Learning about Hemingway can be highly advantageous for students, not only in their secondary school studies, but also in their future careers.*

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.*

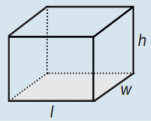
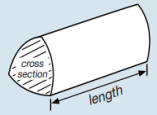
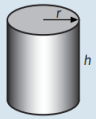
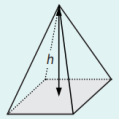
Subject: Mathematics
Topic: Recall Knowledge

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 = $\frac{1}{2}(a + b)h$	

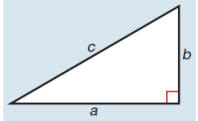
Volumes

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

Pythagoras

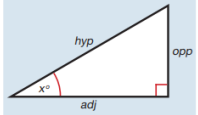
Pythagoras' Theorem

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



Trigonometric ratios (*new to F*)

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



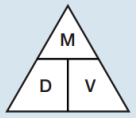
Compound measures

Speed

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

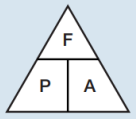
Density

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



Pressure

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

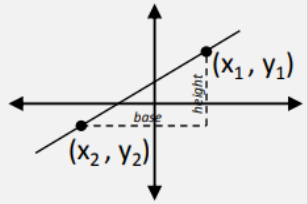


Gradient of a Line

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

or

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



Midpoint of two points

between (x_1 , y_1) and (x_2 , y_2)

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

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 ± means + for growth and – for decay

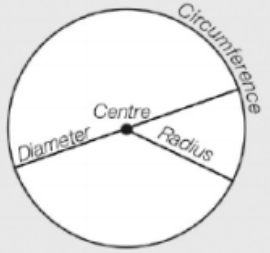
Literacy In Maths	Command Words
Evaluate …	Work out and write your answer
Work out …	Working out is required
Calculate …	Working out is required. A calculator may be needed.
Solve …	Work out the values
Prove …	All working must be shown in steps to link reasons and values.
Expand…	Multiply out of the 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 = $\pi \times$ diameter, $C = \pi d$

Circumference = $2 \times \pi \times$ radius, $C = 2\pi r$

Area of a circle = π x 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

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

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

Subject: Mathematics
Topic: Ch3 Interpreting and Representing Data (Ch7F Averages)

Year / Group: 9H and F
Term: 3

BIG QUESTIONS

How can you extend your knowledge of displaying data from year 7 and 8?

How can you use your knowledge of averages for tables and charts?

Sparx Maths

U981, U363, U557, U506, U508, U172, U840, U277, U199, U260, U291, U456, U569

Key Terms

Stem and leaf diagrams are used to order and organise data. A **key** must be included.

Averages can be found easily from stem and leaf diagrams.

A **two way table** is used to represent categorised data.

e.g. gender and school year group

Once completed, probabilities can be formulated easily from two way tables.

Here are the times, in minutes, taken to solve a puzzle.

5	10	15	12	8	7	20	35	24	15
20	33	15	24	10	8	10	20	16	10

Draw an ordered stem and leaf diagram:

0	5 7 8 8
1	0 0 0 0 2 5 5 5 6
2	0 0 0 4 4
3	3 5

Key: 2 | 4 = 24 mins

Calculate the median value = 15
State the mode = 10
Calculate the range = 35 – 5 = 30

Examples

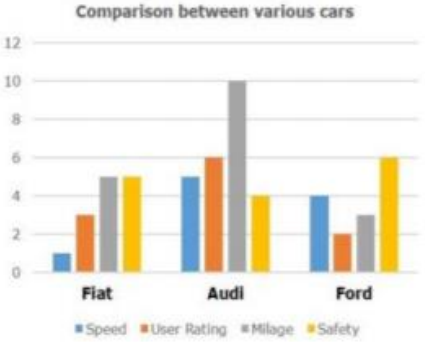
80 children went on a school trip.
They either went to London or to York.
23 boys and 19 girls went to London.
14 boys went to York.
(a) Complete a two way table for this information.

	London	York	Total
Girls	19	24	43
Boys	23	14	37
Total	42	38	80

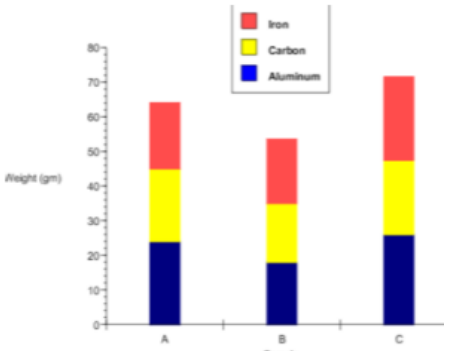
(b) What is the probability that a person chosen at random went to London? $\frac{42}{80}$

(c) A girl is chosen, what is the probability that she went to York? $\frac{24}{38}$

Comparative bar charts



Composite bar charts

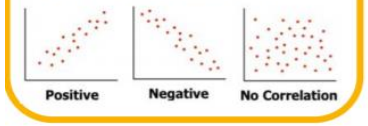


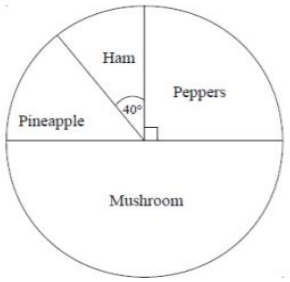
Key Terms

Pie charts use angles to represent, proportionally, the quantity of each group involved.

Pie charts can only be compared to one another when the total frequency or populations are given.

Scatter-graphs show the relationship between two variables. This relationship is called the **correlation**.



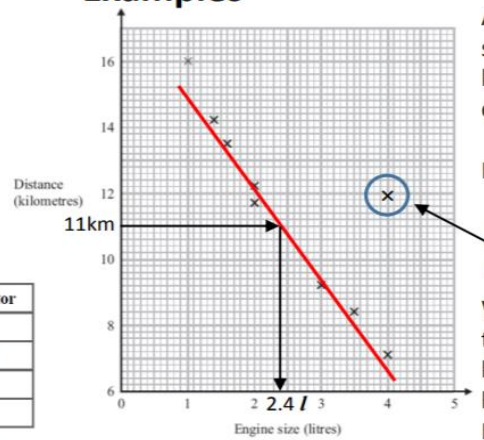


Topping	Frequency	Angle of Sector
Peppers	18	90°
Mushroom	36	180°
Pineapple	10	50°
Ham	8	40°

Total=72 360°

360° ÷ 72 ×5

Examples



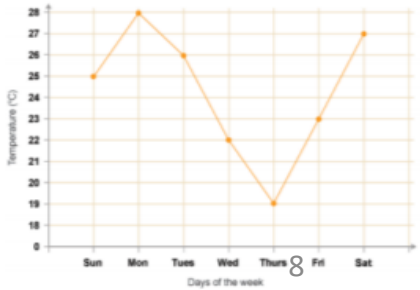
A scatter-graph is drawn to show the relationship between the engine size of a car and how far it can travel.

It shows negative correlation.

This is an outlier.
It does not match the trend.

We draw a **line of best fit** through the data points to help estimate readings, based on the data sample. For example, estimating the engine size of a car that can travel 11km would be 2.4 litres.

Line graphs



Averages

There are three types of **average** that we use to analyse and compare data. We can calculate averages from a **discrete** data set.

Mode The most common value that appears in the list.

Median Once ordered, the middle value.

Mean

$$\frac{Total\ of\ all\ data}{Number\ of\ pieces\ of\ data}$$

The **range** is used to analyse the **spread** of a data set or how **consistent** the data is.

Range

$$largest\ data\ value - smallest\ data\ value$$

Some situations can cause bias and make the sample unrepresentative

When and where the sample is taken?
Is the sample large enough?
Who is in the sample?

Averages

Modal class (mode)
Group with the highest frequency.

Median group
The median lies in the group which holds the $\frac{total\ frequency+1}{2}$ position. Once identified, use the cumulative frequency to identify which group the median belongs from the table.

Estimate the mean
For grouped data, the mean can only be an estimate as we do not know the exact values in each group. To estimate, we use the midpoints of each group and to calculate the mean we find $\frac{total\ fx}{total\ f}$.

Examples

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

a) Estimate the mean of this data.
step 1: calculate the total frequency
step 2: find the midpoint of each group
step 3: calculate $f \times x$
step 4: calculate the mean shown below

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

b) Identify the modal class from this data set. *" the group that has the highest frequency "*
Modal class is $20 < x \leq 30$

c) Identify the group in which the median would lie. Median $= \frac{Total\ frequency+1}{2} = \frac{56}{2} = 28th\ value$
" add the frequency column until you reach the 28th value " Median is the in group $20 < x \leq 30$

Sampling

We collect and analyse data to give us information about a population

Census

Data is collected from the **WHOLE** population

Can take a very long time to collect the information

Sample

Data is collected from **PART** of the population

Quicker to collect the data and the data can be used to describe the whole population

Random

Your sample is randomly selected

Each member assigned a number
Numbers randomly generated
Those numbers used in sample

Stratified

Proportionate numbers from each group selected to make sample

$$\frac{Amount\ in\ group}{Total\ number} \times Sample\ size$$

Types of Data

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

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

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

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

Grouped Data

Data which is organised into classes

Primary

Data collected by you

Secondary

Data gathered from another source

Homework Links

Sparx Maths

MathsGenie.co.uk/GCSE

Corbettmaths.com/contents

bbc.co.uk/bitesize/subjects

Key Vocabulary

Pie Chart

Frequency

Stem and Leaf

Scatter

Correlation

Trend

Best Fit

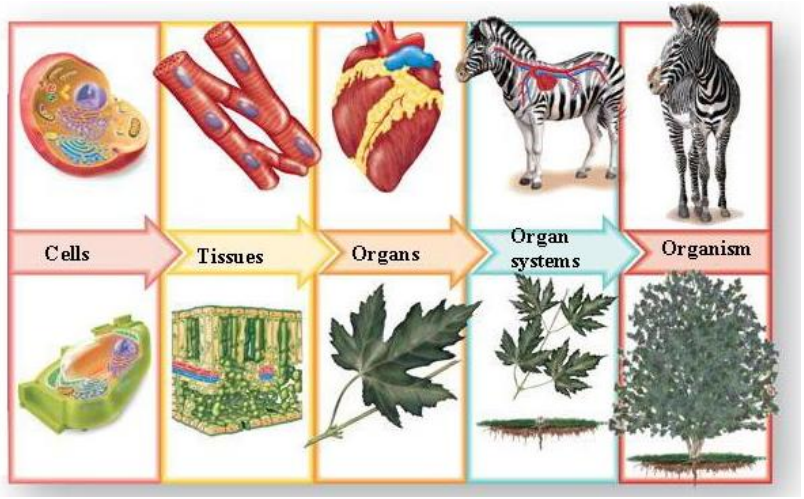
Sample

Bias

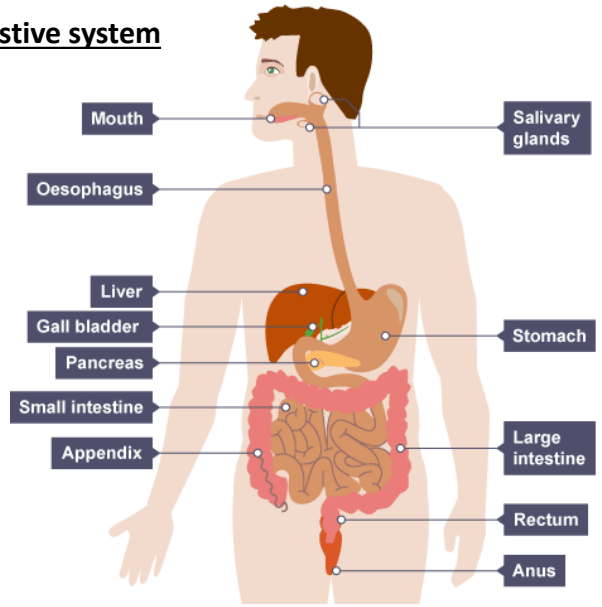
Biology 2: Organisation Knowledge Organiser

A) Organisation, Enzymes and Digestion

Levels of organisation



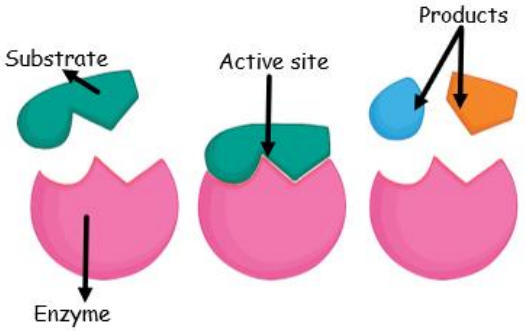
Digestive system



Key term/question	Definition/answer
1. Cells	Basic building blocks of all living organisms
2. Tissues	**similar cells** working together to perform a particular function
3. Organ	**Different tissues** working together to perform a particular function
4. Organ system	**Different organs** working together to perform a particular function
5. Organism	**Different organ systems** working together
6. Digestion	Large **insoluble** molecules are **broken down** into smaller **soluble** molecules
7. What is mechanical digestion?	Physical breakdown of food (e.g. teeth grinding, the stomach churning)
8. What is chemical digestion?	Chemical breakdown of food by enzymes
9. Function of salivary glands	Secretes the enzyme amylase
10. Three functions of the stomach (3)	**1.** Contraction of the muscular walls (mechanical digestion) **2.** Protease is secreted **3.** Hydrochloric acid is secreted
11. Functions of hydrochloric acid (2)	**1.**Lowers the pH of the stomach **2.** Kills harmful microorganisms
12. Function of the pancreas	Makes enzymes
13. Function of the liver	Makes bile
14. Function of the gall bladder	Stores bile
15. Functions of bile (2)	**1.** Neutralises the hydrochloric acid **2.** Emulsifies fats
16. Function of the small intestine	Soluble food molecules are absorbed into the blood stream
17. Function of the large intestine	Absorbs water, leaving faeces
18. What are enzymes in the body?	Biological catalyst made of protein
19. Catalyst	Increases the speed of a reaction, **without being changed or used up**
20. Factors needed for optimum conditions for enzymes (2)	**1.**Temperature **2.** pH
21. Denatured	Enzyme loses its shape, so substrate won't fit into the active site.
22. Substrate	What the enzymes breaks down (e.g. starch, proteins and lipids)

Lock and key theory

A model people use to explain how enzymes work is the lock and key theory. The enzyme is the 'lock' and the substrate is the 'key'. Substrates fit the enzymes active site, then react, turning into products.



Enzyme	Where enzyme is produced	Where enzyme is used	Function of enzyme
Carbohydrase / amylase	Salivary glands and pancreas	Mouth and small intestine	breaks down starch into glucose
Protease	Stomach, pancreas and small intestine	Stomach and small intestine	breaks down proteins into amino acids
Lipase	Pancreas and small intestine	Small intestine	breaks down lipids into glycerol and fatty acids

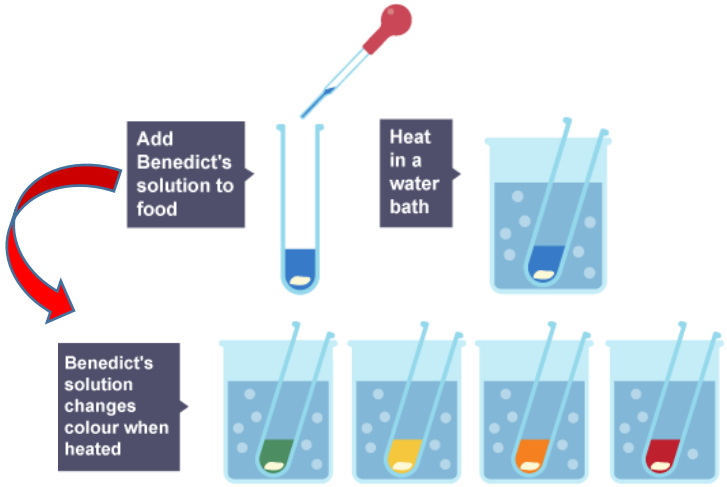
Biology 2: Required Practical 3 – Food Tests

A) Method for preparing a food sample

1. Use a **pestle** and **mortar** to break up a piece of food.
2. Transfer the ground up food to a **beaker** and add **distilled water**.
3. Stir the mixture with a **glass rod**.
4. Filer the solution using a **funnel** and **filter paper.**

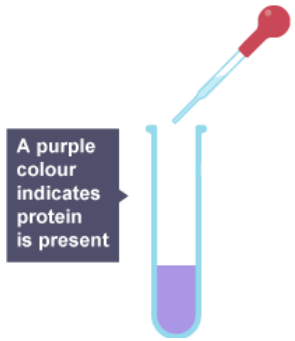
B) Method to test for sugars

1. Add the prepared food sample to a test tube and add 10 drops of Benedict's.
2. Heat in a water bath for 5 minutes at 80°C.
3. Observe colour change of mixture.
4. If there is a high concentration of reducing sugars present, the colour of the solution will change to **brick red.**



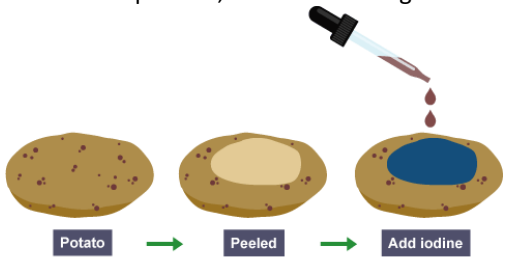
C) Method to test for proteins

1. Add the prepared food sample to a test tube and add 2cm^3 of Biuret A solution.
2. Next add 2cm^3 of Biuret B solution.
3. Shake the test tube gently to mix the contents.
4. Observe the colour change.
5. If protein is present, the colour of the solution will change to **purple**



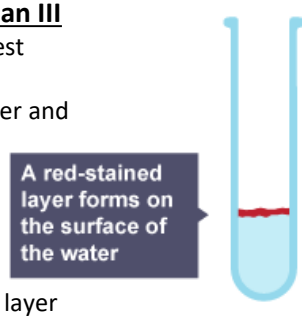
D) Method to test for Starch

1. Add a few drops of iodine to the food sample.
2. Observe the colour change.
3. If starch is present, iodine will change colour to **blue/black.**



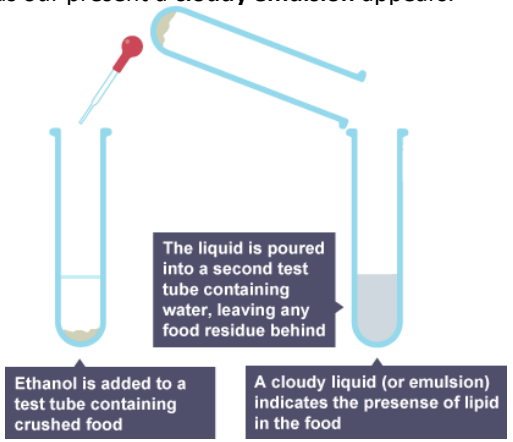
E) Method to test for lipids using Sudan III

1. Add the prepared food sample to a test tube.
2. Add the same volume of distilled water and Sudan III to the test tube.
3. Shake the test tube gently to mix the contents.
4. Observe the colour change.
5. If lipids our present, the mixture will separate into two layers, and the top layer is stained **red.**



F) Method to test for lipids using the emulsion test

1. Add the prepared food sample to a test tube.
2. Add a few drops of ethanol to the test tube.
3. Pour the mixture into a test tube containing distilled water.
4. If lipids our present a **cloudy emulsion** appears.



Key term/question	Definition/answer
1. Reagent to test for reducing sugars (glucose)	Benedict's solution
2. The colour change for a positive result of glucose	Blue → Green → Yellow → Brick red
3. Reagent to test for starch	Iodine
4. The colour change for a positive result for starch	Orange/brown → Blue/black
5. The reagent used to test for proteins	Biuret
6. The colour change for a positive result for protein	Blue → purple
7. Reagent used to test for lipids	Ethanol
8. The positive result for lipids	A cloudy emulsion appears
9. Why are food tests known as qualitative tests?	Results are not expressed as numerical data. They are expressed by the presence or absence of a substance by a colour change.

G) Risk Assessment

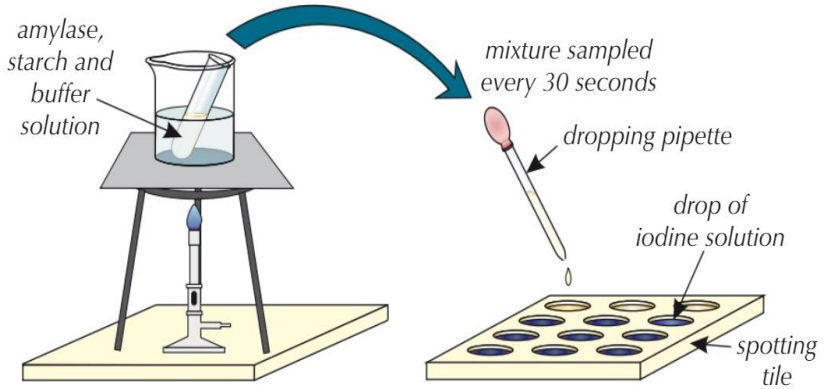
Hazard	Risk	Precaution
Biuret	Corrosive 	• Wear safety goggles • Use the lowest concentration • Avoid contact with skin and eyes
Benedict's and iodine	Irritant 	• Wear safety goggles • Use the lowest concentration • Avoid contact with skin and eyes
Ethanol	Flammable 	Do not use near a Bunsen Burner

Biology 2: Required Practical 4 – Investigating Enzyme Reactions

A) Method to investigate the effect of pH on amylase activity

1. Add one drop of **iodine** to each **spotting well**.
2. Place **2cm³** of **amylase**, **starch** and **pH 5 buffer** solution in three **different test tubes** and place in a water bath set at 35 °C for 10 minutes.
3. Add all the contents of the test tubes together and start a **stopwatch.**
4. Use a **pipette** to transfer a drop of the solution to an iodine well **every 30 seconds** until the iodine remains **orange/brown**. When the iodine no longer changes colour starch is no longer present.
5. Record the time at which the **iodine no longer changes colour.**
6. Repeat steps 2 to 5 with **pH 6, pH7, pH8 and pH 9 buffer solutions.**

Practical set up



Key term/question	Definition/answer
1. Independent variable (what you change)	pH of the buffer solution
2. Dependent variable (what you measure)	Time taken in seconds for amylase to breakdown starch into glucose
3. Control variables of the amylase, pH buffer and starch solution (what you keep the same) (3)	**1**. The temperature (° C) **2.** Volume (cm³) **3.** Concentration (g/dm³)
4. Equipment used to control the temperature	Bunsen Burner or electric water bath
5. Equipment used to control the volume	Pipette
6. What does continuous sampling mean?	Results are recorded at time intervals
7. Optimal pH for amylase within the human body	7
8. What will happen to amylase below or above pH of 7?	Amylase will denature
9. Optimal temperature for enzyme activity within the human body	37 °C
10. Why is the experiment repeated two more times?	To identify any **anomalies** and to determine if the results are **accurate.**
11. Why is a pH buffer used?	To keep the pH of the solution the same
12. Why do you leave the amylase, starch and pH solution in the water bath for 10 minutes before adding the solutions together?	To ensure solutions reach the desired temperature before starting the investigation
13. How do you know that all the starch solution has been broken down?	The iodine will no longer change colour to **blue/black** but will remain **orange/brown**
14. Rate of reaction =	1000 ÷ time

B) Evaluating results

A student set up a model to represent the digestion and absorption of food molecules in the digestive system. The partially permeable tubing represents the small intestine and the water in the test tube represents the blood

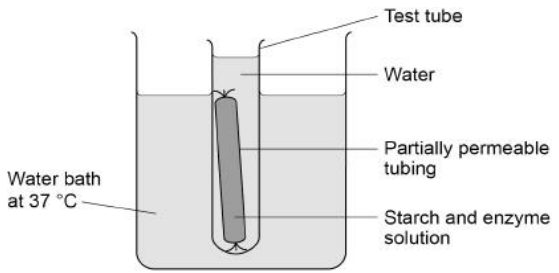


Table of results

Test	Description of liquid	Result of starch test	Results of sugar test
1	Mixture inside tubing at start	✓	X
2	Water in the test tube at start	X	X
3	Mixture inside tubing after 30 minutes	✓	✓
4	Water in the test tube after 30 minutes	X	✓

Test 1
Starch ✓ **glucose X**

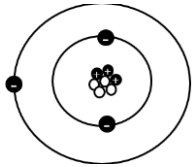
Test 2
Starch X **glucose X**

Test 3
Starch ✓ **glucose ✓**

Test 4
Starch X **glucose ✓**

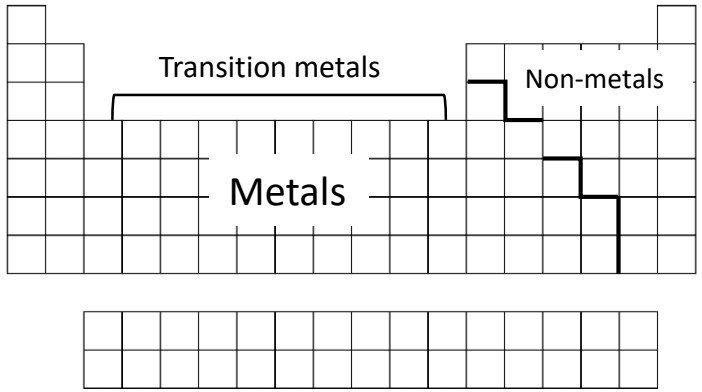
Chemistry 1: Atomic Structure and the Periodic Table Knowledge Organiser

D) The History of the atom

Key term/question	Definition/answer
32. The plum pudding model (2) 	**1.** Atom is a **sphere of a solid mass.** **2. Sphere is positively charged** with **negative electrons embedded** in it.
33. Discovery of nuclear model (3) 	**1. Rutherford** discovered that the centre of the atom is **positively charged** with a **dense nucleus.** **2. Chadwick** discovered **neutrons in the centre.** **3. Bohr** discovered the arrangement of **electrons in shells**.

E) Periodic Table

Key term/question	Definition/answer
34. Number of elements in the periodic table	118
35. How did Mendeleev arrange the periodic table? (2)	**1.** Arranged elements according to **proton number** **2.** Left gaps for undiscovered elements
36. Group number =	Number of electrons in outer shell
37. Period number =	Number of shells an element has
38. General properties of metals (4)	**1**.Strong **2**. High melting and boiling points **3.** Conductors of heat and electricity **4.** High densities
39. General properties of non-metals (4)	**1**.Brittle **2**. Lower melting and boiling points **3**. Poor conductors **4**. Lower densities



F) Group 1 elements

Key term/question	Definition/answer
40. Name of group 1 metals	Alkali metals
41. Alkali metals reactivity	**Increases** as you **move down** the group
42. Alkali metals melting and boiling point	**Decreases** as you **move down** the group
43. Ionic charge of alkali metals	1+ ion
44. Alkali metals reaction with water	Alkali metal + water → Metal hydroxide + hydrogen
45. Alkali metals reaction with oxygen	Alkali metal + oxygen → Metal oxide
46. Alkali metals reaction with chlorine	Alkali metal + chlorine → Metal chloride

G) Group 7 elements

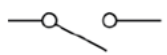
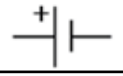
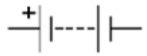
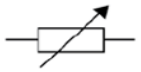
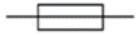
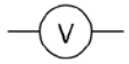
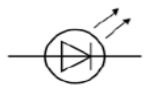
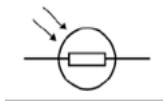
Key term/question	Definition/answer
47. Name of group 7 elements	Halogen
48. Halogen reactivity	**Decreases** as you **move down** the group
49. Halogen melting and boiling point	**Increases** as you **move down** the group
50. Ionic charge of halogens	1- ion
51. Properties of fluorine	**Poisonous yellow gas**
52. Properties of chlorine	**Poisonous green gas**
53. Properties of bromine	**Poisonous orange gas**
54. Properties of iodine	**Poisonous purple gas**

H) Group 0 elements

Key term/question	Definition/answer
55. Name of group 0 elements	Noble gases
56. Why are noble gases unreactive?	Have a **full outer shell**
57. Group 0 boiling points	**Increases** as you **move down** the group

Physics 2 (P2): Electricity Knowledge Organiser

A) Circuit symbols

Key term/question	Definition/answer
1. Switch (open)	
2. Switch (closed)	
3. Cell	
4. Battery	
5. Resistor	
6. Variable resistor	
7. Fuse	
8. Voltmeter	
9. Ammeter	
10. Filament lamp	
11. Thermistor	
12. Diode	
13. Light emitting diode (LED)	
14. Light dependent resistor (LDR)	

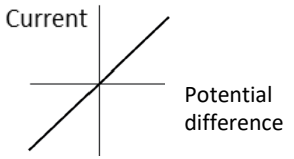
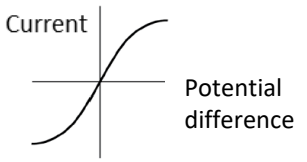
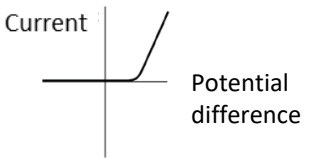
B) Equations and units of measure for electricity

Key term/question	Definition/answer
15. Formula linking current, charge flow and time	Charge = Current x Time **Q = It**
16. Formula linking potential difference, current and resistance	Potential difference = Current x Resistance **V = IR**
17. Formula linking power, current and potential difference	Power = Potential difference x Current **P = VI**
18. Formula linking power, current and resistance	Power = (Current x Current) x Resistance **$P = I^2 R$**
19. Formula linking energy transferred , power and time	Energy transferred = Power x time **E = Pt**
20. Formula linking energy transferred , charge flow and potential difference?	Energy transferred = charge x potential difference **E = QV**
21. Unit of charge	C= Coulombs
22. Unit of current	A = Amperes (Coulombs per second)
23. Unit of potential difference	V= Volts
24. Unit of resistance	Ω = Ohms
25. Unit of energy	J = Joules
26. Unit of power	W = Watts

C) Current and potential difference

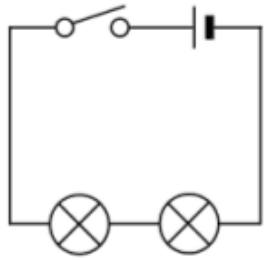
Key term/question	Definition/answer
27. Subatomic particles (3)	1. Proton 2. Neutron 3. Electron
28. Particles with negative charge	Electrons
29. Particles with positive charge	Protons
30. 6.24×10^{18} electrons is…	One coulomb
31. Current	Flow of charge (coulombs) per second
32. Equipment to measure current	Ammeter (which is connect in series)
33. Potential difference (Voltage)	The amount of energy carried by each coulomb
34. Equipment to measure potential difference	Voltmeter (which is connected in parallel)
35. Source of potential difference in a circuit	Cell or battery

D) Resistance and I-V Characteristics

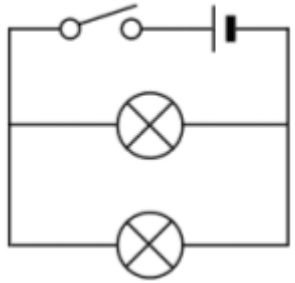
Key term/question	Definition/answer
36. Resistance	Anything which reduces the flow of current
37. Example of an ohmic conductor (2)	1. Resistor 2. Wires
38. Relationship between current and resistance with an ohmic conductor	Directly Proportional
39. Diode	Ensures current flows in one direction
40. Light emitting diode (LED)	Light is emitted when current flows through it
41. I-V characteristic	A graph of current against potential difference for a component
42. Sketch the V-I graph for an ohmic conductor (resistor)	
43. Sketch the V-I graph for a filament bulb	
44. Sketch the V-I graph for a diode	
45. Light dependent resistor (LDR) function	As light increases, resistance decreases
46. Thermistor function	As temperature increases, resistance decreases

Physics 2 (P2): Electricity Knowledge Organiser

E) Series circuits

Key term/question	Definition/answer
47. Series circuit	
48. Rule for current in series?	Is the same
49. Rule for potential difference in series?	Shared between components
50. Rule for resistance in series?	Sum of the resistors

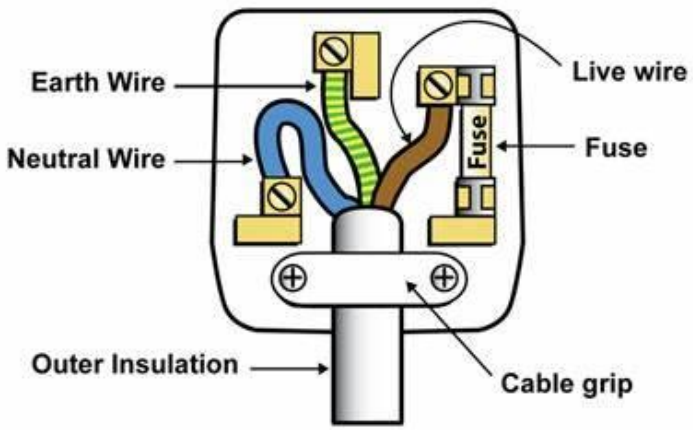
F) Parallel circuits

Key term/question	Definition/answer
51. Parallel circuit	
52. Rule for current in parallel?	Splits up
53. Rule for potential difference in parallel?	Is the same
54. Rule for resistance in parallel?	Is less than the lowest resistor

G) Domestic electricity

Key term/question	Definition/answer
55. Direct current	Current flows in one direction
56. Alternating current	Current flows in both directions
57. UK mains electricity frequency	50 Hz
58. UK mains electricity potential difference	230 V
59. Three core cables in appliances	Live, neutral and earth wires
60. Live wire	Brown – carries the alternating current from the supply
61. Neutral wire	Blue – completes the circuit and carries current away
62. Earth wire	Yellow and Green – safety wire – stops the appliance becoming live
63. Why is the live wire dangerous?	Live wire potential difference = 230 V. If touched will complete the circuit and current will flow through you, resulting in injury or death
64. What is the National Grid?	A system of cables and transformers linking power stations to consumers
65. What do step-up transformers do?	Increase the Potential difference (which lowers the current)
66. What do step-down transformers do?	Decrease the Potential difference for use by consumers
67. Why is the National Grid an efficient way of transferring energy?	Energy lost due to heating is minimised as high potential difference equals lower current

Wires of a plug



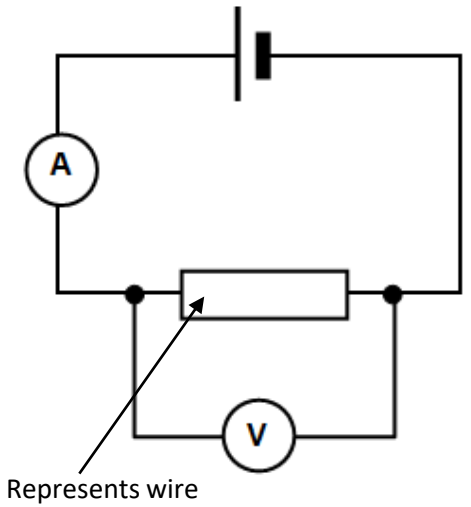
Physic 2: Required practical 15 – Investigating how the length of a wire affects resistance

Key term/question	Definition/answer
1. Independent variable	Length of wire
2. Dependent variable	Resistance
3. Control variable	**1.** Type of metal **2.** Diameter of wire **3.** Temperature
4. Formula linking potential difference, current and resistance	Potential difference = Current x Resistance **V = IR**
5. Relationship between length of wire and resistance	Directly proportional
6. Why does resistance increase as the length of wire increase?	Electrons collide with metal ions more frequently
7. How do we control the temperature?	**1.** Switch the power pack off between readings **2.** Use a low potential difference
8. Why do we not use a wire shorter than 10cm?	To prevent the wire from becoming too hot

Method for measuring resistance of a wire

1. Ruler with a wire and ammeter is attached in series.
2. Attach the voltmeter in parallel to the wire.
3. Attach two crocodile clips 100 cm apart on the wire.
4. Turn on the powerpack at 4 V and measure the current and the potential difference.
5. Reduce the length of the wire by 10 cm and measure the current and potential difference again.
6. Repeat step 6 until reaching the length of 10 cm.
7. For each length of wire use the equation **resistance = potential difference ÷ current**

Circuit set up for measuring resistance of a wire



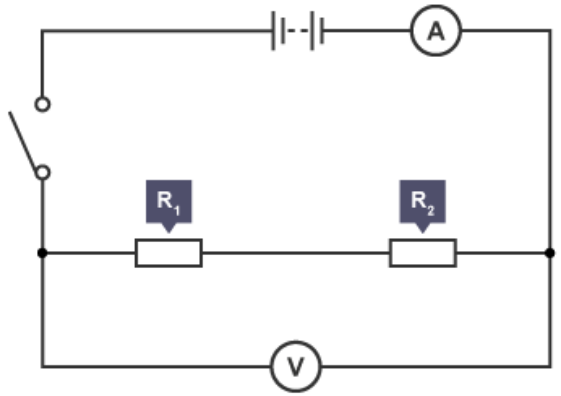
Physic 2: Required practical 15 – Resistance in series and parallel circuits

Key term/question	Definition/answer
9. Independent variable	Number or resisters
10. Dependent variable	Resistance
11. Control variable	Identical resistors
12. Rule for resistance in series?	Sum of the resistors
13. Rule for resistance in parallel?	Is less than the lowest resistor

Method for measuring resistance in series

1. Attach resistor and an ammeter in series.
2. Attach the voltmeter in parallel to the resistor.
3. Turn on the powerpack at 4 V and measure the current and the potential difference.
4. Add another identical resister in series and measure current and potential difference again.
5. Repeat step 5 until you've added all the resistors.
6. For each resistor use the equation **resistance = potential difference ÷ current**

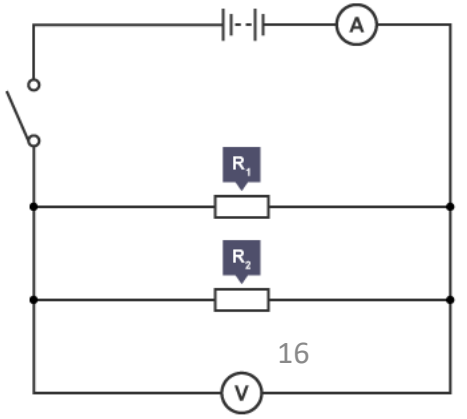
Circuit set up for measuring resistance in series circuits



Method for measuring resistance in parallel

1. Attach resistor and an ammeter in series.
2. Attach the voltmeter in parallel to the resistor.
3. Turn on the powerpack at 4 V and measure the current and the potential difference.
4. Add another identical resister in parallel with the first resistor and measure current and potential difference again.
5. Repeat step 5 until you've added all the resistors.
6. For each resistor use the equation **resistance = potential difference ÷ current**

Circuit set up for measuring resistance in parallel circuits



History
18th and 19th Century Medicine

Year 9 Term 3

BIG QUESTIONS

How did Medicine progress during the 18th and 19th centuries?

How was smallpox eradicated from the planet?

What new ideas did people have about disease in 18th and 19th century Britain?

What impact did Koch have and how did various factors aid him?

What role did John Snow play in combating cholera?

How was the problem of pain solved?

How was the problem of infection solved?

How did government involvement impact on public health in the 19th Century?

How did hospitals change in the 18th and 19th century and why?

Summary of 18th and 19th Century Period

Significant changes in medicine occur in this period. By 1900, there was a better understanding of how germs cause disease and work was being done to develop new vaccines and treatments. The government, which started out with a laissez-faire attitude to public health, began to become more involved, with compulsory small pox vaccination and the Public Health Act of 1875. Hospitals developed into clean, modern institutions thanks to the work of Florence Nightingale and more surgery became possible through the use of anaesthetics. Fewer people died as a result of surgery because of Joseph Lister's pioneering work with antiseptics.

Key 18th and 19th Century Dates

1798 - Jenner publishes his discovery about the smallpox vaccine
1847 - Simpson discovers the anaesthetic properties of chloroform
1848- First Public Health Act (not enforced so ineffective)
1852 - Smallpox vaccine made compulsory (although fines not issued)
1854- Snow disproves miasma by proving cholera is waterborne
1861- Pasteur publishes his germ theory, which disproves spontaneous generation
1865 - Inspired by Pasteur, Lister uses carbolic acid as an antiseptic
1875 - Public Health Act (enforced and government no longer considered laissez-faire)
1876 - Koch discovers that specific germs cause specific diseases
1881 - Koch develops anthrax vaccine
1882 - Koch discovers a way to stain microbes to make them easier to study.

Key 18th and 19th Century Individuals

Edward Jenner - Pioneers the smallpox vaccine by testing on James Phipps. Made the link with Cowpox and milkmaids.
Louis Pasteur - Disproved spontaneous generation with his germ theory; developed vaccines for anthrax and rabies; pioneered pasteurisation.
Henry Bastian - Influential doctor in Britain who believed in **spontaneous generation**.
Robert Koch - Used Pasteur's germ theory to identify which germs caused anthrax, proving specific germs cause specific diseases. He developed a way of dying germs to help study them
Florence Nightingale - Helped establish **nursing** as a respectable profession for women; improved the sanitation and standard of care at military hospitals in the **Crimea** (became known as "the lady with the lamp"); founded school of nursing at St Thomas hospital.
Joseph Lister - British surgeon who pioneered antiseptic surgery using Carbolic Acid spray.
James Simpson - Discovered the anaesthetic properties of chloroform.
John Snow - Proved that cholera is spread by water, not miasma. Made chloroform and ether safer to use by working out correct dosage.

Ideas about the cause of disease and illness – 18th & 19th Century

Little change at the start of the period. Some theorising by scientists about germs being produced by decaying matter – spontaneous generation.

Continuity in the belief in miasma.

Publication in 1861 of Louis Pasteur's Germ Theory, which proved that microbes in the air caused decay.

Limited impact of Germ Theory on medicine in this time period because each disease had to be researched individually.

Robert Koch's development of Pasteur's work by developing a process for identifying specific microbes, such as TB and cholera.

Approaches to prevention and treatment – 18th & 19th Century

Change in hospital conditions from dirty, dingy places to clean, airy, modern spaces.

Impact of Florence Nightingale's ideas about hospitals and nursing on these changes.

Anaesthetics were developed, most notably chloroform, which was discovered by James Simpson in 1847.

Move towards an emphasis on the importance of keeping surgery clean and free from germs. Joseph Lister's use of carbolic acid to prevent infection during surgery.

Vaccination against smallpox; the introduction by the government of a nationwide vaccination program.

Some efforts by the government to improve public health, but real improvements only after the second Public Health Act of 1875, after the publication of Germ Theory

Case Studies – 18th & 19th Centuries

Jenner's publication in 1798 of his observation that exposure to cowpox acted as a preventative for smallpox; term 'vaccination' coined.

Vaccination effective against smallpox developed. Limitations of Jenner's discovery: not a process applicable to other diseases.

Urgency in discovering the cause of cholera due to the epidemics that swept through London in the nineteenth century. John Snow's discovery, through careful observation, of the source of a cholera outbreak in 1854, tracing it back to the Broad Street pump. Impact of his work.

History
Modern Medicine 1900-present

Year 9 Term 3

BIG QUESTIONS

How has medicine developed since 1900?

How has improved understanding of genetics affected health in the 20th century?

How has science explained the impact of lifestyle factors in health?

Why did treatment improve in the 20th century?

How far has care changed in the 20th Century

How has treatment and care changed in the 20th century?

Penicillin - Does Fleming deserve so much credit?

How has incidence, treatment and prevention of lung cancer changed?

SUMMARY OF THE PERIOD

Massive advances in the understanding, treatment and prevention of disease. Better diagnosis of illness using technology such as X-Rays, blood tests and CT, Ultrasound and MRI scans. Better treatment of disease is made possible with the discovery of antibiotics and the development of "magic bullet" drugs. The discovery of DNA and mapping of human genome enables great strides in understanding hereditary factors in disease. Advances in surgical techniques make life-saving treatments possible, such as transplants and mastectomies. The introduction of the NHS in 1948 means that free healthcare is provided to everyone in Britain. Mass vaccination campaigns to help eradicate diseases such as tetanus, polio and measles. There is more understanding of the lifestyle factors affecting disease, such as the link between obesity and diabetes and the link between smoking and lung cancer.

Key Individuals

Gerhard Domagk - Discovered Prontosil could cure bacterial infections**.**
Paul Ehrlich - Tested over 600 arsenic compounds to find a **cure for syphilis**. His research was continued by a Japanese scientist called Hata who found that compound 606 (which was named Salvarsan) cured syphilis.
Alexander Fleming - Discovered by accident that penicillin, a type of mould, could kill harmful bacteria.
Howard Florey and Ernst Chain - Two scientists who took Fleming's discovery of penicillin and developed it as an antibiotic treatment for use on humans.
Rosalind Franklin & Maurice Wilkins - Took the first X-Ray photographs of DNA.
James Watson & Francis Crick- Two scientists working at Cambridge University who identified the double helix structure of DNA.

Key Dates

1909 - Discovery of Salverson 606
1928 - Fleming discovers Penicillin in his lab
1932 - Prontosil found to kill bacterial infections in mice
1941 - Penicillin successfully used on a human by Florey and Chain
1942 - Publication of Beveridge Report
1948 - NHS launched
1990 - Launch of Human Genome Project (completed in 2000)

Ideas about the cause of disease and illness – 20th Century

Development of Germ Theory, isolating viruses and bacteria as different causes of infection and targeting them in different ways.

The discovery of the structure of DNA and the subsequent mapping of the human genome; the search for cures to genetic conditions.

Improved diagnosis as a result of x-rays, scans, blood tests and other technology enabling earlier interventions, and therefore more effective treatments

Approaches to prevention and treatment – 20th Century

Improvements in access to medical care. The impact of the NHS on access and provision.

Development of new drugs, including Salvarsan 606 and Prontosil, the so called magic bullets. The use of chemical drugs to treat illnesses.

The impact of vaccination campaigns on diseases like polio and diphtheria.

Government-launched campaigns to promote the maintenance of good health to the population, for example, encouraging smoking cessation.

Case Studies – 20th Century

Alexander Fleming's discovery of penicillin in 1928. His publication, but not further development, of his findings.

Florey and Chain's interest in Fleming's research in 1938. Subsequent government funding to develop penicillin into a usable treatment.

Lung cancer: diagnosis with new technologies such as CT scans; treatment with modern medical techniques such as radiotherapy and chemotherapy. Also some genetic treatments in development.

Government actions on lung cancer, including national 'Stop Smoking' campaigns, the steady reduction in permissible cigarette advertising and, most recently, the move to plain packaging for cigarettes.

Source A – A poster published by Change4Life in 2015. Change4Life is a Public Health England campaign designed to help families eat well and move more.

How useful is Source A for an enquiry into the health of the nation in the modern period?

N – Nature

O – Origin

P – Purpose

How reliable? Analyse the content and the provenance. Add contextual knowledge of your own.

.

Key Vocabulary

Antibiotic - A treatment that destroys or limits the growth of bacteria in the human body.

Beveridge Report - A 1942 report chaired by William Beveridge which identified five "Giant Evils" in society: squalor, ignorance, want, idleness, and disease, and went on to propose widespread reform to the system of social welfare.

DNA - Short for deoxyribonucleic acid, a substance that carries genetic information that determines characteristics such as hair and eye colour.

Genome - The complete set of DNA containing all the information needed to build a particular organism.

Haemophilia - A genetic disease passed from parent to child that stops blood from clotting.

Human Genome Project - A 10-year project which decoded and mapped all the genomes in DNA. This made it possible for scientists to better understand genetic diseases such as cancer and haemophilia.

Magic Bullet - A chemical treatment that targets specific microbes without harming the rest of the body.

Mastectomy - Surgery to remove one or both breasts.

NHS - National Health Service which provides free medical care for the entire population of Britain.

Penicillin - First antibiotic to be discovered.

Prontosil - A bright red dye which was discovered by scientist Gerhard Domagk to kill bacterial infections in mice, then successfully tested on his daughter who had blood poisoning in 1935.

Salvarsan 606 - First magic bullet drug which treated Syphilis.

Streptomycin - Powerful antibiotic, discovered in 1943, effective against tuberculosis which until then, had been considered incurable.

Homework:
Week 2 – Revise for Term 3 Assessment in week 3.

Week 4/5 - Research and give examples of types of advancements in surgery made during the period 1800 – 1900. How does this compare with the surgery available today?
THINK: Lister / Simpson

Homework Extension
Answer the Source Question on Page 2.

You must use JACK:
Judgement – How useful is it and why?
Analysis – Don't forget to analyse the source itself, what can you learn from it? Then, you also need to analyse the provenance – when, who, why was it issued – is it reliable?
Contextual Knowledge – what do you know from this period, how does it fit with your own knowledge?

Homework Links

https://www.bbc.co.uk/bitesize/guides/zchw4j6/revision/1
(a number of pages from BBC Bitesize summarising key developments during the 20th century)
https://www.youtube.com/watch?v=my14ZuzjH5I
(a great BBC teach video summarizing key developments during the 20th century)

Geography
Urban issues and challenges - London case study

Year: 9
Term: 3

BIG QUESTIONS

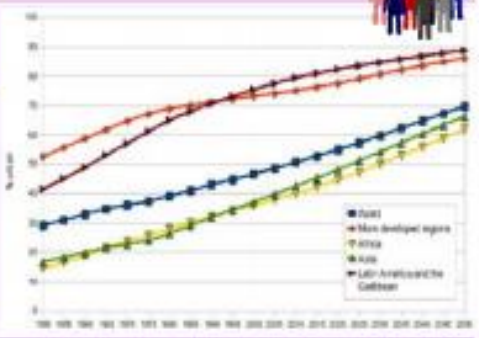
1. How is London important both nationally and internationally?
2. Who is living in London and why?
3. How have jobs changed in London?
4. What is the best way to travel around London?
5. How green is London?
6. What is social deprivation and why it is an issue in London?
7. How did the Olympics change London?
8. Can cities ever be sustainable?

What is urbanisation?

Urbanisation is the increase in the amount of people living in urban areas such as towns or cities. In 2007 the UN announced that, for the first time, more than 50 % of the world's population live in urban areas.

Where is Urbanisation happening?

Urbanisation is happening all over the word but in LICs and NEEs rates are much faster than HICs. This is mostly because of the rapid economic growth, which is leading to increasing life expectancies, that they are experiencing.



Types of Cities

Megacity An urban area with over **10 million people** living there.

More than two thirds of current megacities are located in either NEEs or LICs. The majority of megacities are located in Asia.
The number of megacities are predicted to increase from 28 to 41 by 2030.

Causes of Urbanisation

Rural - urban migration The movement of people from rural to urban areas.

Push factors	Pull factors
Factors that encourage people to move **away** from a place.	Factors that encourage to move people **to** a place.
• Natural disasters e.g. drought. • War and Conflict. • Mechanisation. • Lack of opportunities. • Lack of employment.	Factors are sometimes perceived. • More Jobs . • Better education & healthcare. • Increased quality of life. • Following family members.

Natural Increase When the birth rate is greater than the death rate.

Increase in birth rate (BR)	Lower death rate (DR)
• Migration often involves young adults. When there is a high percentage of population of child-bearing age this leads to higher birth rate. • In the UK migrant groups have higher fertility rates. • Lack of contraception or education about family planning.	• A higher life expectancy is due to supplies of clean water, better living conditions and diet. • Improved medical facilities help lower infant mortality rates and raise life expectancies.

Distribution of population & cities in the UK

The location of most UK cities is linked to the availability of natural resources (particularly coal), or near to the coast for imports, and the subsequent location of industry during the industrial revolution. This is because coal was the original source of power for the factories e.g Glasgow, Newcastle, Nottingham and Cardiff.

London is a major anomaly to this trend. Instead its location on the River Thames enabled resources to be imported along the River Thames. Imports from across the British Empire were then used in industry.

Homework

Watch the power point and take the quiz on this website.

Urban case study - London | Geography Education Online

Sustainable urban living

Sustainable urban living means being able to live in cities in ways that do not pollute the environment and using resources in ways that ensure future generations can also use them. Sustainable living should ensure that all facilities necessary for people are available, and that areas are economically viable.

Water Conservation

This is about reducing the amount of water used.

- Rainwater harvesting provides water for gardens and for flushing toilets.
- Installing water meters discourages water use. Dual flushes on toilets flush less water.
- Educating people on using less water.

Energy Conservation

Using less fossil fuels can reduce the rate of climate change.

- Promoting renewable energy sources e.g. solar panels, insulation.
- Making homes and appliances more energy efficient.
- Encouraging people to use less energy.
- Using wood in buildings instead of bricks.

Creating Green Space

Creating green spaces in urban areas can improve places for people who want to live there.

- Provide natural cooler areas for people to relax in.
- Encourages people to exercise.
- Reduces the risk of flooding from surface runoff.
- Reduces airborne particulates.

Waste Recycling

More recycling means fewer resources are used. Less waste reduces the amount that eventually goes to landfill. This reduces waste gases (methane) and contamination of water sources.

- Collection of household waste.
- More local recycling facilities.
- Greater awareness of the benefits in recycling.

Traffic management

Urban areas are busy places with many people travelling by different modes of transport. This has caused urban areas to experience traffic congestion that can lead to various problems.

Environmental problems

- Traffic increases air pollution which releases greenhouse gases that is leading to climate change.
- More roads have to be built.

Economic problems

- Congestion can make people late for work.
- Business deliveries take longer. This costs companies more money as drivers take longer to make the delivery.

Social Problems

- There is a greater risk of accidents. This is a particular problem in built up areas.
- Congestion causes frustration.
- Traffic creates particulates that can affect health e.g. asthma.

Congestion solutions

- Widen roads to allow more traffic to flow more easily and avoid congestion.
- Build ring roads and bypasses to keep traffic out of city centres.
- Introduce park and ride schemes to reduce car use.
- Encourage car-sharing schemes in work places and by allowing shared cars in special lanes.
- Have public transport, cycle lanes & bike hire schemes.
- Having congestion charges discourages drivers from entering the busy city centres.

Greenbelt Area

This is a zone of land surrounding a city where new building is strictly controlled to try to prevent cities growing too much and too fast. Some developments are now being allowed on green belt. This is controversial.

Urban Regeneration

The investment in the revival of old, urban areas by either improving what is there or clearing it away and rebuilding e.g. development of New Islington on the Cardroom Estate, or the conversion of old factories into accommodation.

Traffic management in London: congestion charges

Introduced in 2003, drivers are charged £11.50 a day if they drive in the central zone of the city. There has been a 10% reduction in the number of cars driving in this zone since it was introduced.

Key Vocabulary

Brownfield site – land once used for industry that is now redundant.
Dereliction – the state of having been abandoned and dilapidated.
Economic – factors to do with money.
Gentrification – the character of a poor urban area is changed by wealthier people and investment. This improves housing and attracts new businesses, but can also displace current inhabitants.
Greenfield site – land not previously built on before.
Inequalities – a lack of equality in an area.
Integrated transport systems – a system where different types of transport are linked together.
Investment – an action of giving a sum of money for a profitable return.
Mega-cities – a very large city, with typically over 10 million people.
Migration – the movement of people from one place to another. Usually to find work or better living conditions.
Natural increase – where birth rate is higher than death rate in an area.
Pollution – the presence or introduction of a harmful substance into the environment.
Rejuvenation – the action of improving something, making it fresher and modern.
Rural-urban fringe – the belt of land between a built up area (of city or town) and countryside.
Social deprivation – a state of poorer housing conditions and infrastructure.
Social opportunities – the opportunities available to people.
Sustainable urban living – people living a good quality of life today, whilst being mindful in their actions for the quality of life for future generations.
Traffic congestion – vehicles queuing resulting in longer trips and increased pollution levels.
Urban greening – practice to design parks and other green areas into a built up area.
Urbanisation – the process of making an area more urban.
Urban regeneration – planning to repair the social and economic problems of an urban area.
Urban sprawl – the spreading of urban developments.

Art
Topic: Drawing and Painting

Year: 9
Term: 3

BIG QUESTIONS

How do artists use painting techniques and processes?

What is special about the primary colours?

Describe how to make a tertiary colour.

Where do the complementary colours sit on the colour wheel?

How can complementary colours be used to create variations in tone?

How do complementary colours relate to each other.

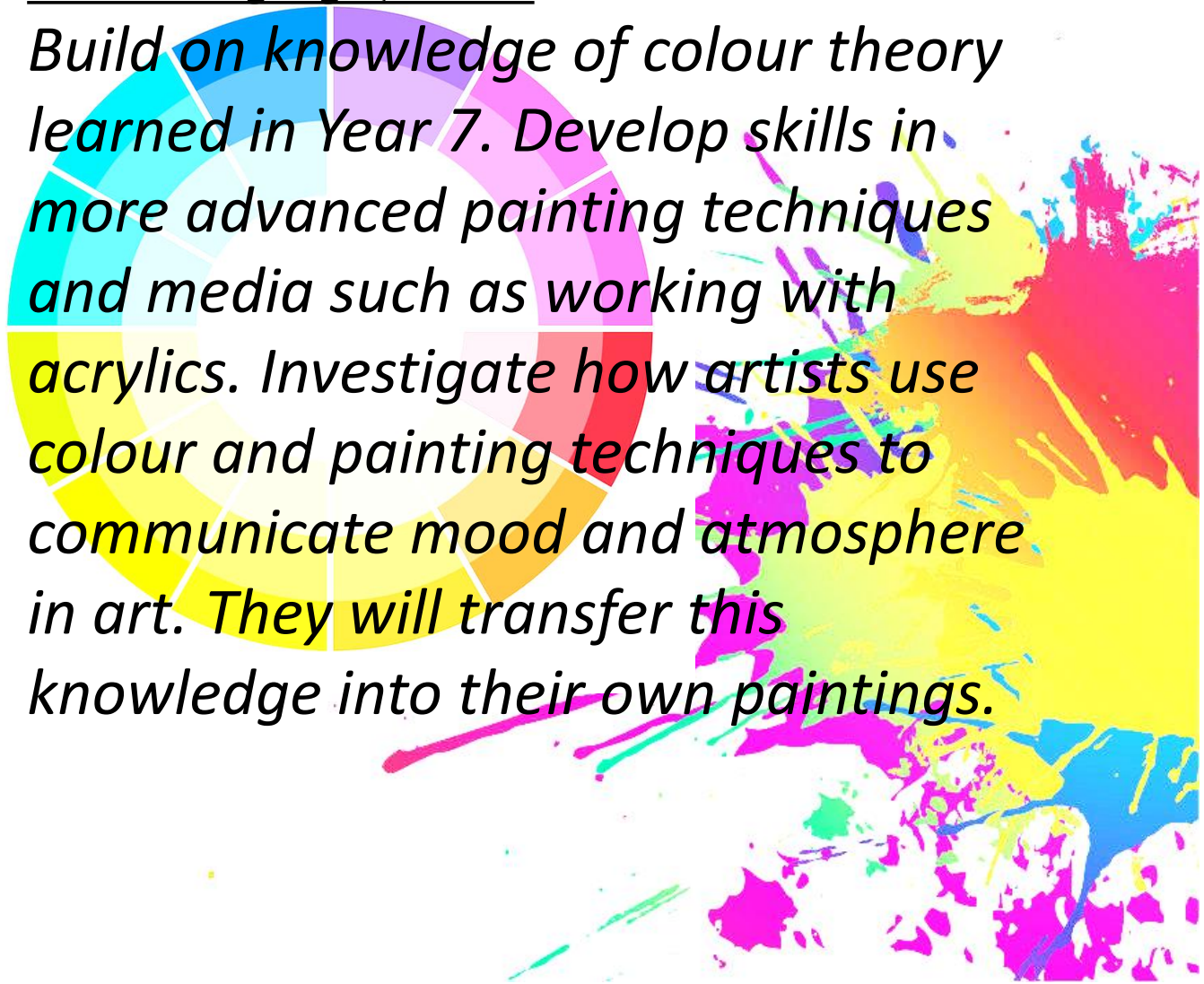
Demonstrate how a wide range of neutral colours can created from the primaries.

List 5 different painting techniques.

Can you apply a specialist painting techniques to your own artwork?

Overarching Big Question

Build on knowledge of colour theory learned in Year 7. Develop skills in more advanced painting techniques and media such as working with acrylics. Investigate how artists use colour and painting techniques to communicate mood and atmosphere in art. They will transfer this knowledge into their own paintings.



Key Skills

RECORD	DEVELOP
I will learn to record... • images and information appropriate to a given theme • examples of artists' work • using wet and dry media • building on my knowledge and understanding of how artists use paint to create meaningful work • ideas for a painting	**I will learn how to develop...** • my observation skills using a range of media, techniques and processes. • and advance my knowledge of colour theory • my knowledge and understanding of painting styles and techniques • my drawing and painting skills ideas in response to a given theme, linking to artists work. • my higher order thinking skills
REFINE I will learn how to... • explore a range of painting techniques e.g. watercolour- wet into wet, wet on dry, scumbling, dry brush etc. acrylics- layering, blending etc. • 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 learn how to... • analyse and reflect on the development of my own work, through annotation making connections to artists and suggesting ways I could I improve. • evaluate artists using analytical writing skills and forming opinions
PRESENT OUTCOMES I will learn how to... produce one or more finished outcomes in paint	

Homework Links

Homework- tasks linked to 'Drawing and Painting' (2 hours per two-week cycle)

Key Vocabulary

I will learn the meaning of...

Texture/Sgraffitto/ Impasto/ Complementary/ Contrast/Chiaroscuro Composition etc. within the context of drawing and painting.

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?

Physical Education
Fitness and Circuits

Years: 7, 8 and 9
Terms: 1-4

Big Questions:

§ Can you attempt/complete a variety of fitness tests?

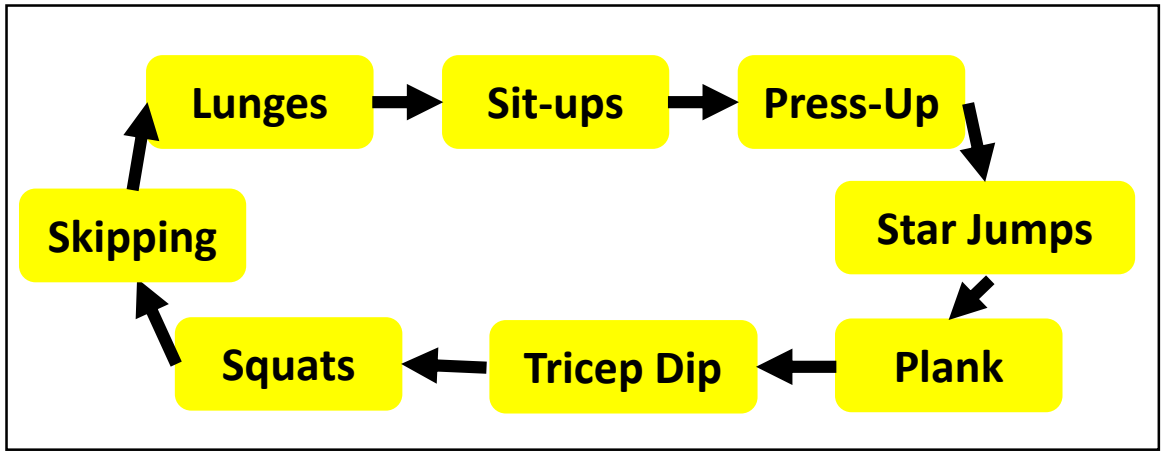
§ Can you name the relevant components of fitness?

§ Can you perform bodyweight exercises with the correct technique?

§ Can re-test your fitness and compare to your results from Part 1?

Key Principles of Circuit Training:

- A method training which enables you train muscular strength, muscular endurance, power or aerobic endurance.
- Participants rotate around a series of exercises (stations), including a set period of time for work and rest.
- Benefits of circuit training; working all muscle groups and components in alternate system of stations allowing recovery of muscles and capacity to exert maximum effort; facilitates anaerobic energy system.
- Can function as a skills or fitness enhancing method with use of stations.



Fitness:

- Shows effort in exercise.
- Can conduct simple fitness tests.
- Know how to record and interpret fitness results against normative data.
- Perform exercises safely.

Knowledge:

- Identify the basic muscles and demonstrate a stretch for each.
- Know the difference between static and dynamic stretches.
- Can identify and describe the key components of fitness and demonstrate suitable exercise to improve each.

Leadership and Coaching:

- Can run a three part warm up.
- Devise and run a small circuit.
- Encourages and motivates others to work effectively.
- Good organisation and communication skills.
- Confident in different roles: Fitness Instructor, measurer, motivator.

Physical Education
Rugby

Years: 7, 8 and 9
Terms: 1-4

Big Questions:

Can you make an accurate pass while running with the ball?

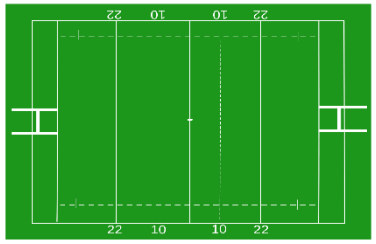
Can you safely and effectively make a tackle?

Can you safely and effectively create a ruck?

Can you use tactics to create space to attack?

Key Skills:

- Tackling: Socket to Pocket, Ring of Steel, Hit Low and Hard, Release when player is down.
- Passing: Soft Hands, Hands Up (W), Pass across Chest, Follow through to Target.
- Scrum: Used to restart the game after a knock on. Front Row (Prop-Hooker-Prop) Second Row (4-5), Flankers (Open Side - Number 8 - Blindside)
- Ruck: Contest for the ball after a tackle is made. Must come through the gate, hands out.
- Line Out: Used to restart the game if the ball goes off the field. Hooker throws the ball down the middle of the two teams' lines (Forwards).



Teamwork and Respect:

- Sets an example for others to follow.
- Very fair in competition.
- Always gracious in defeat and humble in victory.
- Works well in a team and supports their peers.
- Never argues with the referee.

Key Rules in Rugby:

- High Tackle: All tackles must be below the shoulder and you must attempt to wrap your arms around player, NO shoulder barges.
- Knock On: If you drop the ball it has to bounce backwards. Any knock on will result in a scrum.
- Pass Backwards: All passes have to go backwards. If you make a forward pass, it will result in a scrum.
- Off-Side: Defenders need to make sure they are On Side, which is behind the “Gain Line”.

Leadership and Coaching:

- Can run a three-part warm up.
- Devise and run a small skill practice
- Encourages others
- Good organisation skills
- Good communication skills
- Confident in different roles: Coach, Referee, Scorer.

Physical Education
Badminton

Years: 7, 8 and 9
Terms: 1-4

Big Questions:

- Can I consistently rally with a partner (overhead clear)?
- Can I serve accurately (backhand, underarm)?
- Can I effectively play an attacking shot (drop, smash)?
- Can apply rules and tactics effectively to score points?

Key Skills:

Overhead Clear: Force opponent to rear of court, hit at highest point, follow through and stand side on.
Smash: Aim to skim net, hit at highest point in downwards direction and transfer body weight.
Drop Shot: Stand side on, skim net and land just beyond, light tap.
Backhand Shot: Backhand grip, aim for back of court, strong follow through and stand side on
Long Serve: Drop and swing at same time, aim for back of court, stand side on and start with racket at waist height.
Short Serve: Short back swing, aim to skim net, racket in front with backhand grip.

Leadership and Coaching:

- Can compare performance using key terminology and teaching points for a variety of sports and skills
- Can use ICT to compare performance
- Know how to gain others attention

Key Rules in Badminton:

- Singles: Court long and narrow
- Doubles: Court short and wide for serving, whole court thereafter
- You can't touch or cross the net
- Can only hit the shuttle once when returning
- Games are played to 21 points
- Points are scored on every serve

Teamwork and Respect:

- Set examples to others in lessons and competitive games
- Show fair in competition
- Respect officials' decisions
- Be gracious in defeat e.g. shake hands with each other

Physical Education
Gymnastics

Years: 7, 8 and 9
Terms: 1-4

Big Questions:

Year 7:

Can I "travel" using different techniques?

Can I work with another individual to create a balance?

Can I combine balances, jumps and travelling into a mini routine?

Can I create a routine with a peer?

Year 8:

Can I correctly take off when using the springboards?

Can I confidently take off and land correctly when vaulting?

Can I generate height to land on equipment?

Can I create a routine, which includes a jump, roll and balance?

Key Skills:

- Travelling: Moving around the hall using a variety of different, rolls, steps, slides and jumps.
- Balance: Balancing on different body parts, the amount of body parts and performing partner balances with 2 or 3 peers.
- Flight: Travelling through the air, using springboards as an aid.
- Routine: Combining these skills mentioned above to create a routine

Leadership and Coaching:

- Can run a three-part warm up.
- Devise and run a small skill practice
- Encourages others
- Good organisation skills
- Good communication skills
- Confident in different coaching roles.

Key Safety Rules:

- Bare feet only
- Ensure equipment is safe and correctly put out before use
- Only 1 person at any one time on a piece of equipment
- Ensure you are confident and have the right out of support before attempting any jumps, rolls and balances.

Teamwork and Respect:

- Sets an example for others to follow.
- Very fair in competition.
- Always respect others whilst they are demonstrating their routine
- Works well in a team and supports their peers.

Physical Education
Basketball

Years: 7, 8 and 9
Terms: 1-4

Big Questions:

Can you effectively dribble the ball?

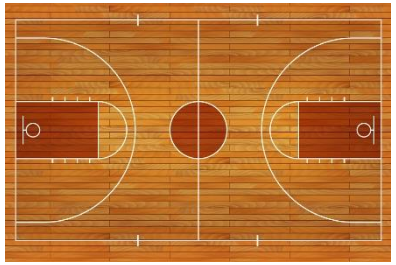
Can you use a bounce/ chest or shoulder pass?

Can you effectively perform the set shot /lay-up shot?

Can you use key defensive /attacking tactics effectively?

Key Skills

- **Shooting:** Set shot: Shoot with one hand only. Bend your knees and flick your wrist. BEEF (Balance/Elbow/Eye/Follow-through). Jump shot: Release the ball at the top of your jump. Lay-up: Use the top right/left hand side of the backboard. Drive up off your right or left leg.
- **Passing:** Chest/Bounce/Javelin: Step into your pass. Always have your hands up and ready to receive the ball.
- **Dribbling:** Controlled dribble/Cross-Over/Speed/Spin: Bounce between hip and knee height. Keep the ball under control & look up.
- **Defending:** Stay between your opponent and your own basket. Move your feet. Do not reach in.



Teamwork and Respect

- Honest/Fair
- Compassionate
- Inspires others
- Speaks to peers/teacher with respect
- Demonstrates good sportsmanship

Key Rules

- Double dribble
- Jump ball
- Traveling
- Time violations
- Out of court
- Tip off
- Back court violation
- Contact fouls
- Free throws
- Side and base line ball

Can you research these common rules to find out more specific details?

Coaching and Leadership

- Knowledge of rules and regulations
- Organisational skills
- Interpersonal communication skills
- Vision
- Creativity
- Humility
- Confidence

Physical Education
Netball

Years: 7, 8 and 9
Terms: 1-4

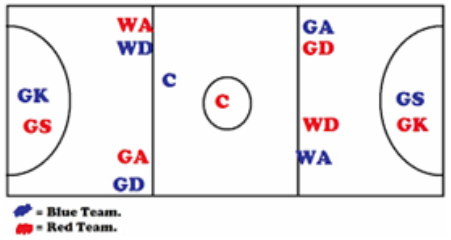
Big Questions:

Can you perform the correct footwork technique in netball?

Can you accurately pass a netball using different techniques?

Can you demonstrate good shooting technique?

Can you apply different strategies to get free from your opponent and tactics in a game?



Key Skills:

- Chest pass: W grip/ Step/Chest to chest/Follow through/ short distance
- Bounce pass: W grip/ Step/Chest to chest/Follow through/ Bounce before player/ short distance
- Shoulder pass: sideways on/elevation/ shoulder to shoulder/ step/ follow through/arch/ long distance
- Footwork: -Landing on alternate feet- first foot to land is the static pivoting foot - Landing on simultaneous feet – either foot can become static pivoting foot -On the move – release ball before third step
- Getting free from their marker e.g. sprint into a space, sprint and feint
- Marking a player and a player with the ball
- Shooting: balance/height/line and aim/ flick and follow/ knee extension.

Leadership and Coaching:

- To run a three part warm-up
- To show good communication skills
- To take the lead in practices
- To have the opportunity to take on different roles e.g. player, coach, scorer, umpire

Key Rules in Netball:

- Netball is a 7 a side game.
- Players are given certain positions and areas they are allowed e.g. GA, GD, C, WA, WD, GS, GK.
- The netball is not allowed to go over a third without it being touched.
- To score a goal the GA or GS must be within the semi-circle to shoot.
- You are not allowed to walk with the ball.
- You should be a metre away when defending a player with the ball.
- A centre pass is taken when a goal has been scored, it is alternated between the two teams.

Teamwork and Respect:

- Follows guidance from others
- Works well in a team
- Does not argue with the netball umpire
- Motivates others
- Fair in competition

Physical Education
Football

Years: 7, 8 and 9
Terms: 1-4

Big Questions:

Can you effectively dribble the ball?

Can you successfully make a short, side-footed pass, and a long-lofted pass?

Can you shoot accurately and with power?

Can you use effective attacking and defensive tactics?

Key Skills:

- Passing: Use the side of your foot to give you accuracy and control of the ball.
- Dribbling: Dribble the ball close to your body to keep more control.
- Shooting: Try to keep shots low and aim for the corners. Power and accuracy are key.
- Defending: Nearest person to the ball should apply pressure on the ball by moving into a position within 2-3 yards of their opponent to close them down. Don't jump in. Communication is key

Leadership and Coaching:

- Encourage and motivate others
- Be creative
- Display knowledge and understanding of the rules
- Show compassion towards others
- Inspire others to perform better
- Be a good role model

Key Rules in Football:

- Throw-in
- Offside
- Corner kick
- Goal kick
- Kick off
- Foul play
- Free kick
- Penalty
- Handball

Can you research these common rules to find out more specific details?

Teamwork and Respect:

- Sets an example for others to follow.
- Very fair in competition.
- Honest
- Always gracious in defeat and humble in victory.
- Works well in a team and supports their peers.
- Never argues with the referee.

Physical Education
Outdoor and Adventurous Activities (OAA)

Years: 7, 8 and 9
Terms: 1-4

Big Questions:

- Can you solve a problem as a team?
- Can you orientate a map?
- Can you take on the role of leader?
- Can you communicate effectively to help your team solve a problem?
- Can you effectively Plan, Do, and Review to overcome a problem?

Key Skills:

- To take on the principle of 'Plan, do, review' in problem solving activities
- To refine ideas and try different approaches to solving problems
- To orientate a map of the school field
- To use grid references to place markers out and to find codes
- To work as a team member
- Verbal and non-verbal communication skills

Leadership and Coaching:

- To run a warm-up appropriate for OAA
- To show good communication skills
- To consider the safety of self and others in the tasks set
- To take on a variety of roles e.g. leading, organising, managing

Key Rules in OAA:

- To follow the rules of orienteering and problem solving
- To follow the safety aspects of the tasks set

Teamwork and Respect:

- To listen to each others' opinion and discuss ideas
- To motivate others to succeed
- To cooperate with others in solving problems
- To be fair in competition

Cambridge National Level 1 / 2 Sport Science
Unit: R180: Reducing the risk of sports injuries and dealing with common medical conditions

Years: 9, 10, 11
Terms: 1-6

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.

Cambridge National Level 1 / 2 Sport Science
Unit: R180: Reducing the risk of sports injuries and dealing with common medical conditions

Years: 9, 10, 11
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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.

Cambridge National Level 1 / 2 Sport Science
Unit: R181: Applying the principles of training: fitness and how it affects skill performance

Years: 9, 10, 11
Terms: 1-6

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 × 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.

Cambridge National Level 1 / 2 Sport Science
Unit: R181: Applying the principles of training: fitness and how it affects skill performance

Years: 9, 10, 11
Terms: 1-6

Big Questions

1) How are components of fitness relevant to different sports?
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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

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

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

Subject:	Cambridge National Level 1 / 2 Sport Science	Years: 9, 10, 11
Unit:	R182: The body's response to physical activity and how technology informs this	Terms: 1-6

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.

Cambridge National Level 1 / 2 Sport Science
Unit: R182: The body's response to physical activity and how technology informs this

Years: 9, 10, 11
Terms: 1-6

Big Questions

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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 3.10 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.

Religion Year: 9
Christianity Term: 3

Big Questions

1. What is sin?
2. What role does sin play in salvation?
3. How do beliefs influence a Christian's actions?

What is sin?

A sin is when a human does something or thinks something that goes against God's rules. For example, in the 10 commandments it says you should not steal, if you steal you are sinning against God.

Original sin is the first Sin. This refers to the story of Adam and Eve. Adam and Eve lived in the Garden of Eden with God. They were told that they could not eat from the tree of knowledge. But the evil serpent (the devil) persuades Eve to eat from the tree. She persuades Adam to do the same. God finds out and is very angry. He throws them out of the garden of Eden. Christians believe this is why humans suffer and catholics believe that when you get baptised you wash away this original sin.

The parable of the sheep and Goats (Matthew 25:31-46)

31 "When the Son of Man comes in his glory, and all the angels with him, he will sit on his glorious throne. 32 All the nations will be gathered before
him, and he will separate the people one from another as a shepherd separates the sheep from the goats. 33 He will put the sheep on his right and
the goats on his left. 34 "Then the King will say to those on his right, 'Come, you who are blessed by my Father; take your inheritance, the
kingdom prepared for you since the creation of the world. 35 For I was hungry and you gave me something to eat, I was thirsty and you gave me
something to drink, I was a stranger and you invited me in, 36 I needed clothes and you clothed me, I was sick and you looked after me, I was in prison
and you came to visit me.' 37 "Then the righteous will answer him, 'Lord, when did we see you hungry and feed you, or thirsty and give you
something to drink? 38 When did we see you a stranger and invite you in, or needing clothes and clothe you? 39 When did we see you sick or in prison
and go to visit you?' 40 "The King will reply, 'Truly I tell you, whatever you did for one of the least of these brothers and sisters of mine, you did for
me.' 41 "Then he will say to those on his left, 'Depart from me, you who are cursed, into the eternal fire prepared for the devil and his angels. 42 For I
was hungry and you gave me nothing to eat, I was thirsty and you gave me nothing to drink, 43 I was a stranger and you did not invite me in, I needed
clothes and you did not clothe me, I was sick and in prison and you did not look after me.' 44 "They also will answer, 'Lord, when did we see you
hungry or thirsty or a stranger or needing clothes or sick or in prison, and did not help you?' 45 "He will reply, 'Truly I tell you, whatever you did not
do for one of the least of these, you did not do for me.' 46 "Then they will go away to eternal punishment, but the righteous to eternal life."

What does atonement mean?

In the old testament when Jews had wandered away from God they would offer a sacrifice to get rid of all their sins. The belief was that you would transfer all your sins onto the animal and you would be clean again. This is called **atonement** because you are making up for your sins.

What is Salvation?

The problem with animal sacrifice though was that it was not permanent. You will sin again and have to offer another animal. So God the father sent his only son, Jesus, to be that sacrifice. Jesus died so all the sins humans do can be forgiven if they choose. This is called **salvation** because he saved all of humanity.

Key words:

Sin – Acting in a way that would displease god, going against his rules.
Original Sin – the first sin of Adam and Eve.
Heaven – A place of pure happiness and peace – where you go if you have been good and followed God.
Hell – A place of pure evil and pain – where you go if you have been bad or not followed God.
Salvation – To be saved by Jesus.
Atonement – To make up for wrongdoing.
Resurrection – The term used to describe Jesus coming back from the dead.
Baptism - an initiation ceremony into the church family – also gets rid of original sin in Catholicism.

Quick facts!

Holy book – The Bible (500CE)
Age of religion 2027 years old (roughly)
Place of worship – Church
Name of followers – Christians
Number in the UK - 31,479,876

Subject: Drama
Topic : Performance Skills and Drama Techniques

Year / Group: KS4
Term : 1-6

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.

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.

Dance
Choreography- Developing a motif

Year: 9
Term: 3

BIG QUESTIONS

How can a motif be developed through action content?

How can a motif be developed through spatial content?

How can a motif be developed through dynamic content?

How can a motif be developed through relationship content?

Can you identify and define each content category?

What is action content?

What is dynamic content?

What is relationship content?

What is spatial content?

What is rhythmic content?

Technical Skills: These include accuracy of action, timing, dynamic, rhythmic and spatial content and the reproduction of movement in a stylistically accurate way.
There are 6 technical skills. Each category is followed by the word 'content'.

1. **Action content**
2. **Dynamic content**
3. **Spatial content**
4. **Relationship content**
5. **Timing content**
6. **Rhythmic content**

Action Content: the movement

A range of action content must be used in your practical work.

You must show variations of the 5 Basic Body Actions; travel, turn, gesture, stillness and jump

You may choose to develop a motif through action content using the checklist below.

- Adding an action to a phrase
- Taking an action away
- Repeating an action
- Performing an action on a different body part
- Re-order motif

Example:

Motif = jump, turn, seat roll, reach arms to ceiling, fall
Motif developed = jump, jump, seat roll, reach arms to ceiling, fall handstand (jump repeated, turn taken away, new action added)

Dynamic Content: how an action is performed

A range of dynamic ontent must be used in your practical work.

Fast/slow – **speed**
Sudden/sustained – **execution**
Acceleration/deceleration – **tempo**
Strong/light – **force**
Direct/indirect – **route**
Flowing/abrupt - **flow**

A range of dynamics must be included in your practical work. When describing a movement always refer to a dynamic.

Example:

- jump slowly
- abruptly turn to face the front and then reach your arms out to the sides in a strong motion

Rhythmic Content: repeated patterns of sounds or movements

A range of rhythmic content must be used in your practical work.

Relationship Content: with who the action is performed

A range of relationship content must be used in your practical work.

Mirroring – reflecting the actions of another dancer as if there is a mirror line
Example: dancer 1 extends right arm whilst leaning to the right but dancer 2 extends left arm to the left

Action and reaction – a dancer responds to the action of another dancer's action
Example: dancer 1 elbows to left, dancer 2 falls to floor after dancer 1 has performed their action

Accumulation – the movements are added to existing movements in a successive manner
Example: A, AB, ABC = jump, jump + turn, jump + turn + slide

Complementary – perform actions or shapes that are similar but not exactly the same as another dancer's actions
Example: dancer 1 performs seat roll whilst dancer two performs an elevated turn

Contrast – movements or shapes that have nothing in common
Example: fast dynamics of sharp elevated actions vs slow fluid arm gestures

Counterpoint – when dancers perform different phrases simultaneously
Example: floor phrase in one place vs elevation

Contact – a moment of physical contact which could be in the form of a counterbalance, touch or lift
Example: fan lift, hand on shoulder, and sacrifice lift

Formations – where the dancers stand in the space
Example: zig zag, circular, vertical line, diagonal line, horizontal line, cluster, sporadic

Spatial Content: where an action is performed

A range of spatial content must be used in your practical work.

Pathways; circular, linear, diagonal, zig – zag

Levels; floor work, mid-level, standing, elevation

Direction; left, right, front, back, diagonal front, diagonal back

Size of movement; small, medium and large

Spatial design; upstage, centre stage, downstage, stage right, stage left

You may choose to develop a motif through spatial content using the checklist above.

Example:
Change of levels
Version 1: Reach right arm to ceiling, left arm up to ceiling whilst jumping in the air.
Version 2: The dancer could kneel and perform the same arm actions.

Timing Content: The use of time or counts when matching movements to sound and/or other dancers

A range of timing content must be used in your practical work.

Homework Links

https://www.aqa.org.uk/resources/dance/gcse/dance/teach/subject-specific-vocabulary

Key Vocabulary

You must be able to identify and define ALL vocabulary listed. You MUST be able to give movement examples of each skill listed.

Dance
Dance Technique – Skills for Performance

Year: 9
Term: 3

BIG QUESTIONS

Can you identify and offer specific movement examples of the 5 basic body actions?

How do expressive skills contribute to the overall performance of a piece of dance?

How do physical skills contribute to the overall performance of a piece of dance?

What is the difference between mental skills for process and mental skills for performance?

How might a dancer improve their expressive skills?

How can a physical skill be improved over time?

Physical Skills: aspects enabling effective performance

Posture – The way the body is held
Alignment – Correct placement of body parts in relation to each other
Balance - A steady or held position achieved by an even distribution of weight
Coordination – The efficient combination of body parts
Control – The ability to start and stop movement, change direction and hold a shape efficiently
Flexibility - The range of movement in the joints (involving muscles, tendons and ligaments)
Mobility – The range of movement in a joint; the ability to move fluently from action to action
Stamina – Ability to maintain physical and mental energy over periods of time
Extension – Lengthening of one or more muscles or limbs
Isolation: an independent movement of part of the body

Expressive Skills: aspects that contribute to performance artistry and that engage the audience.

Projection – The energy the dancer uses to connect with and draw the audience in
Focus – The use of the eyes to enhance performance or interpretative qualities
Spatial awareness – Consciousness of the surrounding space and its effective use
Facial expressions – use of the face to show mood, character or feeling
Phrasing – The way in which the energy is distributed in the execution of a movement phrase
Musicality – the ability to make the unique qualities of the accompaniment evident in performance
Sensitivity to other Dancers – Awareness of and connection to other dancers

Mental Skills: skills in preparation for a performance

Systematic repetition – repeating something in an ordered way

Mental rehearsal – thinking through or visualising the dance

Rehearsal discipline – attributes and skills required for refining a performance – effective use of a rehearsal and time

Planning of rehearsal – organisation of when to go over material

Response to feedback – implementing changes and making improvements based on feedback/opinion given to you

Capacity to improve – willing to make changes and better, relearn, implement or adapt to make something better

Mental Skills: skills needed during a performance

Movement memory – the automatic recall of learned movement material without conscious thought

Commitment – dedication to a performance

Concentration – the power to focus all of one's attention

Confidence – the feeling or belief that one can have in one's performance or work

Technical Skills: the accuracy of content

- **Action Content**; 5BBA, use of different body parts
- **Spatial Content;** size, direction, level, pathway
- **Dynamic Content**; flow, speed, force
- **Relationship Content;** lead and follow, mirroring, action and reaction, accumulation, complement and contrast, counterpoint, contact, formations
- **Timing Content**
- **Rhythmic Content**

The Five Basic Body Actions: 5BBA
Jump, Turn, Travel, Stillness and Gesture

Can you define each of the 5 basic body actions?

What is the overall impact of technical skills in a performance?

What is the acronym to remember physical skills/expressive skills/technical skills and mental skills?

Homework Links

https://www.aqa.org.uk/resources/dance/gcse/dance/teach/subject-specific-vocabulary

Key Vocabulary

You must be able to identify and define ALL vocabulary listed.

You must be able to distinguish what category each skill falls under

EG: strength is a physical skill NOT a mental skill

Business
Pitch a Micro-enterprise activity

Year: 9
Term: 3

BIG QUESTIONS

- What are the features of a successful pitch?
- Explain the importance of being well prepared and rehearsed
- Understanding the impact of body language when pitching
- What is meant by language, tone, pace, volume and projection?

Key Words
- Communication
- Professionalism
- Funding
- Investment
- Body Language
- Appearance
- Language

A business will need to take responsibility for creating and delivering a pitch for their developed product/service. A pitch is made to an audience using their knowledge of business, and demonstrating entrepreneurial characteristics, qualities and skills. This is usually in the hope of securing funding/investment.

Presentation Skills:

- Positive attitude
- Professional behaviour and conduct of presenter
- Well-rehearsed and prepared
- Considerate of the needs and interests of the audience
- Use of visual aids, e.g. computer projection/slideshow with speaker notes, handouts for audience, clarity and legibility of text, impact of graphics and images

Communication skills:

- Body language, gestures and eye contact
- Language and tone, pace, volume and projection
- Use of business terminology
- Listening, handling questions and formulating appropriate responses.

Homework:

Research 'Levi Roots Pitch Dragon's Den' on YouTube and answer the following questions:

- Explain the strengths of Levi's pitch?
- Explain the weaknesses of Levi's pitch?
- Suggest improvements Levi Roots could make to his pitch in the future?

Business
Pitch a Micro-enterprise activity

Year: 9
Term: 3

BIG QUESTIONS

- What are the features of a successful pitch?
- How can I assess my pitch and improve through received feedback?

Body language – This relates to posture, facial expressions and gestures. Present with a smile and look audience in the eye. This creates a far better impression than if you look down and mumble.

Attitude – Be positive! Give an upbeat image of yourself and your business!

Interpersonal skills – Build a relationship with the audience. Listen carefully to questions and respond positively and politely.

Language – This must be appropriate for the audience. Make sure to use key business language i.e. revenue, profit, market research….

Pace – This relates to the speed at which you speak. Don't run your words together causing you to speak too quickly or so slowly that the audience loses interest!

Reflective listening – This is vital if you are to understand and respond to questions from the audience appropriately

Key Words

- Recommendations
- Communication
- Professionalism
- Assess
- Investment
- Body Language
- Appearance
- Language

It's important to improve through feedback and you'll need to review your plan and pitch for the micro-enterprise activity, reflecting on your plan, your pitch and the skills you demonstrated when pitching. Businesses constantly develop through customer and investor feedback, making improvements to their products and services.

Pitch Review

WWW (What Went Well):
What were the positives of your pitch? What do you feel went well? Did the feedback agree?

EBI (Even Better If):
What suggested improvements were given? How would you address these for future pitches?

ICT
Web design - Dreamweaver/PowerPoint

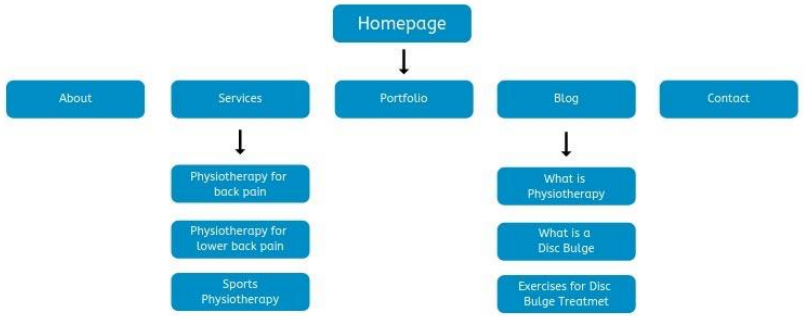
Year: 9
Term: 3

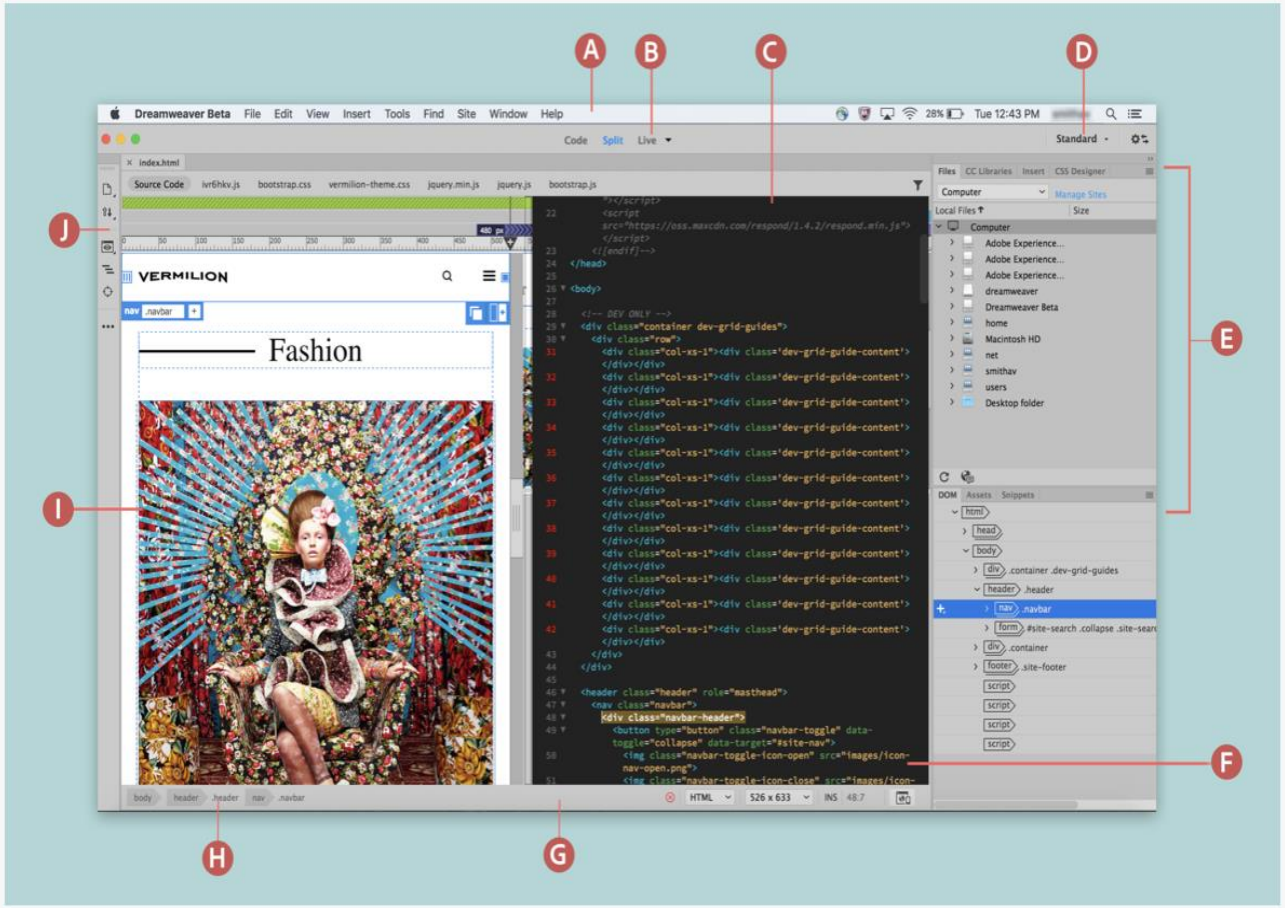
BIG QUESTIONS

1. What are the key features for each audience for websites and apps?
2. What is accessibility and why is this important?
3. Why do we need site maps when organising a website?
4. What are the key principles in web design?
5. What is a template and how is it used within a website?

Good vs Bad Web design

Planning: Website structure diagram example





Dreamweaver workspace

A. Application bar **B.** Document toolbar **C.** Document window **D.** Workspace switcher **E.** Panels **F.** Code View **G.** Status bar **H.** Tag selector **I.** Live View **J.** Toolbar

Homework Links

Links in Teams

Homework 1: Match the Key Terms

Homework 2: Find each of the website features using the links within the homework task. Use the keywords where possible.

www.cbbc.co.uk

www.amazon.co.uk

Homework 3: Use the link in the website and find there biggest website mistakes and reason why you chose them.

Key Vocabulary

Audience and Purpose
Accessibility
Input/output
Voice control
Hierarchy
Structure
Index
Template
Hyperlink
Hotspots

Media
Film Posters

Year 9 Term 3

Big Questions:

What is genre?
Why is genre important in the creation of film posters?
What are the conventions of a film poster and how does genre impact on them?
How can genre be used to target a specific audience?
What are the conventions of Action?

Film Posters (Print)

Film Industry Key Roles
Director / Producer / Editor / Screen writer / Director of Photography / Cinematographer / Production Designer / Costume Designer / Composer

5 Stages of the Film Making Process

1. **Development** – ideas are created, if necessary rights are bought, screenplay is written and financing is sought.
2. **Pre-Production** – Cast and film crew are found, locations chosen and sets are built.
3. **Production** – The film is shot
4. **Post-production** – The recorded film is edited. Crew work on the sound, images and visual effects
5. **Distribution** – Finished film is distributed. It is screened at the cinema and released for home viewing.

Key Concept - Genre:
A 'type'. A way of categorising media (inc films), e.g. Horror, Western, etc
Iconography: the signs and symbols that create a genre: e.g. monsters in horror films. Space ships in sci-fi, costumes in superhero movies, etc

Key Concept - Narrative:
Propp's Character Roles – Hero / Villain / Princess / helper, etc
Protagonist – the main character who's narrative we follow. Usually the hero, but not always a good person
Antagonist – the character that opposes the main character (protagonist). Usually the villain, but not always a bad person.
Enigma code - anything we see that keeps us guessing as to what will happen next. It creates suspense and intrigue.

Key Terms:
Synergy: When one or more institutions benefit from the same media text. E.g. an official Marvel YouTube page
Convergence: The coming together of technologies to experience the media in different ways . E.g. watching a film via Netflix over wifi on your mobile phone.

Key Concept - Institutions:
Most of the big film institutions are massive global **conglomerates**, e.g. WB, Sony, Disney, etc
Vertical Integration – When a media company buys up and owns similar companies, e.g. Disney bought Marvel, Pixar & Lucasfilm.
BBFC – are the regulators of the film industry in the UK. They enforce age ratings, etc.
Ideology – the ideas/beliefs behind a media text. Tabloids like the Sun have clear right wing ideology, e.g. sexist, anti immigration, pro monarchy, etc
Gross – How much money a film makes before deductions such as distribution costs, etc / **Budget** – How much a films costs to make.

Genre Conventions of a Film Poster

MFL - French **Year: 9**

Mod 2 – Le temps de loisirs – *How do I talk about my hobbies and interests?* **Term: 3**

BIG QUESTIONS

1. **Que fais-tu pendant ton temps libre?**
   What do you do in your free time?
2. **Qu'est-ce que tu aimes faire?**
   What do you like to do?
3. **Ta famille est sportive?**
   Is your family sporty?
4. **Qu'est-ce que il / elle joue/fait?**
   What does he/she do/play?
5. **Quel sport préfères-tu?**
   What sport do you prefer?
6. **Que fais-tu sur ton portable?**
   What do you do with your phone?
7. **Qu'est-ce qu'on peut faire sur internet?**
   What can we do on the internet?
8. **Quelle est ton avis sur internet?**
   What is your opinion of the internet?

Les passe-temps	Hobbies		
Je joue …	*I play …*	aux cartes/aux échecs	*cards/chess*
au badminton/au basket	*badminton/basketball*	du piano/du saxophone	*the piano/the saxophone*
au billard/au foot/au golf	*snooker/billiards/football/golf*	du violon	*the violin*
au hockey/au rugby	*hockey/rugby*	de la batterie/de la guitare	*the drums/the guitar*
au tennis/au volley	*tennis/volleyball*	de l'accordéon (m)	*the accordion*
à la pétanque	*French bowls*	de l'harmonica (m)	*the harmonica*
Les expressions de fréquence	**Frequency expressions**		
tous les jours	*every day*	deux fois par semaine	*twice a week*
tous les soirs	*every evening*	souvent	*often*
tous les samedis	*every Saturday*	de temps en temps	*from time to time*
une fois par semaine	*once a week*	rarement	*rarely*
Les opinions	**Opinions**		
Je trouve ça …	*I find that …*	ennuyeux/nul	*boring/rubbish*
cool/génial	*cool/great*	stupide	*stupid*
passionnant/super	*exciting/super*		
J'aime et je n'aime pas …	**I like and I don't like …**		
Ma passion, c'est …	*My passion is …*	Je n'aime pas/Je déteste …	*I don't like/hate …*
le cinéma/le sport/la musique	*the cinema/sport/music*	le foot/jouer au foot	*football/playing football*
J'aime/J'adore/Je préfère …	*I like/love/prefer …*	la lecture/lire	*reading*
		la photographie/prendre des photos	*photography/taking photos*
Les films	**Films**		
une comédie	*a comedy*	un film d'aventure	*an adventure film*
un western	*a Western*	un film d'horreur	*a horror film*
un film fantastique	*a fantasy film*	un film de gangsters	*a gangster film*
un film d'action	*an action film*	un film de science-fiction	*a science-fiction film*
un film d'arts martiaux	*a martial arts film*		
Acheter des billets	**Buying tickets**		
Qu'est-ce qu'il y a au cinéma?	*What's on at the cinema?*	Pour quelle séance?	*For which screening?*
La séance commence à quelle heure?	*At what time does the screening start?*	Pour la séance de 19 heures.	*For the screening at 7 p.m.*
		Ça coûte combien?	*How much does it cost?*
Je peux vous aider?	*Can I help you?*	Le tarif réduit, c'est 14 euros la place.	*The reduced price is 14 euros per seat.*
Je voudrais deux billets pour …	*I would like two tickets for …*		
Le sport	**Sport**		
Je fais …	*I …*	de l'équitation (f)	*go horse-riding*
du footing	*go jogging*	de l'escalade (f)	*go climbing*
du trampoline	*do trampolining*	de l'escrime (f)	*do fencing*
du vélo	*go cycling*	des randonnées (f)	*go hiking*
de la boxe	*do boxing*	Je fais ça depuis …	*I have been doing that for …*
de la danse	*go dancing*	six mois/deux ans	*six months/two years*
de la natation	*go swimming*		

Parler de sport	Talking about sport		
Je préfère les sports individuels.	*I prefer individual sports.*	Ça booste le moral.	*It boosts my/your mood.*
Je préfère les sports d'équipe.	*I prefer team sports.*	C'est bon pour le corps et le mental.	*It's good for the body and the mind.*
Je trouve ça …	*I find it/that …*	Quand je fais ça, …	*When I do/I'm doing it, …*
rigolo/facile/rapide	*fun/easy/fast*	je respire	*I breathe*
Ça me fait du bien.	*It does me good.*	j'oublie mes soucis	*I forget my worries*
Ça me détend.	*It relaxes me.*		

Sur mon téléphone portable/ ma tablette, …	On my phone/tablet …		
je crée des playlists	*I create playlists*	j'écris des articles pour mon blog	*I write posts for my blog*
je télécharge de la musique	*I download music*	je lis mes e-mails	*I read my emails*
je regarde des clips vidéo	*I watch music videos*	je vais sur des réseaux sociaux	*I go onto social media sites*
je joue à des jeux	*I play games*	je prends des photos	*I take photos*
je fais des recherches pour mes devoirs	*I do research for my homework*	je mets mes photos sur Instagram ou Snapchat	*I put my photos on Instagram or Snapchat*
je fais des achats	*I buy things*	À mon avis, c'est …	*In my opinion, it's …*
j'écris des messages	*I write messages*	génial/très pratique/indispensable	*great/very practical/essential*

Internet	The internet		
Il est facile de (d') …	*It is easy to …*	passer trop de temps sur internet	*spend too much time on the internet*
Il est possible de (d') …	*It is possible to …*		
rester en contact avec ses amis	*stay in contact with your friends*	tchatter en ligne avec des inconnus	*chat to strangers online*
faire des recherches pour ses devoirs	*do research for your homework*	Il est important de …	*It is important to …*
		faire du sport	*do some sport*
utiliser un dico en ligne	*use an online dictionary*	passer du temps avec sa famille	*spend some time with your family*
partager des photos	*share photos*		
Il est dangereux de …	*It is dangerous to …*	retrouver ses amis en vrai	*meet up with your friends in real life*
partager ses détails personnels	*share your personal details*		

La lecture	Reading		
J'apprécie beaucoup les …	*I really appreciate/like …*	livres d'épouvante	*horror books*
Je préfère les …	*I prefer …*	BD	*comic books/graphic novels*
J'adore les…	*I love …*	mangas	*mangas*
J'ai une passion pour les …	*I'm passionate about …*	J'aime les illustrations/l'humour.	*I like the illustrations/humour.*
Je n'aime pas les …	*I don't like …*	Je ne lis pas sur une tablette.	*I don't read on a tablet.*
J'ai horreur des …	*I hate …*	Je préfère tenir un livre traditionnel dans mes mains.	*I prefer holding a traditional book in my hands.*
romans fantastiques	*fantasy novels*	Je ne lis plus de livres traditionnels.	*I no longer read traditional books.*
romans policiers	*detective novels*	Je lis beaucoup en ligne.	*I read a lot online.*
romans d'amour	*romance novels*		

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
- U

Writing

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

- Le
- La

Key Vocabulary

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

MFL - French **Year: 9**

Mod 2 – Le temps de loisirs – *How do I talk about my hobbies and interests?* **Term: 3**

BIG QUESTIONS

1. **Qu'est-ce qu'il y a au cinéma?**
   What is on at the cinema?
2. **Je peux vous aider?**
   Can I help you?
3. **Quel genre du livre aimes-tu?**
   Which genre of books do you like?
4. **Quelle musique aimes-tu?**
   What music do you like?
5. **Quel genre d'émission aimes-tu?**
   What type of TV programme do you like?
6. **Quel est ton émission préférée?**
   What is your favourite programme?
7. **PAST: Où es-tu allé(e) … dernier/ère?**
   Where did you go last…?
8. **PAST: Qu'est-ce que tu as fait… dernier/ère?**
   What did you do last…?

La musique	Music		
j'aime …/je n'aime pas …	*I like …/I don't like …*	Je regarde des clips vidéo pour écouter ma musique.	*I watch music videos to listen to my music.*
le jazz/le rap	*jazz/rap*	Mon chanteur préféré/Ma chanteuse préférée, c'est … car …	*My favourite singer is … because …*
le reggae/le rock	*reggae/rock*	j'aime ses paroles	*I like his/her lyrics*
la musique classique	*classical music*	j'aime ses mélodies	*I like his/her tunes*
la musique pop	*pop music*	sa musique me donne envie de danser	*his/her music makes me want to dance*
j'écoute ma musique …	*I listen to my music …*	sa musique me donne envie de chanter	*his/her music makes me want to sing*
sur mon téléphone portable avec mes écouteurs	*on my phone with my earphones*		
sur mon ordi	*on my computer*		
sur une tablette	*on a tablet*		
Les émissions de télé	**TV programmes**		
j'aime/je n'aime pas …	*I like/I don't like …*	éducatifs/-ives	*educational*
les documentaires (m)	*documentaries*	ennuyeux/-euses	*boring*
les jeux télévisés (m)	*game shows*	(trop) sérieux/-euses	*too serious*
les magazines culturels (m)	*magazine programmes*	originaux/-ales	*original*
les séries (f)	*series*	Mon émission préférée s'appelle …	*My favourite programme is called …*
les émissions de sport (f)	*sports programmes*		
les émissions de musique (f)	*music programmes*	C'est un jeu télévisé.	*It's a game show.*
les émissions de télé-réalité (f)	*reality TV programmes*	C'est une série.	*It's a drama series.*
les actualités	*the news*	J'aime bien l'animateur(-trice).	*I like the presenter.*
parce qu'ils/elles sont …	*because they are/it is …*	Les acteurs sont très doués.	*The actors are very talented.*
amusant(e)s	*funny*	Le scénario est passionnant.	*The plot is exciting.*
divertissant(e)s	*entertaining*	J'apprends beaucoup.	*I learn a lot.*
intéressant(e)s	*interesting*	Je ne rate jamais cette émission!	*I never miss this programme!*
passionnant(e)s	*exciting*		
Une soirée entre amis	**An evening with friends**		
Je suis allé(e) au cinéma.	*I went to the cinema.*	J'ai mis les photos sur Instagram.	*I put the photos on Instagram.*
Je suis sorti(e) avec …	*I went out with …*	On est allé(e)s au restaurant.	*We went to a restaurant.*
On est allé(e)s à un concert.	*We went to a concert.*	J'ai bu un coca.	*I drank a cola.*
On a vu un film.	*We saw a film.*	C'était …	*It was …*
On est allé(e)s en ville.	*We went into town.*	génial/lamentable	*great/pathetic*
On a fait du patin à glace.	*We went ice skating.*	amusant/délicieux	*fun/funny/delicious*
J'ai pris beaucoup de photos.	*I took lots of photos.*		
Les mots essentiels	**High-frequency words**		
en plus	*what's more*	d'habitude	*usually*
cependant	*however*	en général	*in general*
par contre	*on the other hand*	Ça dépend.	*It depends.*
normalement	*normally*		

MFL – Spanish **Year: 9**

Mod 2 – Mi vida en el insti – *How do I talk about School?*

Term: 3

BIG QUESTIONS

1. **¿Qué opinas del / de la…?**
   What do you think of…?
2. **¿Cómo son tus profesores?**
   What are your teachers like?
3. **¿Qué llevas en el insti?**
   What do you wear to school?
4. **¿Cómo es tu día escolar?**
   What is your school day like?
5. **¿Qué instalaciones hay en tu insti?**
   What facilities does your school have?
6. **¿Qué es lo bueno/malo?**
   What is the good/bad thing?
7. **¿Cómo era tu escuela primaria?**
   What was your primary school like?
8. **¿Qué había?**
   What did it have?

¿Te interesa(n)…?	Are you interested in…?	la tecnología	technology
el arte dramático	drama	los idiomas	languages
el dibujo	art / drawing	las empresariales	business studies
el español	Spanish	las matemáticas	maths
el inglés	English	las ciencias	science
la biología	biology	la asignatura	subject
la educación física	PE	¿Qué opinas de…?	What do you think of…?
la física	physics	me encanta(n)	I love
la geografía	geography	me chifla(n)	I love
la historia	history	me interesa(n)	I'm interested in
la informática	ICT	me gusta(n)	I like
la lengua	language	no me gusta(n)	I don't like
la química	chemistry	odio	I hate
la religión	RE	prefiero	I prefer

¿Cómo son tus profes?	What are your teachers like?		
Mi profe (de inglés) es…	My English teacher is…	aburrido/a	boring
joven	young	gracioso/a	funny
viejo/a	old	serio/a	serious
severo/a	strict	simpático/a	nice / friendly
tolerante	easy-going	antipático/a	unfriendly
impaciente	impatient	más divertido/a que	more fun than
paciente	patient	menos creativo/a que	less creative than
interesante	interesting	tan interesante como	as interesting as

¿Qué llevas en el insti?	What do you wear at school?		
(No) llevo…	I (don't) wear…	rojo	red
(No) llevamos…	We (don't) wear…	morado / violeta	purple
Tengo que llevar…	I have to wear…	naranja	orange
Tenemos que llevar…	We have to wear…	rosa	pink
un jersey (de punto)	a (knitted) sweater	azul	blue
un vestido	a dress	verde	green
una camisa	a shirt	gris	grey
una camiseta	a t-shirt	marrón	brown
una chaqueta (a rayas)	a (striped) jacket	oscuro / claro	dark / light
una chaqueta de punto	a cardigan	a rayas / a cuadros	striped / checked
una corbata	a tie	bonito / feo	pretty / ugly
una falda	a skirt	cómodo / incómodo	comfortable / uncomfortable
unos pantalones	trousers	formal / informal	formal / informal
unos calcetines	socks	elegante	smart
unos zapatos	shoes	práctico	practical
unos vaqueros	jeans	El uniforme…	Uniform…
unas medias	tights	mejora la disciplina	improves discipline
amarillo	yellow	limita la individualidad	limits individuality
blanco	white	Las diferencias económicas	The economic differences
negro	black	no son tan obvias.	are not as obvious

¿Cómo es tu insti?	What is your school like?		
En mi insti hay…	*In my school there is…*	amplio(s)	*spacious*
Mi insti tiene…	*My school has…*	pequeño(s)	*small*
un salón de actos	*a hall*	feo(s)	*ugly*
un comedor	*a canteen*	atractivo(s)	*attractive*
un campo de fútbol	*a football pitch*	lo bueno / malo es que…	*the good / bad thing is that…*
un patio	*a playground*	lo mejor / peor es que…	*the best / worst thing is that…*
un gimnasio	*a gym*	ni…ni…	*(n)either…nor…*
una piscina	*a pool*	nada	*nothing / anything*
una biblioteca	*a library*	tampoco	*not either*
una pista de tenis	*a tennis court*	En mi escuela primaria…	*In my primary school…*
unos laboratorios	*some laboratories*	(no) había…	*there was/were (not any)…*
muchas aulas	*lots of classrooms*	exámenes	*exams*
Mi instituto / colegio es…	*My school is…*	deberes	*homework*
mixto	*mixed*	instalaciones (deportivas)	*(sports) facilities*
femenino / masculino	*all girls / all boys*	actividades extraescolares	*extra-curricular activities*
público / privado	*state / private*	la educación infantil	*pre-school education*
El edificio es…	*The building is…*	la educación primaria	*primary education*
Los edificios son…	*The buildings are…*	la educación secundaria	*secondary education*
nuevo(s)	*new*	el bachillerato	*A levels*
antiguo(s)	*old*	la formación profesional	*vocational training*
moderno(s)	*modern*	el instituto	*secondary school*

¿Cómo vas al insti?	How do you get to school?	Las clases empiezan a las…	*Lessons start at…*
Voy al insti…	*I go to school…*	y terminan a las…	*and finish at…*
a pie / andando	*on foot / walking*	Tenemos… clases	*We have… lessons*
en bici	*by bike*	al día	*per day*
en autobús	*by bus*	por la mañana	*in the morning*
en coche	*by car*	por la tarde	*in the afternoon*
en metro	*by underground*	Cada clase dura…	*Each lesson lasts…*
en taxi	*by taxi*	el recreo	*break*
en tren	*by train*	la hora de comer	*lunch*
Salgo de casa a las…	*I leave home at…*		

¿Qué vas a hacer?	What are you going to do?		
Voy a…	*I'm going to…*	ir a pie	*walk*
Vamos a…	*We're going to…*	llevar ropa de calle	*wear (my/your/our) own clothes*
participar en un intercambio	*take part in an exchange*	ir / comer juntos	*go / eat together*
viajar con mi clase	*travel with my class*	ir de excursión	*go on a trip*
conocer	*meet / get to know*	hacer turismo	*see the sights*
visitar	*visit*	hacer una visita guiada	*do a guided tour*
llegar	*arrive*	ver los edificios	*see the buildings*
estar	*be*	Va a ser…	*It's going to be…*
asistir a clases	*attend lessons*	fácil / guay	*easy / cool*

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
- U

Writing

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

- Le
- La

Key Vocabulary

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

MFL – Spanish **Year: 9**

Mod 2 – Mi vida en el insti – *How do I talk about School?*

Term: 3

BIG QUESTIONS

1. **¿Cuáles son las normas de tu insti?**
   What are your school rules?
2. **¿Hay problemas en tu insti?**
   Are there problems in your school?
3. **¿Qué es lo mejor de tu insti?**
   What is the best thing about your school?
4. **¿Qué actividades extraescolares haces?**
   What extra-curricular activities do you do?
5. **PAST: ¿Háblame de un éxito reciente?**
   Tell me about a recent success
6. **FUTURE: ¿Vas a participar a un intercambio?**
   Are you going to go on an exchange?
7. **FUTURE: ¿Qué vas a hacer?**
   What are you going to do?

¿Cuáles son las normas de tu insti?	What are the rules in your school?		
Está prohibido…	It is forbidden…	estoy de acuerdo	I agree
No se permite…	You are not allowed…	no estoy de acuerdo	I disagree
No se debe…	You / One must not…	En mi opinión, …	In my opinión, …
comer chicle	to chew chewing gum	Pienso que / Creo que…	I think that…
usar el móvil en clase	to use your phone in lessons	es justo	it's fair
llevar uniforme	to wear a uniform	es injusto	it's unfair
ser agresivo o grosero	to be aggressive or rude	no es justo	it's not fair
correr en los pasillos	to run in the corridors	¡Qué va!	No way!
llevar piercings	to have visible piercings	Las normas son…	The rules are…
ser puntual	to be on time	buenas / malas	good / bad
salir del insituto durante el dia escolar	to leave the school during the school day	necesarias	necesary
		demasiado severas	too strict

¿Hay problemas en tu insti?	Are there problems in your school?		
Un problema es…	One problem in my school is…	Hay (algunos) alumnos que…	There are (some) pupils who…
el estrés de los exámenes	exam stress	intimidan	intimidate
el acoso escolar	bullying	abusan	abuse
la presión del grupo	peer pressure	sienten pánico	feel panic
Estoy estresado/a.	I am stressed out.	hacen novillos	skip lessons
Tengo miedo de…	I am scared of…	quieren ser parte de la pandilla	want to be part of the gang
suspender mis pruebas.	fail(ing) my assessments.	son una mala influencia	are a bad influence
aprobar mis exámenes	pass my exams		

Éxitos	Successes / Achievements		
practico el judo	I do / have been doing judo	hice / hicimos…	I did / we did…
toco la trompeta	I play / have been playing the trumpet	una prueba	a test / exam
canto en el coro	I sing / have been singing in the choir	una película	a film
voy al	I go / have been going to	gané / ganamos…	I won / we won…
club de (ajedrez)	(chess) club	un trofeo	a trophy
soy miembro del…	I am / have been a member of the…	un premio	a prize
club de teatro	drama club	toqué un solo	I played a solo
club de periodismo	reporters club	¡Fue un éxito!	It was a success!
club de lectores	reading club	este trimestre	this term
club de fotografía	photography club	el próximo trimestre	next term
desde hace…años	for… years	voy a continuar con…	I'm going to continue with…
el trimestre pasado…	last term…	voy a ir al club de…	I'm going to go to… club
participé en…	I took part in…	Los clubs extraescolares…	Extra-curricular clubs…
un maratón	a marathon	son divertidos / geniales / interesantes	are fun / great / interesting
un torneo	a tournament	Te ayudan a…	They help you to…
un concierto	a concert	aprender cosas interesantes	learn interesting things
un campeonato	a championship	hacer nuevos amigos	make new friends
un concurso	a competition		

Child Development
Component 1: Children's Growth and Development

Year: 9
Term: 3

BIG QUESTIONS

To be able to understand -

- ✓ The characteristics of children's development from birth to five years old
- ✓ What is the difference between growth and development
- ✓ What skills and knowledge is gained over time

Understand the characteristics of children's development from birth to five years old

Understand the difference between growth and development

Learners will understand that growth and development are two different characteristics of human development.

Growth:

a. changes to physical size, the skeleton, muscles and the brain, children's height, weight and head circumference
b. how growth is measured and plotted, e.g. centile charts
c. reasons why growth is measured and plotted, e.g. to ensure consistency with expected patterns, to highlight potential issues at an early stage.

Development:

a. the skills and knowledge gained by a child over time
b. children acquiring skills at varying rates in different areas of development
c. milestones, sometimes called developmental norms, indicating the stage of development the child may meet at a particular age
d. holistic development – supporting children to progress across all areas of development (physically, intellectually and cognitively, communication and language, socially, and emotionally).

Homework

1.1. Explain the sequence and rate of each aspect of development from birth- 2 years

1.2. Explain the sequence and rate of each aspect of development from 3- 5 years

Child Development **Year: 9**

Component 1: Children's Growth and Development **Term: 3**

Homework Links

Research from the following websites-

- ✓ www.education.gov.uk
- ✓ www.foundationyears.org.uk
- ✓ www.earlyyearsmatters.co.uk/eyfs/a-uni que-child/play-learning/
- ✓ http://www.earlyyearsmatters.co.uk/eyfs/positive-relationships/key-person-attachment/

Key Terms LA-A/B

Growth-an increase in size and mass

Proportion- considered in comparison to something else

Consistent- something that remains the same over time

Circumference- the distance around something. In this case a baby's head

Development- skills and knowledge gained over time

Milestone- a stage or event in a process

Holistic- parts that are interconnected

Perseverance- continued effort and determination, despite difficulty

Psychologist- a professional who studies the human mind and why people do things

Self-esteem confidence in own abilities and worth.

Understand the characteristics of children's development from birth to five years old

Growth and development across the ages of birth to five years old

Learners will explore different aspects of change that children aged birth to five years old experience across the five areas of development.

The following life stages should be included when it comes to the areas of development

- 0 – 18 months
- 18 months–3 years
- 3 years – 5 years.

Physical development:

Physical development is the way in which the body increases in skill and becomes more complex in its performance. There are two main areas: Gross motor skills & Fine motor skills

Cognitive/Intellectual Development

Is about how you approach a problem and try to solve it and what do you do if you are unable to solve it.

Communication and language Development

The way in which a baby learns how to use verbal and non-verbal to make their thoughts and feelings known

Emotional Development

Ways in which a child develops, so they are able to find other ways of expressing themselves and gaining attention through their feelings, such as crying

Social Development

Children like to be around people, me helps them to identify themselves and be an individual through learning about others around them

Health and Social Care **Year:9**

Component 1 Human Lifespan Development **Term:3**

BIG QUESTIONS

- **What are the life stages?**
- **What does PIES mean?**
- **How can we link PIES to the way we grow?**

A1: Human growth and development across life stages

Main life stages linked to ages. Areas of growth and development across main life stages using PIES classification-

Physical Development-

a. gross and fine motor skills

b. infancy and early childhood, gross and fine motor skills and growth patterns

c. in adolescence and early adulthood: growth patterns and primary and secondary sexual characteristics

d. in middle and later adulthood: menopause, loss of mobility, muscle tone/strength and skin elasticity

Intellectual/Cognitive Development-

a. problem solving, abstract and creative thinking, development/loss of memory and recall

Emotional development

a. including bonding and attachment, security and independence

b. Independence, security, contentment, self-image and self-esteem

Social development

a. Formation of relationships with others and socialisation process

b. Formation of relationships with others and socialisation process

Health and Social Care **Year:9**

Component 1 Human Lifespan Development **Term:3**

BIG QUESTIONS

- **How do factors affect our growth and development?**
- **What influences us as we grow and develop?**

A2: Factors affecting growth and development

Physical factors that affect growth and development-

a. genetic inheritance, experience of illness and disease

b. diet and lifestyle choices, and appearance

c. Social and cultural factors that affect human growth and development-

d. culture, religion, community involvement, gender roles and expectations and educational experiences

e. the influence of role models, social isolation and personal relationships with friends and family

Economic factors that affect human growth and development-

a. income/wealth and material possessions

Homework Links

https://www.simonweston.com/

https://www.youtube.com/watch?v=XjaArHGF7mw

https://www.youtube.com/watch?v=nx71vp3ceaw

https://www.youtube.com/watch?v=Qx1ymZFg1gA

Key Words-

Life events- are expected or unexpected events that can affect development

Expected- is a belief that something is likely to happen

Unexpected- long-or short-term changes that is not thought likely to happen

Bereavement- is the process of coming to terms with the death of someone close

Physical events- make changes to your body, physical health or mobility

Relationship changes- impact on informal and intimate relationships

Life circumstances- impacts on day-to-day life and the choices you make

Adapt-is to adjust to new conditions or circumstances

Respite care- involves temporary care of an individual with ill health to provide relief for their parents or carers

Professional-describes a member of a profession who is trained and skilled in their area of work

Subject: 3D AD
Topic: Balancing Tools

Year: 9
Term: 3

BIG QUESTIONS

Describe the process of development in artists work.

Explain why primary sources are the richest form of research.

How can Secondary sources enrich the development of 3D ideas?

Show different ways of recording your observations

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?

Why is it important to evaluate?

What is a prototype?

Client Brief- *Design and make a prototype model for a sculpture to be place at the entrance of a DIY Homeware store*

Vitra | 04 - Balancing Tools

On the seventieth birthday of Willi Fehlbaum, Vitra's founder, his children presented him with the sculpture "Balancing Tools". Erected on the grounds between the main road and the complex of buildings, it depicts the tools of the furniture maker juxtaposed with one another on an oversized scale. *It was in Claes Oldenburg's studio that Vitra Chairman Rolf Fehlbaum met Frank Gehry for the very first time.*

'Balancing Tools' 1984

Key Skills

RECORD	DEVELOP
I will learn to record... • **images and information appropriate for the Tools theme** • **using 2D & 3D media** • **using technical; drawing and photography** • **building on my knowledge and understanding of how artists/designers use materials and imagery to create meaningful work** • **ideas for a sculpture inspired by tools**	**I will learn how to develop...** • **my observation skills using a range of media, techniques and processes.** • **my knowledge and understanding of 3D 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 learn how to... • select and experiment with a range of 3D media and techniques • 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 learn how to... • analyse and reflect on the development of my own work, through annotation making connections to artists and suggesting ways I could I improve. • evaluate artists using analytical writing skills and forming opinions
PRESENT OUTCOUMES I will learn how to... Produce one or more finished prototypes in 3D	

Homework Links

Tasks linked to the theme 'Tools' (2 hours per cycle)

Key Vocabulary

Shape/Form/Balance/ Scale/Colour/Acryilic/ Papiermache/Primary Source/Secondary Source/Composition/ Isometric/Orthographic Vectorise

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

PSHE Year: 9
WPD Term: 3

Big Questions

PSHE

How can I successfully manage my money?

What are the most common financial products?

What are the challenges when organising money?

How can we keep financially savvy and avoid debt?

What do you think is meant by the term "employability"? What are employers looking for

WPD Community Project – Character

What is "GOOD" character?

What is resilience and persistence?

HOUSE COMPETITION:

Design a poster to promote your House and to encourage students to a) work towards achieving more house points and b) get involved with house activities, events and competitions. The best one for each house will be printed and put up on display around school and there will be a small prize and house points for the winners.

3

Living in The wider World
Financial Futures – Preparing for Life

- Debt – including interest/loans
- Planning money for a financial future
- Common financial products
- Challenges when organising money
- Keeping financially savvy
- Employability

Wider Personal Development
PERSONAL PROJECT CHARACTER – Persistence and Resilience

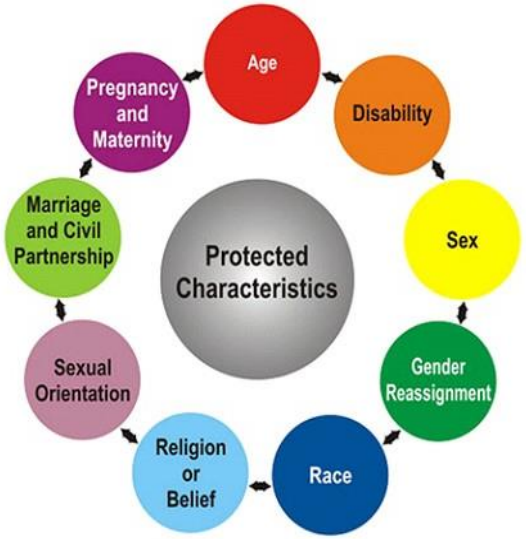
- Defining character, morals and qualities
- Positive characteristics
- The Abbey Attitudes/values
- Community & working together
- Value of curiosity
- Resilience and persistence
- Goals, achievements and support
- British Values

Careers Employability Skills Builder: Team work , Industry Focus – Construction

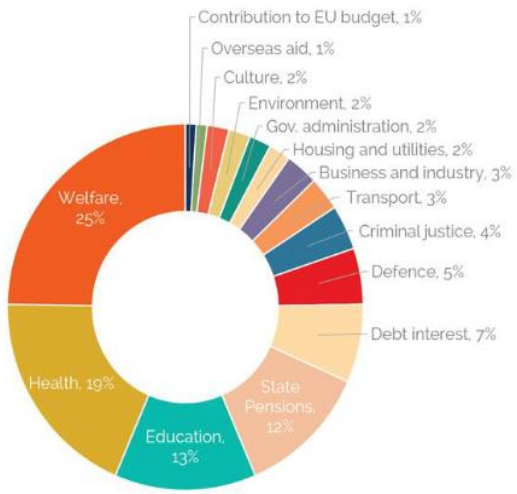
- Understanding and respecting diversity of others' cultures, beliefs and backgrounds
- Team work skills
- Contributing to group work/team work projects
- Recognising the value of others' ideas
- Construction industry

Why does the construction industry require

Careers:
Employability Focus during form time – Teamwork
Careers Event – Digital Footprint Workshops



How is taxation spent by the government



What do National Insurance Contributions go towards

- State retirement pension;
- Bereavement benefits for spouse/civil partner;
- Contribution-based Jobseeker's allowance;
- Contribution-based Employment and Support Allowance.
- The NHS

National Insurance payments cannot be used directly to fund general government **spending**.

What happens if I don't pay Income Tax

Most people pay Income Tax through PAYE. This is the system your employer or pension provider uses to take Income Tax before they pay your wages or pension.

If your employer makes a mistake and under pays your tax, you could be made to repay that amount through the next years PAYE if the amount is under £3,000 and you earn under £30,000 per year.

In some very limited circumstances, it may be possible for HMRC to write off the debt, or, if your employer or pension payer is at fault, to collect the tax from them instead.

If you are a self-employed person, you are responsible for filing your tax returns each year with the HMRC.
Failure to do so or filing late or inaccurate returns can result in a HMRC Enquiry.

If the enquiry find you are guilty of deliberately misleading or falsify your tax record you can be prosecuted for fraud.

In most cases you will be given a bill for the unpaid tax and a set time frame to pay it back.

What happens if I don't pay National Insurance contributions

Most people pay National Insurance through PAYE. This is the system your employer or pension provider uses to take National Insurance contributions before they pay your wages or pension.

If your employer makes a mistake and under pays your national insurance, they can be fined and expected to make up the payments. You are not responsible if this is not paid.

If you do not pay any national insurance, then you may not be entitled to benefit pays mends which are considered "contributory Benefits" such as:

- Unemployment benefits, in the form of Jobseeker's Allowance (JSA) and Employment and Support Allowance (ESA)
- Maternity Allowance, if you don't qualify for statutory maternity pay
- Bereavement benefits (Bereavement Allowance, Bereavement Payment and Widowed Parent's Allowance)
- Incapacity Benefit, if you face long term unemployment because of illness or disability.

It does not affect your ability to apply for Universal Credit, PIP, Pensions or access to the NHS.