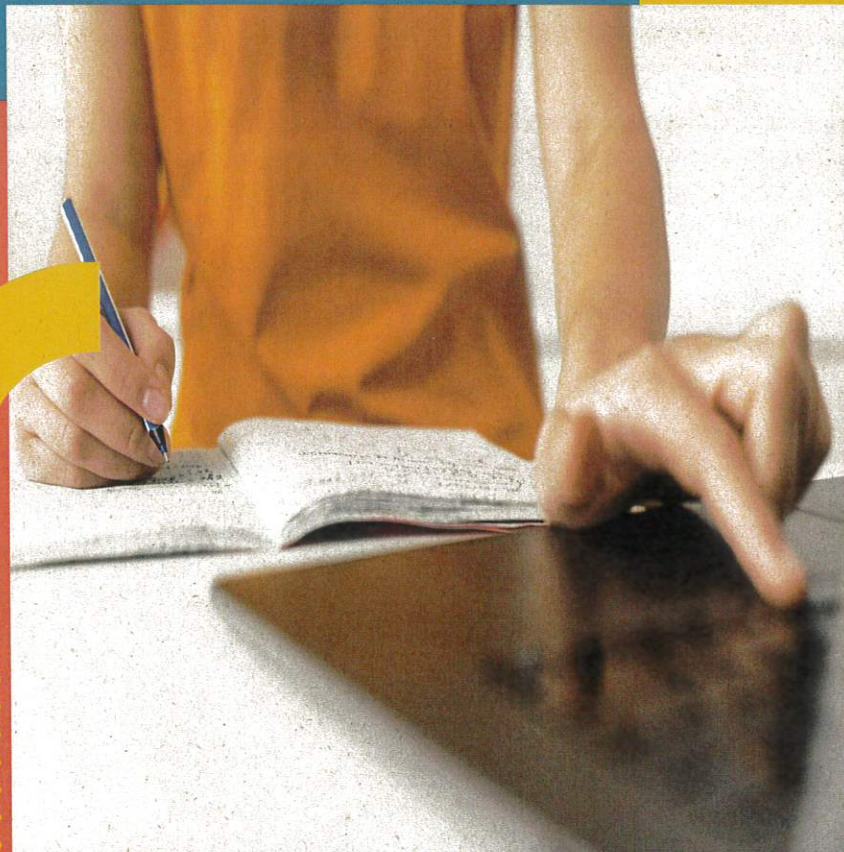




SMITHILLS SCHOOL
SUCCESS FOR ALL

HOMework BOOKLET



YEAR 10
AUTUMN TERM 1

www.smithillsschool.net



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YEAR 10

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Homework Timetable:

	Monday	Tuesday	Wednesday	Thursday	Friday
Green	Maths	Science	English	Maths	Science
	Option W/X	Humanities	Science	Option Y/Z	
	Sparx Reader	Sparx Reader	Sparx Reader	Sparx Reader	Sparx Reader
Orange	English	Maths	Science	English	Maths
	Science	Option Y/Z	Humanities	Option W/X	
	Sparx Reader	Sparx Reader	Sparx Reader	Sparx Reader	Sparx Reader

Instructions on how to complete your homework:

1. Write the subject and date in your homework exercise book
2. If you have been given tasks to complete, please do this in your exercise book. If you have been asked to recall information from a knowledge organiser, please use the steps below.



- Look at box/es that your teacher has assigned to you. Repeatedly read the information until you are confident you can remember it. You might find saying them out loud helps you.



- Cover each box so that you cannot see the text.



- Next, in your homework exercise book, write down everything you can remember from each box



- Uncover the box and check your answers, correct any you got wrong or missed
- Repeat this one more time as you should be able to remember more from each box on the second round.

3. Rule a line under the homework you have completed.

4. Repeat the process for your next subject/s.

5. Use the QR link below if you would prefer a visual reminder of how to complete this.



Student Guide to Logging In

- 1 Go to **sparxmaths.com**
- 2 Select **Student Login**
- 3 Carefully select your school from the list
- 4 Select **New Sparx user**
- 5 Enter your:
 - First Name
 - Last Name
 - Date of Birth
- 6 Click **Submit**
- 7 You will be prompted to set your own password. The password must be at least 6 characters long and you will need to remember it
- 8 Confirm your username and password, then click **Check your details**
- 9 You can now log in to Sparx using your username and password
- 10 If a password is lost, you can select the option to request a new password from your teacher

Use your Sparx login

Username:

Password:

[Show](#)

[Forgotten Sparx login details?](#)

[New Sparx user?](#)

Fill in your details below to create your account

Your first name:

David

Your last name:

Smith

Your date of birth:

01 February 2010

Submit

Now set a password, make sure you choose one that you will remember

Choose your password

..... [Show](#)

Your password needs to:

- ✓ Be 6 or more characters

[Back](#)

Confirm your details >

Let's check you have remembered your log in details

Enter your username:

David Smith

Enter your password:

..... [Show](#)

[Back](#)

Check your details >

Week 1 – “Charge of the Light Brigade” by Alfred Lord Tennyson

Contextual Questions

1. Who was Alfred Lord Tennyson?
2. Who was involved in the Crimean War?
3. What part did Lord Raglan play in the Crimean War?
4. What happened at the “Battle of Balaclava”?

Thematic Question

5. What does the poem show us about “Warfare”?
6. What does the poem show us about “Courage”?
7. What does the poem show us about “Patriotism”?
8. What does the poem show us about “Respect & Reputation”?

Week 2 – Bayonet Charge by Ted Hughes

Task 1: Find the definitions for the following pieces of vocabulary linked to the poem:

Alliteration
Enjambment
Personification
Sibilance
Caesura
Patriotic
Bayonet
Primal
Bewilderment
Dehumanise
Pandemonium

Task 2: Explain how each word links to the poem ‘Bayonet Charge’.

Task 3: Find three quotations from the poem that include a piece of vocabulary or technique from above. Annotate these quotations.

Week 3 – “Exposure” by Wilfred Owen

Key Quotations

1. What do we learn from the quotation, “we hear the mad gusts tugging on the wire, Like twitching agonies of men among its brambles”?
2. What does the quotation, “Pale flakes with fingering stealth come feeling for our faces” tell us about the threats that the soldiers face?
3. What does the quotation, “For love of God seems dying” tell us about the soldier’s feelings?
4. Why do you think Owen repeats “But nothing happens” at the end of each stanza?

Week 4: Kamikaze by Beatrice Garland

Task 1: Find the definitions for the following pieces of vocabulary linked to the poem:

Samurai sword
Cockpit
Incantations
Bunting
Translucent
Shoal
Cairns
Turbulent
Metaphor
Symbolism
Italics
Ambiguity
Narrative voice

Task 2: Explain how each word links to the poem ‘Kamikaze’

Task 3: Find three quotations from the poem that include a piece of vocabulary or technique from above. Annotate these quotations.

Week 5 – “War Photographer” by Carol Anne Duffy

Summary of the poem

1. What is this poem about?
2. What do you think the writer is trying to show us about conflict?
3. How does the War Photographer’s work space contrast with what he sees in the war zones?
4. What emotional and psychological impacts does the War Photographer experience?
5. How does the poem present the public’s reaction to the conflicts?

Week 6 – Poppies by Jane Weir

Task 1: Find the definitions of the following pieces of vocabulary linked to the poem:

Blockade
Crimped
Bias
Intoxicating
Reinforcements
War memorial
Ornamental
Simile
Sibilance
Spasmed
Steeled

Task 2: Explain how each word links to the poem ‘Poppies’

Task 3: Find three quotations from the poem that include a piece of vocabulary or technique from above. Annotate these quotations.

Week 7 – “Remains” by Simon Armitage

Summary Questions

1. Who is Simon Armitage?
2. What is “Post Traumatic Stress Disorder”?
3. What might have caused the speaker’s “Post Traumatic Stress Disorder”?
4. What evidence is there in the poem that the speaker is suffering from “Post Traumatic Stress Disorder”?

YEAR 10 — SIMILARITY...

@whisto_maths

Congruence, similarity & enlargement

What do I need to be able to do?

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

- Enlarge by a positive scale factor
- Enlarge by a fractional scale factor
- Identify similar shapes
- Work out missing sides and angles in similar shapes
- Use parallel lines to find missing angles
- Understand similarity and congruence

Keywords

Enlarge: to make a shape bigger (or smaller) by a given multiplier (scale factor)

Scale Factor: the multiplier of enlargement

Centre of enlargement: the point the shape is enlarged from

Similar: when one shape can become another with a reflection, rotation, enlargement or translation

Congruent: the same size and shape

Corresponding: items that appear in the same place in two similar situations

Parallel: straight lines that never meet (equal gradients)

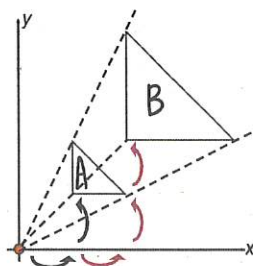
Positive scale factors R

Enlargement from a point

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

The shape is enlarged by 2

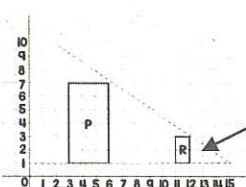
The distance from the point enlarges by 2



Fractional scale factors R

Fractions less than 1 make a shape **SMALLER**

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



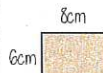
SF $\frac{1}{3}$ - R is three times smaller than P

Identify similar shapes

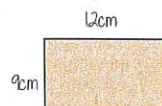


Angles in similar shapes do not change
e.g if a triangle gets bigger the angles can not go above 180°

Similar shapes



Compare sides $\frac{6}{2} = \frac{9}{3}$

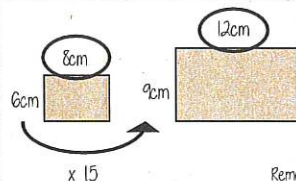


Compare sides $\frac{8}{2} = \frac{12}{3}$

Both sets of sides are in the same ratio

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

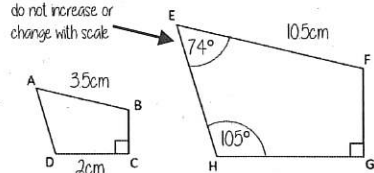
Information in similar shapes



Compare the equivalent side on both shapes

Scale Factor is the multiplicative relationship between the two lengths

Remember angles do not increase or change with scale



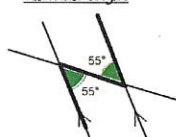
Shape ABCD and EFGH are similar

Notation helps us find the corresponding sides

OB and EF are corresponding

Angles in parallel lines R

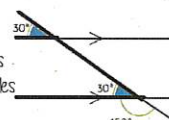
Alternate angles



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

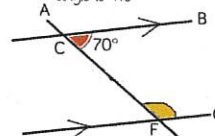
Corresponding angles

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



Co-interior angles

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



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

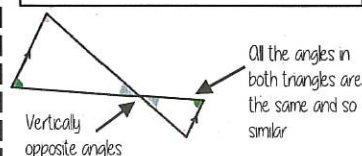
Similar triangles

Shares a vertex

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

Parallel lines — all angles will be the same in both triangle

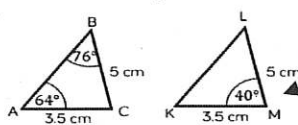
As all angles are the same this is similar — it only one pair of sides are needed to show equality



All the angles in both triangles are the same and so similar

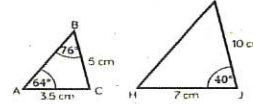
Congruence and Similarity

Congruent shapes are identical — all corresponding sides and angles are the same size



$ACB = KML$

Because all the angles are the same and $AC=KM$ $BC=LM$ triangles ABC and KLM are congruent



Because all angles are the same, but all sides are enlarged by 2 ABC and HJ are similar

Conditions for congruent triangles

Triangles are congruent if they satisfy any of the following conditions

Side-side-side

All three sides on the triangle are the same size

Angle-side-angle

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

Side-angle-side

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

Right angle-hypotenuse-side

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

YEAR 10 — SIMILARITY...

@whisto_maths

Trigonometry

What do I need to be able to do?

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

- Work fluently with hypotenuse, opposite and adjacent sides
- Use the tan, sine and cosine ratio to find missing side lengths
- Use the tan, sine and cosine ratio to find missing angles
- Calculate sides using Pythagoras' Theorem

Keywords

Enlarge: to make a shape bigger (or smaller) by a given multiplier (scale factor)

Scale Factor: the multiplier of enlargement

Constant: a value that remains the same

Cosine ratio: the ratio of the length of the adjacent side to that of the hypotenuse. The sine of the complement

Sine ratio: the ratio of the length of the opposite side to that of the hypotenuse

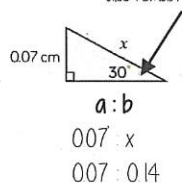
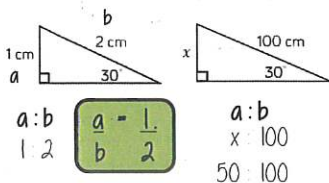
Tangent ratio: the ratio of the length of the opposite side to that of the adjacent side

Inverse: function that has the opposite effect

Hypotenuse: longest side of a right-angled triangle. It is the side opposite the right-angle.

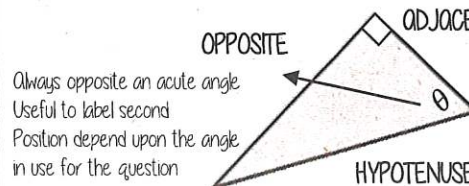
Ratio in right-angled triangles

When the angle is the same the ratio of sides a and b will also remain the same



Hypotenuse, adjacent and opposite

ONLY right-angled triangles are labelled in this way



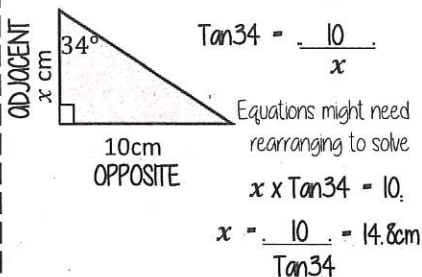
Next to the angle in question
Often labelled last

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

Tangent ratio: side lengths

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

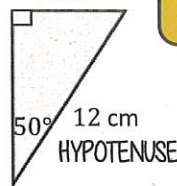
Substitute the values into the tangent formula



Sin and Cos ratio: side lengths

OPPOSITE
x cm

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

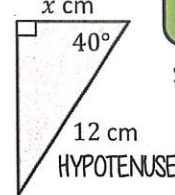


NOTE

The $\sin(x)$ ratio is the same as the $\cos(90-x)$ ratio

ADJACENT
x cm

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

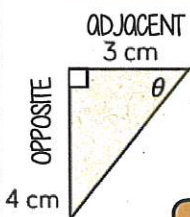


Substitute the values into the ratio formula

Equations might need rearranging to solve

Sin, Cos, Tan: Angles

Inverse trigonometric functions



Label your triangle and choose your trigonometric ratio

Substitute values into the ratio formula

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

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

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

$$\theta = 36.9^\circ$$

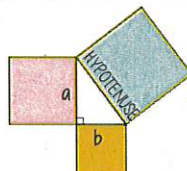
$$\theta = \sin^{-1} \frac{\text{opposite side}}{\text{hypotenuse side}}$$

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

Pythagoras theorem

R

$$\text{Hypotenuse}^2 = a^2 + b^2$$



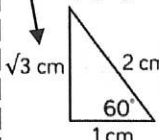
This is commutative — the square of the hypotenuse is equal to the sum of the squares of the two shorter sides

Places to look out for Pythagoras

- Perpendicular heights in isosceles triangles
- Diagonals on right angled shapes
- Distance between coordinates
- Any length made from a right angles

Key angles

This side could be calculated using Pythagoras



Because trig ratios remain the same for similar shapes you can generalise from the following statements

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

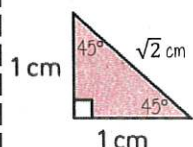
$$\cos 30 = \frac{\sqrt{3}}{2}$$

$$\sin 30 = \frac{1}{2}$$

$$\tan 60 = \sqrt{3}$$

$$\cos 60 = \frac{1}{2}$$

$$\sin 60 = \frac{\sqrt{3}}{2}$$



$$\tan 45 = 1$$

$$\cos 45 = \frac{1}{\sqrt{2}}$$

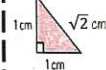
$$\sin 45 = \frac{1}{\sqrt{2}}$$

Key angles 0° and 90°

$$\tan 0 = 0$$

$$\tan 90$$

This value cannot be defined — it is impossible as you cannot have two 90° angles in a triangle



$$\sin 0 = 0$$

$$\sin 90 = 1$$

$$\cos 0 = 1$$

$$\cos 90 = 0$$

Year 10 Science Electricity

Big Picture: why are we studying this now this topic builds on circuits year 7 and introduces electricity in the home.

1. Circuits Symbols and definitions



Cell	Battery	Switch	Lamp	Ammeter	Voltmeter	Diode	LED	LDR	Fuse	Resistor	Variable resistor	Thermistor
Store of chemical energy	Two or more cells in series	Breaks circuit, turning current off	Lights when current flows	Measures current	Measures potential difference	Current flows one way	Emits light when current flows	Resistance low in bright light	Melts when current is too high	Affects the size of current flowing	Allows current to be varied	Resistance low at high temp

Charge = Current X time

$$Q = I \times t$$

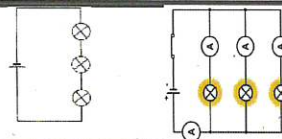
Work is done when charge flowing.

Electrons carry current. Electrons are free to move in metal.

Current	Flow of electrical charge	Ampere (A)
Potential difference (p.d.)	How much electrical work is done by a cell	Volts (V)
Charge	Amount of electricity travelling in a circuit	Coulombs (C)

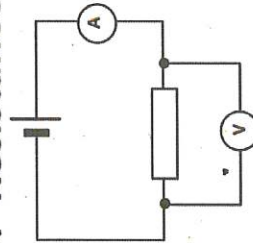
2. Circuits

Series circuit	Current is the same in all components	Total p.d. from battery is shared between all the components.	Total resistance is the sum of each component's resistance.
Parallel circuit	Total current is the sum of each component's current.	p.d. across all components is the same.	Total resistance is less than the resistance value of the smallest individual resistor.



Series	Parallel
A circuit with one loop	A circuit with two or more loops
If cells are joined in series, add up individual cell values Change the p.d. of the cells Add more components	

3. Resistance



Ohmic conductor	At a constant temperature, current is directly proportional to the p.d. across the resistor.	$R = V \div I$
Filament lamp	As current increases, the resistance increases. The temperature increases as current flows.	Resistance = Potential difference $\div$ Current
Diode	Current flows when p.d. flows forward. Very high resistance in reverse.	

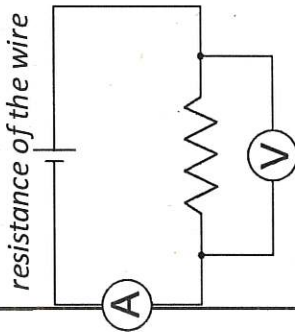
Ammeter	Set up in series with components
Voltmeter	Set up parallel to components
Resistance (Ω)	A measurement of how much current flow is reduced
The higher the resistance, the more difficult it is for current to flow.	
Increasing resistance, reduces current.	
Increasing voltage, increases current.	

Year 10 Science Electricity

Big Picture: why are we studying this now this topic builds on circuits year 7 and introduces electricity in the home.

4. Electricity RPA . Resistance of a wire

Investigating whether the length of wire will affect the resistance of the wire



1. Connect the wires into the DC socket of the power pack at 4V
2. Connect the ammeter in series with the circuit
3. Connect crocodile clips to each end of the wire nearest to the wire to be tested
4. Place the voltmeter in parallel (piggy backed) onto the back of the crocodile clips
5. Connect the crocodile clips to the wire to be tested at 10cm
6. Record the current and potential difference readings at this point and substitute into the equation resistance = potential difference / current to calculate the resistance
- Between each reading the circuit must be turned off to prevent the wire from overheating and the resistance being affected
7. Repeat for a range of lengths for the wire

6. Power and national grid

Energy transferred = Power X time

$$E = P \times t$$

Power (W) = potential difference X current

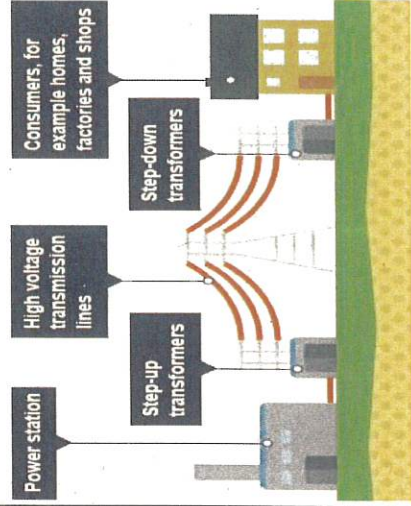
$$P = V \times I$$

Power = (current)² X resistance

$$P = I^2 \times R$$

Symbol	Meaning	Unit	Meaning
V	Potential difference	V	Volts
I	Current	A	Amps
R	Resistance	Ω	Ohms
Q	Charge	C	Coulombs
P	Power	W	Watts
E	Energy	J	Joules

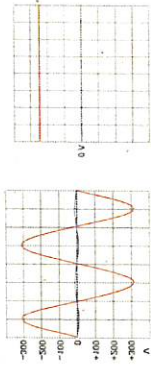
National Grid
Distributes electricity generated in power stations around UK



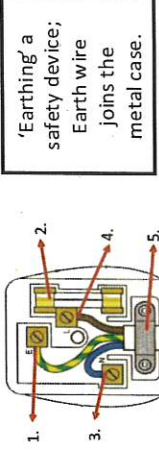
Step-up transformers	Step-down transformers
Increase voltage, decrease current	Decrease voltage, increase current
Increases efficiency, reduces heat loss.	Makes safer for houses.

5. Mains electricity

Mains supply		
Frequency 50Hz, 230V		
Alternating current	Direct current	
p.d. switches direction many times a second, current switches direction	p.d. remains in one direction, current flows the same direction	
Generator.	Cell or battery.	



Live - Brown	Carries p.d from mains supply.	p.d between live and earth = 230V
Neutral - Blue	Completes the circuit.	p.d. = 0V
Earth - Green and Yellow stripes	Only carries current if there is a fault.	p.d. = 0V



Year 10 Science Bioenergetics (Photosynthesis)

Big Picture: why are we studying this now building on Year 7 organism, Year 9 Ecosystem and KS4 Cell Biology and organisation. Organisms require a supply of energy and materials for which they often depend on, or compete with, other organisms.

1. Photosynthesis Reaction

Plants make use of light energy from the environment (ENDOTHERMIC) to make food (glucose)	Carbon dioxide + Water + Glucose	light	Oxygen + Glucose
	$CO_2 + H_2O$	light	$O_2 + C_6H_{12}O_6$

Plants use the glucose produced in photosynthesis in a variety of ways

Respiration, stored as insoluble starch, fats or oils for storage, cellulose for cell walls, combine with nitrates from the soil to form amino acids for protein synthesis

Greenhouses to reduce limiting factors can improve crop yields	Heating	Used to provide optimum temperatures for maximum plant growth.	Growers must balance the economics of additional costs of controlling the conditions to maximise photosynthesis with making a profit.
	Artificial lighting	Enhances the natural sunlight especially overnight and on cloudy days.	
	Extra carbon dioxide	Gas can be pumped into the air inside the greenhouse.	



Graph lines C and D: If temperature is increased by 10°C then a slight increase in rate of photosynthesis occurs.

Graph Lines A and B: If carbon dioxide concentration is increased from 0.01% to 0.1% then a large increase in rate occurs up to a point.

2. Rate of photosynthesis

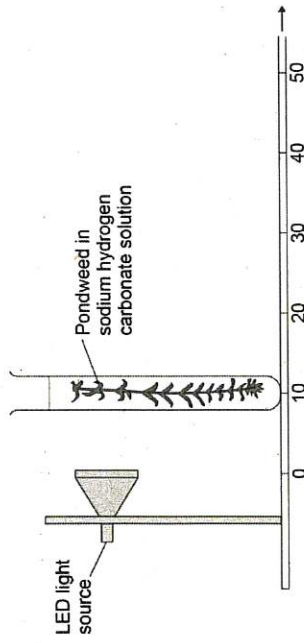
Factors affecting the rate of photosynthesis			
Factor	How the rate is affected	Limiting factors (why the rate stops going up)	
Temperature	As the temperature increases rate of photosynthesis increases (up to a point) as there is more energy for the chemical reaction.	Photosynthesis is an enzyme controlled reaction. If the temperature increases too much, then the enzymes become denatured and the rate of reaction will decrease and stop	
Light intensity	As light intensity increases so does the rate of photosynthesis (up to a point) as more energy is available for the chemical reaction.	At point X another factor is limiting the rate of photosynthesis. This could be carbon dioxide concentration, temperature or the amount of chlorophyll	
Carbon dioxide concentration	The rate of photosynthesis will increase when a plant is given higher concentrations of carbon dioxide (up to a point).	At point X another factor is limiting the rate of photosynthesis. This could be light intensity, temperature or the amount of chlorophyll	
Amount of chlorophyll	Chlorophyll is a photosynthetic pigment that absorbs light and allows the reaction	Another factor could limit the rate of photosynthesis. This could be light intensity, temperature or the carbon dioxide concentration	

HT Light intensity obeys the inverse square law. This means that if you double the distance between the plant and the light source you quarter the light intensity

Year 10 Science Organisation

Big Picture: why are we studying this now building on Year 8 organ systems and building on plant organisation (year 7 and Year 9) Organisms are organised on a cellular level

3 . Photosynthesis Required Practical



Method

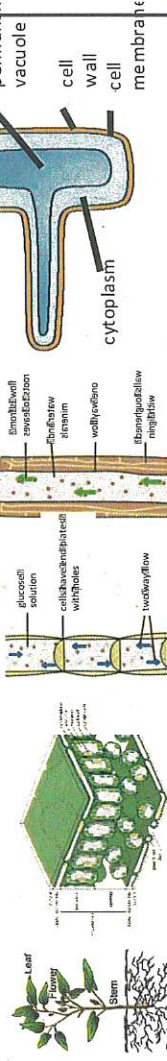
1. Set up a test tube rack at a distance of 10cm away from the light source
2. Fill the boiling tube with sodium hydrogen carbonate (this increases the concentration of CO_2 stopping CO_2 being a limiting factor)
3. Put a piece of pondweed into the boiling tube
4. Leave for 5 minutes
5. Start the stop watch and count the number of bubbles produced in 1 minute
6. Repeat (use data to calculate a mean)
7. Repeat at distances of 20cm, 30 cm and 40cm from the light source

Results

- The closer the lamp, the quicker the bubbles are produced (so higher rate of photosynthesis)

Leave the plant for a few minutes before starting to count bubbles as it takes time for the plant to adjust to the light/temperature and for photosynthesis to reach the correct rate
Place a glass screen in front of the beaker so that light gets through but heat doesn't or use an LED

4. Plant Organisation



Epidermal tissues	Waxy cuticle (top layer of the leaf)	Reduces water loss from the leaf
Palisade mesophyll	Guard cells and stomata	Guard cells open and close the stomata to control water loss and allow for gas exchange (oxygen and carbon dioxide).
Spongy mesophyll	Palisade cells	Cells near the top surface of the leaf that are packed with chloroplasts that contain chlorophyll. Both adaptations maximize photosynthesis.
xylem	Air spaces in the leaf between cells	Increased surface area for gas exchange so that carbon dioxide can diffuse into photosynthesising cells.
phloem	Hollow tubes strengthened by lignin adapted for the transportation of water in the transpiration stream	Allows transport of water and mineral ions from the roots to the stem and the leaves.
Meristem tissue	Cell sap moves from one phloem cell to the next through pores in the end walls	Transports dissolved sugars from the leaves to the rest of the plant for immediate use or storage (translocation).
	New cells (roots and shoot tips) are made here including root hair cells	Root hair cells have an increased surface area for the uptake of water by osmosis, and mineral ions by active transport.
Transpiration	The rate at which water is lost from the leaves of a plant. The transpiration stream is the column of water moving through the roots, stem and leaves	Temperature, humidity, air movement and light intensity affect the rate of transpiration.
		A potometer is used to measure the amount of water lost over time (rate of transpiration)

Year 10 Science Bioenergetics (Respiration)

Big Picture: why are we studying this now building on Year 7 organism, Year 9 Ecosystem and KS4 Cell Biology and organisation. Organisms require a supply of energy and materials for which they often depend on, or compete with, other organisms.

5. Aerobic Respiration

Aerobic respiration		Aerobic respiration releases a large amount of energy from each glucose molecule
Respiration with oxygen. Occurs inside the mitochondria continuously		
Glucose is oxidised by oxygen to transfer the energy the organism needs to perform its functions.		
$C_6H_{12}O_6 + O_2 \longrightarrow CO_2 + H_2O$		
glucose + oxygen $\longrightarrow$ carbon dioxide + water		

7. Uses of energy and responses to exercise

An organism will receive all the energy it needs for living processes as a result of the energy transferred from respiration	For movement	 Smooth muscle cells	To enable muscles to contract in animals.
	For keeping warm		To keep a steady body temperature in a cold environment.
	For chemical reactions		To build larger molecules from smaller one.
During exercise the human body reacts to increased demand for energy	Heart rate increases	Top pump oxygenated blood faster to the muscle tissues and cells.	
	Breathing rate and breath volume increase	This increases the amount of oxygen entering the blood stream.	
	During long periods of vigorous activity muscles become fatigued and stop contracting efficiently		

6. Anaerobic respiration

Anaerobic respiration		Anaerobic respiration releases a much smaller amount of energy than aerobic respiration.
Respiration when oxygen is in short supply. Occurs during intensive exercise		The incomplete oxidation of glucose causes a build up of lactic acid and creates an oxygen debt
During hard exercise, muscle cells are respiring so fast that blood cannot transport enough oxygen to meet their needs. Glucose is partially oxidised to produce lactic acid which builds up in muscle tissue causing them to become painful and fatigued.		The extra amount of oxygen required to remove all lactic acids from cells is called the oxygen debt
glucose $\longrightarrow$ lactic acid		The liver oxidises the lactic acid and converts it back to glucose
Lactic acid builds up in the muscle cells during exercise	Blood flows through the muscle cells and transports the lactic acid to the liver	
Anaerobic respiration in plant and yeast cells		
The end products are ethanol and carbon dioxide. Anaerobic respiration in yeast cells is called fermentation		
glucose $\longrightarrow$ ethanol + carbon dioxide		
Ethanol is used to make alcoholic drinks and carbon dioxide is used in baking bread (makes the bread rise) Yeast will produce carbon dioxide slowly at low temperatures (not active) Yeast will be killed at high temperatures.		

Year 11 Science Infection and Response

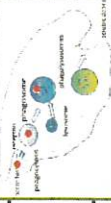
Big Picture: why are we studying this now building on Year 7 and Year 10 Cell Biology and organisation. Organisms are organised on a cellular level.

1. Pathogens				Pathogens are microorganisms that cause infectious disease
Viruses	Bacteria (prokaryotes)	Protists (eukaryotes)	Fungi (eukaryotes)	
e.g. influenza, measles, HIV, tobacco mosaic virus	e.g. tuberculosis (TB), Salmonella, Gonorrhoea	e.g. dysentery, sleeping sickness, malaria	e.g. athlete's foot, thrush, rose black spot	
DNA or RNA surrounded by a protein coat	No membrane bound organelles (no mitochondria or nucleus). Cell wall. Single celled organisms	Membrane bound organelles. Usually single celled.	Membrane bound organelles, cell wall made of chitin. Single celled or multi-cellular	
Bacteria may produce toxins that damage tissues and make us feel ill				Viruses live and reproduce inside cells causing damage

3. Defence				Pathogens may infect plants or animals and can be spread by direct contact, water or air
The human body has several non specific ways of defending itself from pathogens getting in				
	Nose	Nasal hairs, sticky mucus and cilia prevent pathogens entering through the nostrils.		
	Trachea and bronchus (respiratory system)	Lined with mucus to trap dust and pathogens. Cilia move the mucus upwards to be swallowed.		
	Stomach acid	Stomach acid (pH1) kills most ingested pathogens.		
	Skin	Hard to penetrate waterproof barrier. Glands secrete oil which kill microbes		

2. Diseases				
Pathogen	Disease	Symptoms	Method of transmission	Control of spread
Virus	Measles	Fever, red skin rash.	Droplet infection from sneezes and coughs.	Vaccination as a child.
Virus	HIV	Initially flu like systems, serious damage to immune system.	Sexual contact and exchange of body fluids.	Anti-retroviral drugs and use of condoms.
Virus	Tobacco mosaic virus	Mosaic pattern on leaves.	Enters via wounds in epidermis caused by pests.	Remove infected leaves and control pests that damage the leaves.
Bacteria	Salmonella	Fever, cramp, vomiting, diarrhoea.	Food prepared in unhygienic conditions or not cooked properly.	Improve food hygiene, wash hands, vaccinate poultry, cook food thoroughly.
Bacteria	Gonorrhoea	Green discharge from penis or vagina.	Direct sexual contact or exchange of body fluids.	Use condoms. Treatment using antibiotics.
Protists	Malaria	Recurrent fever.	By an animal vector (mosquitoes).	Prevent breeding of mosquitoes. Use of nets to prevent bites.
Fungus	Rose black spot	Purple black spots on leaves.	Spores carried via wind or water.	Remove infected leaves. Spray with fungicide.

4. White Blood Cells		
Phagocytes	Phagocytosis	Phagocytes engulf the pathogens and digest them.
Lymphocytes	Antibody production	Specific antibodies destroy the pathogen. This takes time so an infection can occur. If a person is infected again by the same pathogen, the lymphocytes make antibodies much faster.
	Antitoxin production	Antitoxin is a type of antibody produced to counteract the toxins produced by bacteria.



Pathogens are identified by white blood cells by the different proteins on their surfaces

ANTIGENS

Year 11 Science Infection and Response

Big Picture: why are we studying this now building on Year 7 and Year 10 Cell Biology and organisation. Organisms are organised on a cellular level

5 Vaccination

Used to immunise a large proportion of the population to prevent the spread of a pathogen

Vaccination	Small amount of dead or inactive form of the pathogen	1 st infection by pathogen	White blood cells detect pathogens in the vaccine. Antibodies are released into the blood.
		Re-infection by the same pathogen	White blood cells detect pathogens. Antibodies are made much faster and in larger amounts.

A person is unlikely to suffer the symptoms of the harmful disease and it's spread in a population is prevented

6. Antibiotics and Painkillers

Most new drugs are synthesised by chemists in the pharmaceutical industry.

Traditionally drugs were extracted from plants and microorganisms			Antibiotics have greatly reduced deaths from infectious bacterial disease <i>Bacteria can mutate</i> Sometimes this makes them resistant to antibiotic drugs.
<i>Digitalis</i>	<i>Aspirin</i>	<i>Penicillin</i>	
Extracted from foxglove plants, used as a heart drug	A painkiller and anti-inflammatory that was first found in willow bark	Discovered by Alexander Fleming from the <i>Penicillium</i> mould and used as an antibiotic	
antibiotics	<i>e.g. penicillin</i>	Kill infective bacteria inside the body. Specific bacterial infections require specific antibiotics.	
Painkillers and other medicines	<i>e.g. aspirin, paracetamol, ibuprofen</i>	Drugs that are used to treat the symptoms of a disease. They do not kill pathogens	

7. Drugs Trials

New drugs are extensively tested for:	<i>Efficacy</i>	Make sure the drug works
	<i>Toxicity</i>	Check that the drug is not poisonous
	<i>Dose</i>	The most suitable amount to take
Drugs have to be tested and trialled before to check they are safe and effective		

It is difficult to develop drugs to kill viruses without harming body tissues because viruses live and reproduce inside cells

<i>Stage 1</i>	<i>Stage 2</i>	<i>Stage 3</i>	<i>Stage 4</i>
Healthy volunteers try small dose of the drug to check it is safe record any side effects	A small number of patients try the drug at a low dose to see if it works	A larger number of patients; different doses are trialled to find the optimum dose	A double blind trial will occur. The patients are divided into groups. Some will be given the drug and some a placebo.

Preclinical trials - using cells, tissues and live animals - must be carried out before the drug can be tested on humans.

Clinical trials use healthy volunteers and patients

Double blind trial: patients and scientists do not know who receives the new drug or placebo until the end of the trial. This avoids bias.

A placebo can look identical to the new drug but contain no active ingredients

Year 10 Science Chemical Change

Big Picture: why are we studying this now building on Year 7 and Year 8 Matter and chemical reaction topics, acids and Bases, reactivity series, electrolysis

1. Reactions of metals

	Reactions with water	Reactions with acid
Group 1 metals	Reactions get more vigorous as you go down the group	Reactions get more vigorous as you go down the group
Group 2 metals	Do not react with water	Observable reactions include fizzing and temperature increases
Zinc, iron and copper	Do not react with water	Zinc and iron react slowly with acid. Copper does not react with acid.

2. Reactivity Series

Metals form positive ions when they react	The reactivity series of a metal is related to its tendency to form positive ions	The reactivity series arranges metals in order of their reactivity (their tendency to form positive ions).	potassium most reactive sodium calcium magnesium aluminium carbon zinc iron tin lead hydrogen copper silver gold platinum least reactive K Na Ca Mg Al C Zn Fe Sn Pb H Cu Ag Au Pt
Carbon and hydrogen	Carbon and hydrogen are non-metals but are included in the reactivity series	These two non-metals are included in the reactivity series as they can be used to extract some metals from their ores, depending on their reactivity.	
Displacement	A more reactive metal can displace a less reactive metal from a compound.	Silver nitrate + Sodium chloride → Sodium nitrate + Silver chloride	
Extraction using carbon			Unreactive metals, such as gold, are found in the Earth as the metal itself. They can be mined from the ground.
Metals less reactive than carbon can be extracted from their oxides by reduction.			

For example:
zinc oxide + carbon → zinc + carbon dioxide

3. More Reactions of metals

Reactions with acids	$metal + acid \rightarrow metal\ salt + hydrogen$	$magnesium + hydrochloric\ acid \rightarrow magnesium\ chloride + hydrogen$												
Acids react with some metals to produce salts and hydrogen.		$zinc + sulfuric\ acid \rightarrow zinc\ sulfate + hydrogen$												
HT ONLY: Reactions between metals and acids are redox reactions as the metal donates electrons to the hydrogen ions. This displaces hydrogen as a gas while the metal ions are left in the solution.														
Acid name	Salt name	Acids can be neutralised by alkalis and bases An alkali is a soluble base e.g. metal hydroxide. A base is a substance that neutralises an acid e.g. a soluble metal hydroxide or a metal oxide.												
Hydrochloric acid	Chloride													
Sulfuric acid	Sulfate													
Nitric acid	Nitrate													
Making soluble salts Required Practical  1. Heat acid gently to speed up reaction  2. Add excess metal oxide (until solid remains) and filter  3. Evaporate gently  4. Heat acid gently to speed up reaction  5. Add excess metal oxide (until solid remains) and filter  6. Evaporate gently <tr><td colspan="3"> sodium hydroxide + hydrochloric acid $\rightarrow$ sodium chloride + water calcium carbonate + sulfuric acid $\rightarrow$ calcium sulfate, + carbon dioxide + water </td></tr> <tr><td>Metals and oxygen</td><td>Metals react with oxygen to form metal oxides</td><td>$magnesium + oxygen \rightarrow magnesium\ oxide$ $2Mg + O_2 \rightarrow 2MgO$</td></tr> <tr><td>Reduction</td><td>This is when oxygen is removed from a compound during a reaction</td><td>e.g. metal oxides reacting with hydrogen, extracting low reactivity metals</td></tr> <tr><td>Oxidation</td><td>This is when oxygen is gained by a compound during a reaction</td><td>e.g. metals reacting with oxygen, rusting of iron</td></tr>			sodium hydroxide + hydrochloric acid $\rightarrow$ sodium chloride + water calcium carbonate + sulfuric acid $\rightarrow$ calcium sulfate, + carbon dioxide + water			Metals and oxygen	Metals react with oxygen to form metal oxides	$magnesium + oxygen \rightarrow magnesium\ oxide$ $2Mg + O_2 \rightarrow 2MgO$	Reduction	This is when oxygen is removed from a compound during a reaction	e.g. metal oxides reacting with hydrogen, extracting low reactivity metals	Oxidation	This is when oxygen is gained by a compound during a reaction	e.g. metals reacting with oxygen, rusting of iron
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Year 10 Science Chemical Change

Big Picture: why are we studying this now building on Year 7 and Year 8 Matter and chemical reaction topics, acids and Bases, reactivity series, electrolysis

4. Displacement (HT)

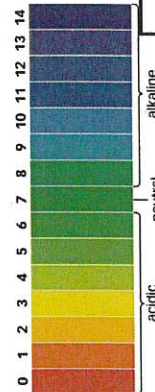
Ionic half equations (HT only)		
For displacement reactions	Ionic half equations show what happens to each of the reactants during reactions	For example: The ionic equation for the reaction between iron and copper (II) ions is: $\text{Fe} + \text{Cu}^{2+} \rightarrow \text{Fe}^{2+} + \text{Cu}$ The half-equation for iron (II) is: $\text{Fe} \rightarrow \text{Fe}^{2+} + 2\text{e}^-$ The half-equation for copper (II) ions is: $\text{Cu}^{2+} + 2\text{e}^- \rightarrow \text{Cu}$

Oxidation is Loss (of electrons) Reduction is Gain (of electrons)

5. Acid and Alkali

Soluble salts	Soluble salts can be made from reacting acids with solid insoluble substances (e.g. metals, metal oxides, hydroxides and carbonates).
Production of soluble salts	Add the solid to the acid until no more dissolves. Filter off excess solid and then crystallise to produce solid salts.

You can use universal indicator or a pH probe to measure the acidity or alkalinity of a solution against the pH scale.



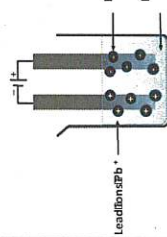
In neutralisation reactions, hydrogen ions react with hydroxide ions to produce water:
$$\text{H}^+ + \text{OH}^- \rightarrow \text{H}_2\text{O}$$

Acids	Acids produce hydrogen ions (H ⁺) in aqueous solutions.
Alkalis	Aqueous solutions of alkalis contain hydroxide ions (OH ⁻).

6. Electrolysis RQA Skills

Process of electrolysis	Splitting up using electricity	When an ionic compound is melted or dissolved in water, the ions are free to move. These are then able to conduct electricity and are called electrolytes. Passing an electric current through electrolytes causes the ions to move to the electrodes.
Electrode	Anode Cathode	The positive electrode is called the anode. The negative electrode is called the cathode.
Where do the ions go?	Cations Anions	Cations are positive ions and they move to the negative cathode. Anions are negative ions and they move to the positive anode.

Extracting metals using electrolysis	
Metals can be extracted from molten compounds using electrolysis.	Higher tier: You can display what is happening at each electrode using half-equations: At the cathode: $\text{Pb}^{2+} + 2\text{e}^- \rightarrow \text{Pb}$ At the anode: $2\text{Br}^- \rightarrow \text{Br}_2 + 2\text{e}^-$
This process is used when the metal is too reactive to be extracted by reduction with carbon.	
The process is expensive due to large amounts of energy needed to produce the electrical current. Example: aluminium is extracted in this way.	



Strong acids	Completely ionised in aqueous solutions e.g. hydrochloric, nitric and sulfuric acids.	At the negative electrode Metal will be produced on the electrode if it is less reactive than hydrogen. Hydrogen will be produced if the metal is more reactive than hydrogen.
Weak acids	Only partially ionised in aqueous solutions e.g. ethanoic acid, citric acid.	At the positive electrode Oxygen is formed at positive electrode. If you have a halide ion (Cl ⁻ , I ⁻ , Br ⁻) then you will get chlorine, bromine or iodine formed at that electrode.
Hydrogen ion concentration	As the pH decreases by one unit (becoming a stronger acid), the hydrogen ion concentration increases by a factor of 10.	The ions discharged when an aqueous solution is electrolysed using inert electrodes depend on the relative reactivity of the elements involved.

LANDSCAPES & PHYSICAL PROCESSES KNOWLEDGE ORGANISER YR10 : DISTINCTIVE LANDSCAPES

1. COMPONENT KNOWLEDGE

- Know there are four main types of UK landscapes (coastal, rivers, upland, lowland)
- Know an example of coastal (Jurassic Coast), upland (Lake District), river (Severn) & lowland (Norfolk)
- Know that The Lake District is a glaciated upland area with many lakes
- Know that the rural nature of the Lake District has influenced the culture and employment structure of the Lake District
- To use maps and photographs at different scales to explain the location and nature of this distinctive landscape
- Know that distinctive landscapes such as the Lake District attract huge amounts of visitors and tourism each year
- Know that tourism and energy production harms our UK distinctive landscape
- Know how human influences may harm or affect our UK distinctive landscapes
- Know that tourism and energy production can bring both positives and negatives
- Explain why some groups of people might come into conflict with each other in rural areas (for instance farmers and tourists in the Peak District)
- Know that large scale tourism causes damage to distinctive landscapes such as the Lake District
- Know that distinctive landscape need management if they are to avoid being damaged
- Know how large scale tourism can be managed through many ways, including increasing car parking charges, improving public transport, restricting large vehicles and park and ride.
- Know how this management is reacted to in different ways by different stakeholders (such as farmers, tourists, locals)
- Know how to describe the differing physical features of global distinctive landscapes

2. KEY VOCABULARY

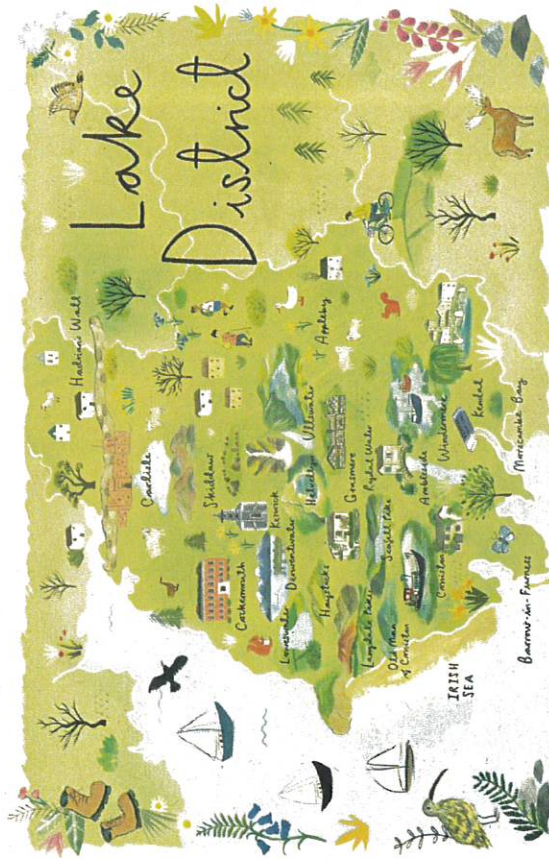
- Visitor pressure** - The increased impact on the environment, resource is and services of an increased number of people due to tourism.
- Honey-pot site** - A place of special interest that attracts tourists. Carrying capacity the maximum population size that an environment can sustain.
- Environmental challenges** - Problems caused by human use of the natural landscape or resources.
- National Park** - An area which is protected because of its beautiful countryside, wildlife and cultural heritage.
- Area of Outstanding Natural Beauty (AONB)** - A part of the countryside that is designated for conservation due to its natural beauty.

Can distinctive landscapes be managed?

Visitors to these areas must be managed in order to reduce their impact on the landscape.

Examples of Management techniques in the Lake District.
Designated footpaths protect sensitive areas

1. Detailed visitor information boards educate tourists about importance of conserving the environment
2. Clearly marked car parks reduce people parking on grass verges
3. Investment in public transport reduces car use
4. Strict control of planning and building ensures new developments are restricted.
5. Footpaths are maintained using hard wearing materials like stone. Often volunteers help with the maintenance



A honeypot site is an area that experiences excessive visitor numbers e.g. Bowness, Lake District

Positives in Bowness

- Increase in rural income from tourists
- Investment in tourism has allowed communities to diversify a farming economy

Negatives in Bowness

- Congestion
- Local shops often changed into souvenir stores
- House prices rise due to second homes
- Footpath erosion
- Litter

1. Key content		2. Vocab	
Beliefs About Disease: People believed disease was caused by the imbalance of the Four Humours (Hippocrates and Galen) or sent by God as punishment for sin. The Church strongly supported these ideas and discouraged challenges. Miasma Theory: Bad air and smells (miasma) were thought to spread disease. People tried to purify the air with herbs and cleaned streets to stay healthy. Common Treatments: Popular methods included bloodletting, purging, and herbal remedies to balance the humours, along with prayer and confession for spiritual healing. Medical Roles: Physicians trained at university, barber surgeons performed basic procedures, and wise women used herbal treatments. Hospitals, mostly run by the Church, focused on care rather than cures. The Black Death (1348): Brought by fleas on rats, it caused widespread fear. People believed it was divine punishment or caused by miasma and responded with prayer, herbs, and humour-based treatments. Public Health Responses: The Church led health advice. Some authorities cleaned streets to fight miasma, while others stopped cleaning, thinking the bad smells would repel the disease		Miasma	The 'bad air' that was believed to carry disease
		Four humours	The belief that 4 liquids in the body need to be in balance
		Zodiac	A system of star signs used in astrology to diagnose or treat illness
		Astrology	The idea that the stars and planets could affect health and illness
		Flagellation	Whipping yourself to show God you were sorry for sins, hoping to avoid illness
		Purging	To get rid of fluid in the body
		Leprosy	A serious skin disease. People with it were sent to live in leper houses, away from others
		Wise Woman	A local woman who used herbs and traditional knowledge to treat illness.



Mixed Media and Sarah Graham

- The term media could mean pencil, pen, watercolour, acrylic, brush, collage, oil pastels, pencil crayons, sculpture.
- A tonal ladder is a range of tones – ranging from dark to light. This is not just pencil, it could be pencil or paint or pen; it is all called tone.
- Sarah Graham is photorealist artist – showing the highest level of skill with pencil, making her artwork look as real as a photo.
- Graham paints sweets and toys – looking closely at the details, so much that she even blurs a little bit of the background out with her fuzzy painting style.



Portfolio construction – The Assessment Objectives

Research – You should write about an artist's life and events, what paintings have they created? Write about your opinions of the artist.

Record – Take photos, take notes and more importantly draw, paint and sculpt what you want to show

Refine – explain which parts you like and which parts you dislike about the artwork you have created. Edit bits of your work to help your grade, explaining in your sketchbook as you go

Watercolours and Georgina Luck

- Georgina Luck is an illustrator from Cornwall, England and creates a unique splash and dash style with her watercolour technique.
- Luck uses watercolours, blowing and splashing them all over to create the illusion of messy watercolours vs very neat black drawn lines.
- A 'Response' is replicating someone else's style – but doing your own idea. If you drew a chocolate bar in the style of Luck, this would be called a 'response'.



Photorealism: a style of art and sculpture characterized by the highly detailed depiction of ordinary life with the impersonality of a photograph.

Illustrator: Someone who creates artwork depicting what we are talking about or thinking about – e.g. a book illustrator would draw the insides or the cover of a book

Annotation: Taking notes on the processes and artwork we are creating

Response: Creating your own artwork that is in the style of another existing artist

Research: Investigations and conclusions when looking into the life and artwork of another existing artist

Big Picture: Big Picture: You will develop a deeper understanding of the designing, creating and programming of algorithms to solve problems

Key Concepts:

Key Concepts:			
1. Computational Thinking - Computational thinking is a problem-solving method using computer science techniques - Programming tells a computer what to do and how to do it. Computational thinking enables you to work out exactly what to tell the computer to do. - Three important elements of computational thinking are: Decomposition - Breaking down a complex problem or system into smaller parts that are more manageable and easier to understand and solve. Abstraction - is the process of filtering out - essentially ignoring - the characteristics of problems that are not needed in order to concentrate on those that are needed. It is also the filtering out of specific details. Algorithmic Thinking - An algorithm is a logical, step-by-step process for solving a problem. Algorithm production is part of algorithmic thinking, an important concept in computational thinking. This focuses on how a desired solution can be reached by identifying the steps needed to get there - Algorithms are normally written as one of the following: - Pseudocode - Flow diagrams	2. Flow Diagrams A flow diagram is a diagram that shows an overview of a program. Flow diagrams normally use standard symbols to represent the different types of instruction. These symbols are used to construct the flowchart and show the step-by-step solution to the problem. Flow diagrams are sometimes known as flowcharts 	3. Pseudocode (Exam Reference Language) - Pseudocode is not an actual programming language. Instead, it is a simple way of describing a set of instructions in a manner that resembles a programming language. - Any algorithms designed using pseudocode will not run unless they are converted into an actual programming language. Advantages: - Because pseudocode is similar to a programming language, it can be quickly and easily converted into an actual programming language - It is fairly easy to understand, even for non-programmers - It does not matter if there are errors in the syntax - it is usually still obvious what is intended Disadvantages: - It can be hard to see how a program flows, for example, where does following one path as opposed to another take the program? - It can be time consuming to produce. - The specific pseudocode syntax for OCR is called Exam Reference Language and can be found at the end of the OCR specification.	4. Variables and Constants Variables: - A variable is a named memory location that holds a value. The value held in a variable can change as the program is running - A variable's name is known as an identifier - The identifier should be meaningful - it should represent the value it is holding e.g. score or name - Giving a variable a value is known as assignment - A variable must be assigned a value before it can be used. For example: Score = 6 - this would assign the value 6 to the variable score Constants: - Unlike a variable, the value assigned to a constant cannot be changed whilst the programming is running - Constants are useful because they are declared and assigned once, but can be referred to over and over again throughout the program. They are used for values that are unlikely to change, for example: PI - const PI = 3.142
5. Sequence - In programming, statements are executed one after another. Sequence is the order in which the statements are executed. - The sequence of a program is extremely important as carrying out instructions in the wrong order leads to a program performing incorrectly e.g. <pre> num3 = num1 + num2 num1 = 5 num2 = 4 Running this program would result in an error, because it tries to calculate num3 before it knows the values of num1 and num2 num1 = 5 num2 = 4 num3 = num1 + num2 </pre> - This version has the instructions in the correct sequence:	6. Selection - Selection is the process of making a decision. The result of the decision decides which path the program will take next. - Selection works by testing a condition. The test gives a Boolean result - TRUE or FALSE. If the result is TRUE, the program follows one path - otherwise it follows another - In programming, selection is implemented using if then else statements e.g. <pre> if answer == "Yes" then print ("Correct") elseif answer == "No" then print ("Wrong") else print ("Error") endif </pre> - In the above pseudocode program, the path the program takes depends on the condition. A variable, in this case answer, is used to test the condition.	7. Iteration (Loops) - There are times when a program needs to repeat certain steps until told otherwise, or until a condition has been met. This process is known as iteration. - Iteration enables programmers to greatly simplify a program. Instead of writing out the same lines of code again and again, a programmer can write a section of code once, and ask the program to execute it again and again until no longer needed	Count-Controlled - Count-controlled iteration repeatedly executes a section of code a fixed number of predetermined times e.g. <pre> for i = 0 to 9 print ("Loop") next i </pre> - The above pseudocode program would print the word "Loop" 10 times, i.e. 0-9 inclusive - Every time the code is iterated, the value of i increases by one Condition-Controlled - Condition-controlled iteration repeatedly executes a section of code until a condition is met - or no longer met - While loops test the condition at the beginning of the loop. If the condition is met, the code within the loop is executed before the program loops back to test the condition again e.g. <pre> while answer != "Correct" answer = input ("New answer") endwhile </pre> - The above pseudocode program will loop until the user inputs the string "Correct". Check condition is carried out before entering loop

Big Picture: Dancers in Year 10 will start the BTEC Tech Award in Performing Arts with a dance approach by studying three professional dance works. Pupils will be studying Component 1: Exploring the Performing Arts this term. In this component pupils will develop their understanding of the performing arts by examining the work of performing arts professionals and the processes used to create performance. The first professional dance work you will study in Autumn Term 1 is A Linha Curva choreographed by Itzik Galili.

1. Key features		2. Choreographic intention and Choreographic approach	
Stimulus Dance Style Themes Music Lighting	Brazilian Culture, celebrating the Brazilian way of life.	Choreographic intention	Just have fun How Brazilian men communicate with women Men showing off/competing
	Capoeira, samba and contemporary dance.	Choreographic approach	Choreographer worked collaboratively with the dancers. Dance motifs were created using improvisation. Dance motifs developed into large group formations. Movement and music complement each other.
	Carnival, relationships between men and women.	Smithills School Performing Arts	
	Live orchestra with vocal sounds from the dancers.		
	Colourful lighting patterns and shapes are used to support the dance formations.		
3. Costume Contributions		4. Music and Lighting Contributions	
Costume – colours of the shorts reflect the colours of Brazilian carnivals. The costumes are tight fitted allowing the movement to be performed to its maximum, enhancing the ‘just have fun’ intention. Colours of the costumes reflect a bright and happy mood. Costumes are tight fitting sculpting the body. Costumes are the same creating uniformity. Metal collars highlight the male gender in the opening. Slashes in the torso highlight their masculinity.  		Music – a live orchestra plays on stage; the orchestra plays samba music that portrays the traditional Brazilian style of music. Throughout the music there is rapid tempos and use of vocals to create a sense of fun and excitement. There is samba beats that builds throughout the dance. The music complements the movement content. There is sounds of rapid drumming within the large group dance sections. Lighting – the colours of the stage lights reflect the colours of Brazil and carnivals. There is a ‘checkerboard’ design in the lighting, the dancers are manipulation by this ‘checkerboard’ design. Spotlights are used in the solo and duet sections to highlight the dancers. Colours of light reflect the colours of the Brazilian flag – green, blue and yellow.	

Year 10 Graphics: Knowledge Organiser - Autumn 1

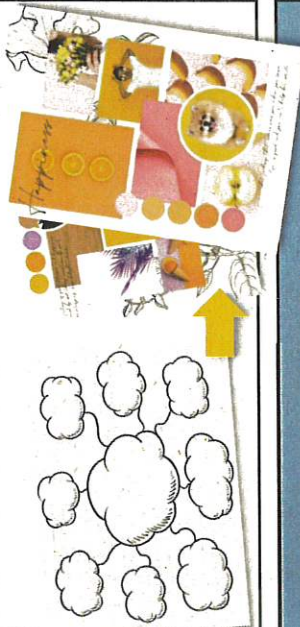
Key Outcome 1

What is a Design Brief?

A design brief is a document that outlines the requirements and constraints of a project, providing the designer with clear goals and objectives.

What is the design process?

The design process refers to the order in which the project should be completed.



Key Outcome 2

The importance of research

Research is important in graphic design because:

- It helps designers understand who they're designing for and what those people like.
- It gives designers ideas and inspiration for their work.
- It makes sure designs work well for the client and don't accidentally copy others.

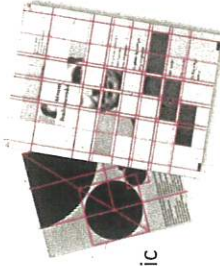
Brainstorming ideas in graphic design

Using mind maps or word associations to explore connections on a project theme, is a creative technique where designers produce many different solutions or ideas.

Key Outcome 3

Fundamentals of Graphic Design

Fundamentals are key principles in graphic design for clarity, aesthetic appeal, and effective communication.



Grids ensure consistency and alignment in design layouts, enhancing visual structure, readability, and overall aesthetic appeal in various media.

Typography shapes readability and tone, influencing how messages are perceived, enhancing visual appeal, and evoking emotional responses in designs.

Lettering plays an important part in our everyday lives. Different typefaces can express a wide variety of feelings and emotions.

Fonts can be grouped into 4 main classifications:

Aa Aa Aa Aa

Serif

Sans Serif

Script

Display

Colour creates a mood within the piece and tells a story. Every colour says something different, and combinations can alter that impression further. It enhances visual appeal and guides attention, making designs more effective and engaging.



The Design Process

Design Brief	A statement outlining what is to be designed and made
Specification	A list of design criteria
Research	Gather inspiration and information
Analysis	Examining details to understand
Ideas	Potential solutions to the problem
Development	Refine selected ideas in more detail
Manufacture	Making the outcome
Evaluation	Reviewing strengths and weaknesses of the design work and final product

Keywords

Mind map	An organisational tool to explore ideas on a theme
Mood Board	A collage that combines various visual elements such as colours, typography, images and words to inspire your final design
Structure and alignment	Arrangement for order and consistency
Hierarchy	Order of importance
Readability	Ease of reading text
Mood	How something makes you feel

Big picture : In Hair & beauty sessions you will explore the hair and beauty sector. It will help you gain an insight about the industry; learn useful basic practical skills by using a variety of equipment always ensuring health and safety and PPE requirements.

Check the plug before use
Do not touch plugs with wet hands
Label report and remove faulty equipment
Unplug heated equipment when not in use
Hazard Something that may cause risk of an accident
Risk Something that may happen if a hazard is not dealt with

Tail comb used for sectioning ,back combing and supporting direction when using a variety off techniques

Curling wand used for creating spiral curls, heat glove provided for protection, use on dry hair only

Hair straighteners used for curling or straightening hair heat glove provided for training purposes ,use on dry hair only

Steriliser used to clean equipment stopping cross infection of germs and diseases

First aid box

Paddle brush used for detangling long hair

Fire exit

PPE (Personal Protective Equipment)

Towel, gown, plastic cape

Key Roles in Hair and Beauty Businesses:

Hairstylist/Barber: Provides hair cutting, colouring, and styling services.
Beauty Therapist: Offers services such as facials, waxing, and skincare treatments.

Receptionist: Manages appointments, customer inquiries, and administrative tasks.

Reasons for Starting a Business: 1. Passion and Interest Personal Passion:

Earnings: Potential to make more money than being an employee. **Wealth Creation:** Building long-term financial success. **3. Flexibility and Control**

Work-Life Balance: Set your own schedule. **Decision-Making:** Make all the key business decisions. **4. Market Opportunities Identifying Gaps:** Spotting unmet needs and providing unique products or services. Starting a business allows for pursuing personal passions, achieving financial goals, enjoying flexibility, and meeting market needs.

Salons: Establishments offering a variety of hair, skin, and beauty treatments
Spas: Facilities focused on relaxation and wellness, providing services like massages, facials, and other body treatments. **Barbershops:** Specialise in hair cutting and grooming services primarily for men.

Franchises: Chain salons or spas that operate under a brand name with standardized practices and services.

Advantages of Hair Salon Franchise

- 1 Brand Recognition
- 2 Existing Customer Base
- 3 Business Support
- 4 Buying in Bulk
- 5 Less Experience Required
- 6 Less Risky
- 7 Favorable Failure Rates
- 8 Freedom (With Benefits)
- 9 Can Be Very Profitable

SUCCESS FOR ALL

SUCCESS FOR ALL

Big Picture: Unit 1 – Hospitality and catering provision

1. Key Concepts – Hospitality & Catering Providers

1.1.a - Commercial (residential)	1.1.b - Commercial (non-residential)	1.1.c - Non-commercial (residential)	1.1.d - Non-commercial (non-residential)
Commercial (residential): meaning the hospitality and catering provision aims to create a profit from the service they provide, but also offers accommodation. For example: - hotels, motels & hostels - B&B, guest houses and Airbnb - holiday parks, lodges, pods, and cabins - campsites and caravan parks.	Commercial (non-residential): catering establishments that aim to make a profit from their service, but no accommodation is provided. For example: - restaurants and bistros - cafes, tea rooms and coffee shops - takeaways - fast food outlets - public houses and bars - airlines, cruise ships, long distance trains - pop up restaurants - food and drink provided by stadiums, concert halls and tourist attractions - mobile food vans and street food trucks - vending machines.	Non-commercial (residential): the hospitality and catering provision offers accommodation but does not aim to make a profit from the service they provide. For example: - hospitals, hospices, and care homes - armed forces - prisons - boarding schools, colleges, and university residences.	Non-commercial (non-residential): catering establishments with no accommodation provided and don't aim to make a profit from their service. For example: - schools, colleges, and universities - meals on wheels - canteen in working establishments (subsidised) - charity run food providers.

2. Key Concepts – Types of service in commercial and non-commercial provision

1.1.e - Food service	1.1.f - Residential service
The different types of food services in the catering sector are listed below. You should know the meaning of each one and be able to provide examples. For instance; Table service - Plate: the food is put on plates in the kitchen and served by waiting staff. Good portion control and food presentation consistent. - Silver: a waiter will transfer food from a serving dish to the customer's plate using a silver spoon and fork at their table. - Banquet: a range of foods suitable for large catered events such as weddings, parties, or award ceremonies. - Family style: the food is placed on serving bowls on the customer's table for customers to share between them. - Gueridon: is served from a trolley to the customer's table, the food is then cooked and/or finished and presented in front of the customer. Creates an atmosphere of sophistication and entertainment. Counter service - Cafeteria: all types of food and drink are shown on a long counter for customers to move along with a tray for them to choose what they want to eat. - Fast food: the food and drink is displayed on a menu behind the counter, often with pictures. Quick, simple, and usually served with disposable packaging. - Buffet: a range of foods served on a big serving table where customers walk up to collect their plate and help themselves to food and drink. The food can be hot or cold, and some items could be served by waiting staff. Personal service - Tray or trolley: the meals are served on trays from a trolley and customers sometimes order items in advance. - Home delivery: the customer's order is made over the phone or online, and is then delivered by the business to their address. - Takeaway: food that's cooked by the business onsite and then eaten elsewhere.	Listed below are the different types of residential types of service in the hospitality and catering sector. You should know the different types of service offered in various hospitality provisions. Rooms: - single/double/king/family - suite (en-suite bath/shower room, shared facilities). Refreshments: - breakfast/lunch/evening meal 24-hour room service/restaurant available. Leisure facilities: - spa - gym - swimming pool. Conference and function facilities: - large rooms - overhead projector and computer - pens and paper provided - refreshments available.

Edward Weston

- Born in Illinois, USA in 1886
- Known for taking closeup pictures of fruit and veg, creating abstract pieces of art
- In class we will be photographing – natural forms; shells, skulls, fruit and veg
- Your homework task is – take fifteen photos of natural forms; life, decay, colour, fruit, veg, leaves, flowers.



Rachel Levy

- Born in France in 1955
- Known for taking birdseye photos of flowers that are slightly decaying around the edges
- In class we will be photographing – bright vibrant flowers with multicoloured backgrounds
- Your homework task is – Take 20 photos showing close up shots (Macro photography) of Textures.



Portfolio construction

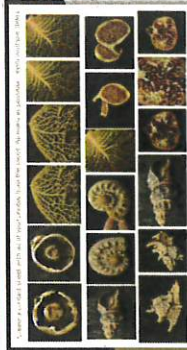
Artist research – You should write at least

one slide's worth of your opinion of the photographer, what they have achieved in their life and what photoshoot you plan to complete in their style.

Contact sheets (pictured) – Take as many photos during your shoot and then place them neatly in your portfolio

Edited images – Edit images using lightroom and photoshop, annotate them throughout your portfolio explaining how you did it and why

Celebration image – Which is your favourite photo and why? Link it back to the artist we have looked at and explain the links.



Abstract: use perspective, movement, and light to transform the world we see and create an unrecognizable image.

Macro: Extreme close up photography, usually of smaller subjects such as insects or flowers

Grayscale: A range of grey shades that are used in a monochrome display (black and white)

Focal point: What you are looking at and what you are focusing on.

Contrast: The difference between light and dark areas, highlights and/or shadows

Focus: Your photo could be in focus or show too much blur.

Add blur to areas too if intended



Big Picture:															
1. Key Concepts															
The nature of God 1.1 How is God perceived differently in Christianity? Christian beliefs about God. The Trinity – the importance of the Apostles' Creed and the Nicene Creed. The significance of SOWAs for Christians.	Creation 1.2 What is the importance of Creation for Christians today? Creation and the Trinity. The Creation story with reference to Genesis. The Garden of Eden – God falling out with Adam and Eve for disobeying him (The Fall). Christian attitudes towards the Creation story.	Incarnation 1.3 How is Jesus Christ seen as the incarnate Son of God? The birth, life, death and resurrection and teachings of Jesus Christ with reference to the Gospels. Hypostatic Union – the religious term to describe the union of Jesus' humanity and divinity in the one person. The importance of the Doctrine of the Incarnation for Christians today.	Last Days of Jesus' life 1.4 How does the Last Days of Jesus' life impact on Christians today? The Passion – the last days of Jesus' life focusing on his suffering. The Last Supper – with reference to the Gospels where Jesus told his disciples that he would no longer be with them physically. Good Friday and Jesus' arrest, trial and crucifixion. The resurrection and it's significance to Christians.	2. Vocabulary <table><tr><td>Atonement</td><td>The idea that through confession and repentance of sins, humans are able to restore their relationship with God.</td></tr><tr><td>Incarnation</td><td>The belief that God came to Earth in human form (Jesus)</td></tr><tr><td>Eschatology</td><td>The belief in life after death</td></tr><tr><td>Ascension</td><td>The idea that Jesus rose to heaven.</td></tr></table>		Atonement	The idea that through confession and repentance of sins, humans are able to restore their relationship with God.	Incarnation	The belief that God came to Earth in human form (Jesus)	Eschatology	The belief in life after death	Ascension	The idea that Jesus rose to heaven.		
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Incarnation	The belief that God came to Earth in human form (Jesus)														
Eschatology	The belief in life after death														
Ascension	The idea that Jesus rose to heaven.														
Atonement and Salvation 1.5 What is Jesus's role in atonement and salvation? The Doctrines of The Fall and original sin – the story of Adam and Eve and how they were created perfect in a world without fault. Atonement and redemption – the idea that mankind being reconciled with God. Salvation – this means being granted eternal life with God and Jesus Christ after death. The significance of atonement and salvation for Christians today.	Eschatology 1.6 What are Christian beliefs about eschatology (end of the world)? The soul – Christians believe that each life has purpose and that death is not the end. The soul being immortal. Judgement- Human beings are accountable for their actions as they will eventually be judged before God and this will determine whether they go to heaven or hell. Heaven – a place described as peaceful and calm where no pain or suffering happens. Hell- a place where sinners go after death and endure eternal pain and suffering. Purgatory – a place where souls are purified and made holy enough to enter heaven. Similarities and differences between Christianity and Islam.	The problem of evil and suffering 1.7 What are Christian beliefs about evil and suffering? Evil and suffering in the world – with reference to the nature of God. Responses from theists, atheists and agnostics. Natural evil – suffering caused by nature. Moral evil – suffering caused by humans. The Christian response to evil and suffering. The Devil – evil in the world is due to the devil also known as Satan. Linked to the story of The Fall. Irenaean theodicy – Irenaeus taught the purpose of the world was to develop morality of human beings. Humans need to grow in to the perfect likeness of God. The 'Vale of Soul Making' theodicy – Hick believed that God purposefully allowed evil in the world and left humans incomplete so they could develop their souls themselves. Augustinian theodicy – Augustine believed evil is in the world from the Original sin. Story of Job – suffering is there to test humankind.	5. Key Figures <table><tr><td>Jesus</td><td>His birth, life, death and resurrection along with his teachings.</td></tr><tr><td>God</td><td>The nature of God.</td></tr><tr><td>Job</td><td>Biblical figure who coped with suffering.</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>			Jesus	His birth, life, death and resurrection along with his teachings.	God	The nature of God.	Job	Biblical figure who coped with suffering.				
Jesus	His birth, life, death and resurrection along with his teachings.														
God	The nature of God.														
Job	Biblical figure who coped with suffering.														
3. Skills Discuss differing versions of the Creation story. Evaluate whether the Good Friday is the most important of Jesus' Last Days. Explain why atonement is important to Christians. Explain why the Trinity is important to some Christians. Interpret SOWA and consider their application for and against one of the concepts	4. Key SOWA (sources of wisdom and authority) Bible (Old and New Testament)-numerous The Nicene Creed Creation story accounts (Genesis) Incarnation story Last days of Jesus' life Apostles' Creed														
6. Assessment Criteria <table><tr><td>State/Outline</td><td>Give 3 examples in 3 different sentences</td></tr><tr><td>Explain</td><td>2 developed reasons in 2 sentences. (develop with examples / SOWAs or explanation)</td></tr><tr><td>Explain and SOWA</td><td>2 developed reasons in 2 sentences. (develop with examples / SOWAs or explanation) and link in a SOWA to support the points.</td></tr><tr><td>Evaluate</td><td>Higher level answers will state which is the stronger argument and WHY this argument is more compelling.</td></tr></table>						State/Outline	Give 3 examples in 3 different sentences	Explain	2 developed reasons in 2 sentences. (develop with examples / SOWAs or explanation)	Explain and SOWA	2 developed reasons in 2 sentences. (develop with examples / SOWAs or explanation) and link in a SOWA to support the points.	Evaluate	Higher level answers will state which is the stronger argument and WHY this argument is more compelling.		
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Evaluate	Higher level answers will state which is the stronger argument and WHY this argument is more compelling.														

Foundation: Aut 1, year 10. Task 1. Write all answers in your homework book.

Q1. A Spanish festival You read about a festival in the region of Murcia.

Fiesta de mayo	
1 de mayo –	procesión de caballos
2 de mayo –	bailes típicos
3 de mayo –	concurso de dibujo
4 de mayo –	festival de flores

Which activity takes place on the dates below?

Write the correct letter for each date

A	Art competition
B	Flower festival
C	Food tasting
D	Horse parade
E	Prize giving
F	Traditional dances

1 May 1st

(1)

2 May 2nd

(1)

3 May 3rd

(1)

4 May 4th

(1)

(Total 4 marks)

Foundation: Aut 1, year 10. Task 2. Write all answers in your homework book.

Q2. A festival in the town of Solsona On a Spanish website you see an advert for this festival.

Festival de Solsona

- Procesiones de personas que llevan camisetas amarillas.
- Bailes por las calles.
- Mercado con vinos de la región.

Para más información, visiten la Oficina de Turismo (cerrada los domingos).

Decide if the following statements are **true (T)**, **false (F)** or **not mentioned (NM)** in the text.

Write **T** if the statement is **true**.
 F if the statement is **false**.
 NM if the statement is **not mentioned** in the text.

- | | | |
|---|---|------------------------|
| 1 | The people in the processions wear red T-shirts. | (1) |
| 2 | The dancing takes place at night. | (1) |
| 3 | There is a market with local wines. | (1) |
| 4 | The Tourist Information Office is open every day. | (1) |
| | | (Total 4 marks) |

Foundation: Aut 1, year 10. Task 3. Write all answers in your homework book.

Q3. A special event Your Spanish friend sends you this email to invite you to a special event.

	From...	analopez@email.es
	Subject:	
Vamos a un evento especial. Vamos a celebrar la última noche de diciembre en el Hotel Palacio donde comeremos las tradicionales uvas. En el hotel, no permiten ni zapatillas deportivas ni camisetas, así que debes llevar un traje, una camisa y zapatos.		

1 When is the special event?

A	Christmas Eve
B	Christmas Day
C	New Year's Eve

(1)

Answer the questions in **English**.

2 What are you going to eat in the hotel?

(1)

3 What should you wear to the event?

Mention **two** things.

1.

2.

(2)

(Total 4 marks)

Overlap: Aut 1, year 10. Task 4. Write all answers in your homework book.

Q4. Formentera, a Spanish island You read an advert about going on holiday to Formentera.

Formentera está bastante lejos de los lugares turísticos populares. Se llega en barco ya que no tiene aeropuerto. Lo bueno es que tiene la segunda mejor playa de España. Por eso es famosa. Además, hay un montón de caminos bonitos en el parque donde se puede montar a caballo o en bici en la tranquilidad. Merece la pena visitar Formentera durante el festival marítimo. El puerto se llena de turistas para ver los barcos salir y se tiran flores al mar. Por la tarde hay bailes tradicionales en la plaza.

A	airport
B	beach
C	park
D	port
E	sea
F	square

Complete the sentences with the correct word.

Write the correct letter in your homework book

1 Formentera is famous for its

(1)

2 The

is a peaceful place.

(1)

3 The

is busy with visitors during the festival.

(1)

(Total 3 marks)

Overlap: Aut 1, year 10. Task 5. Write all answers in your homework book.

Q5. Opiniones sobre la corrida de toros

¿Cuál es la opinión de cada escritor sobre la corrida de toros? *(What is the opinion of each writer about the running of the bulls?)*

Benavente	A pesar de ser una tradición emocionante, las corridas de toros son un vicio desagradable.
Lorca	El toreo está lleno de pasión, la fiesta que mejor representa la cultura española.
Unamuno	Siempre me han fastidiado y molestado las corridas de toros.
Valle-Inclán	El ambiente de la corrida de toros es muy animado. Es algo muy hermoso.

Escribe **P** si la opinión es **positiva**.

N si la opinión es **negativa**.

P+N si la opinión es **positiva y negativa**.

1 Benavente

(1)

2 Lorca

(1)

3 Unamuno

(1)

4 Valle-Inclán

(1)

(Total 4 marks)

Overlap: Aut 1, year 10. Task 6. Write all answers in your homework book.

Q6. La Feria de La Chorrera, a festival in Panama

Your friends are going to the festival. Read their Facebook posts. Write the letter of the correct person in your homework book.

A 	Al final de la feria siempre hay unos fuegos artificiales en la Plaza Mayor. El espectáculo es bonito, pero me dan miedo los fuegos, así que voy a verlos en la tele con mi abuelo. Adrián
B 	Venden una gran variedad de arroces en la feria. Mi favorito es el arroz con verduras y mariscos. También me gustan los helados. Los hay de muchos sabores. Begoña
C 	A uno de mis amigos le gustan los animales, a otro le gustan las atracciones y nunca nos ponemos de acuerdo con qué hacer en la feria. Estoy harta de ellos. Carmen
D 	Mis amigos y yo siempre participamos en la procesión en el parque. Además, ofrecen talleres de bailes tradicionales para todas las edades. Lo pasamos fenomenal. David
E 	Creo que este año irá más gente ya que los organizadores han anunciado la feria por las redes sociales. El público gastará más y el ambiente será estupendo. Elvira

1 Who thinks that the festival can be scary?

(1)

2 Who gets fed up when deciding what to do at the festival?

(1)

3 Who is pleased that there are activities for all age groups?

(1)

(Total 3 marks)

Mark schemes

Q1.

	Accept	Mark
1	D (Horse parade)	1
2	F (Traditional dances)	1
3	A (Art competition)	1
4	B (Flower festival)	1

[4]

Q2.

	Accept	Mark
1	F (false)	1
2	NM (not mentioned in the text)	1
3	T (true)	1
4	F (false)	1

[4]

Q3.

	Key Ideas	Accept	Reject	Mark
1	C			1
2	Grapes	Traditional grapes	Fruit Traditional Food	1
3	Any two of: Suit Shirt Shoes	(Formal) shoes	T Shirt	2

[4]

Q4.

	Accept	Mark
1	B (beach)	1
2	C (park)	1
3	D (port)	1

[3]

Q5.

	Accept	Mark
1	P+N	1
2	P	1
3	N	1
4	P	1

[4]

Q6.

	Accept	Mark
1	A	1
2	C	1
3	D	1

[3]

Big Picture: Why are we learning this now?
There will be a recap about opinions of school subjects before moving on to more complex structures and vocabulary. This is another key topic which allows us to practise using a range of tenses as well as modal verbs (should/would/could).

1. Key Concepts

The present tense: Tells us what is happening NOW eg. I study.../ I like to study.... We are going to look at the present tense with another regular verb (pehn'na = to wear)

The imperfect tense: Saying what something WAS like (a description in the past) OR saying what you USED to do.

4. Vocabulary 1: Facilities in school

Classroom	Kamra jamaat
Building	Imaarath
Science lab	Thajarba gaah
Playground/field	Khelon ka maidhaan
Canteen	Canteen
Library	Kutb khaana
Gym	Varzish ka karma
Floor	Manzil
Spacious	Vaseeh
Tight/small	Thang/chota

Can	Could	May	Might	Should	Must	Would
کر سکتا ہے	کر سکتا ہے	ہو سکتا ہے	ہو سکتا تھا	کرنا چاہیے	ضرور کرنا ہے	کرے گا

2. Processes: forming 'you should/have to'

I have to	Mujhay	..na/i/ay +
We have to	Humay	hai/haiN OR chahiyyay
You have to (impolite)	Thumhay	noun + verb (-'na)
You have to (polite)	Aapko	
E.g. Mujhay homework krna hai. Humay uniform pehn'na chahiyyay.		

3. Sentence starters

Agar maiN school ka mir mudaris hotha tho..

School ka ayk faaidhaa yeh hai kay...

School ki ayk cheez jo mujhay achi nahiN lagthee vo yeh hai kay...

Ayk acha/burra qawaaaid yeh hai kay...

5. Vocabulary 2: Infinitives

To respect	Izzat krna
To look for/to find	Dhoondhna
To support	Madad krna
To correct	Dhrusth krna
To learn	Prhna
To annoy	Thang krna
To remember/to forget	Yaad krna / bhoolna

6. Assessment

- Thumhaaray school kay koi achay qawaaaid hain?
- Primary school kay qawaaaid yahaaN kay qawaaaid say kaisay mukthaliif hain?
- Thumhaara misaali school kaisa hotha?
- Kya thum college jaana chaaahogay?

HT 1 & 2: Urdu Homework (in addition to the Knowledge Organiser work)

Each fortnight:

- Visit *dailypakistan.com.pk/daily-bites* website
- Select an article that you are interested in
- Write out the article headline in Urdu
- Translate the headline into English
- Identify 5 difficult Urdu words from the article and translate them into English

Big Picture: Musicians in Year 10 will begin their time studying the BTEC Tech Award in Music Practice by gaining an overall understanding of the expectations and their responsibilities throughout the course. During Component 1: Exploring Music Styles and Products, students will learn about four important musical genres – Rock n Roll, Horror Film Music, Samba and Synth-Pop. They will develop their understanding of genres by examining the work of famous musical artists and composers and the processes used to create music in these specific styles. The first music genre you will study in Autumn Term 1 is Rock 'n' Roll. The songs you will analyse are 'Great Balls of Fire' by Jerry Lee Lewis and 'Hound Dog' by Elvis Presley.

1. Component 1: Overview

Component 1 Brief: Released in January of Year 10

Task 1: Create a PowerPoint presentation that discusses in-depth four genres of music – Rock n Roll, Horror Film Music, Samba and Synth-Pop. You must use lots of detail and cover all of the musical elements outlined.

Compositional elements: melody, harmony, tonality, structure, rhythm

Sonic elements: instrumentation, timbre, texture, production

Task 2: Create three musical products that meet the theme outlined in the brief. You will need to produce a 30-60 second performance, original composition and a DAW arrangement. You must write a concise commentary to discuss the process of creating your musical products.

melody	harmony	tonality	structure	rhythm	timbre	texture
Blues scale, Flat 3rds/ 5ths/7ths, Catchy, Narrow vocal range (male)	Simple chord structures, 12 bar blues.	Diatonic key signatures – major or minor keys.	Verse- chorus form	4/4 time signature	Harsh, Loud and distorted	Melody and accompaniment

2. Rock n Roll: Overview

Rock 'n' roll is a style of popular music that emerged from America in the 1950s. It has its roots in various African-American styles of music, such as blues, jazz and gospel, and in country music. It was played by both African American and white musicians.

There were many technological developments during this era. Audiences could listen to rock 'n' roll music on the radio and increasingly watch them on television. Mass production of 45 rpm vinyl records, or singles, meant that music could be bought cheaply and easily.

The introduction of the electric guitar was a key development in the sound of rock 'n' roll.

Teenage culture started to develop in the 1950s. Rock 'n' roll was the first style of music to appeal to the new young audience. It was often disapproved of by the older generation and so represented a sense of youthful rebellion.

Teenagers could identify with rock 'n' roll songs. Lyrics were about subjects such as young love, school, parents and cars. Rock 'n' roll songs allowed young people an opportunity to express their emotions and experiences.

Instrumentation – Typical Instruments, Timbres and Sonorities

Early Rock 'n' Roll – lead vocalist accompanied by a small group of acoustic instruments – piano, drum kit, saxophone, trumpet, harmonica, trombone and double bass. The Electric Guitar soon became an essential part of Rock 'n' Roll and Backing Singers/Vocalists were frequently used in Rock 'n' Roll songs.



Rock n Roll

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Big Picture: You will be beginning the term with a baseline scheme of work based on the scripted piece 'DNA by Dennis Kelly.' You will look at sections of the script in detail and explore the sections both practically and for theory. Using your voice and body language to show the characters to the audience and the different emotions the characters are going through. You will use your devising skills and stage craft to create moments off-script. This initial term will allow you to show what you know about performance in terms of devising and scripted. You will also get to demonstrate your written knowledge of literature.

1. Key concept - Body Language and Voice		2. Key concept - Script		3. Key concept - Stage Craft	
Voice - tone, pitch, pace, accent , emphasis, pause, volume Body Language - facial expression, orientation, proxemics, gesture, posture, gait, mime		Stage directions, given circumstances, context: The script provides essential information to the actor and technical department. It suggests stage directions, pauses and the style of emotion the character should move or speak in. For the technical team, it prompts any lighting, sound or stage direction that is needed for the scene.		Projection, Facing the audience, Monologue, Thought-Track, Tableaux (freeze-frame), Realism, Hot seating, Tension	
5. Key Vocabulary/Themes					
4. Plot	Responsibility	The characters don't take responsibility for their actions or for their treatment of others			
	Bullying	The play shows the destructive consequences of bullying and how it can be used to hurt and manipulate people.			
	Power	Kelly suggests that power brings out the worst in people and cause them to act immorally.			
	Identity	The characters face a struggle between trying to fit in with the group while acting in a way that is morally right.			
	Dramatic tension	Moments in a drama where the audience feels a heightened sense of anticipation about what is going to happen next.			
	Realism	A genre that attempts to replicate nature and present events and characters on stage as though they are from real life.			
	Style	Style refers to the way the actors are performing, the visual characteristics of the setting and costumes and the choice of particular conventions. Confusingly, a drama belonging to one genre (e.g. naturalism) can be presented in different styles (for example, the acting may be in a naturalistic style but the stage design can be in an abstract style).			
	6. Processes				
DNA was written in 2007 originally to be performed by youth theatre groups as part of the 2007 National Theatre Connections after being asked to write a play for young people to perform.	DNA's purpose was to raise questions about whether it was more beneficial to think about the group or the individual. It also raised issues about social issues in 21 st century Britain. People believed that anti-social behaviour in young people was getting worse with media labelling it as 'Broken Britain'- a British society where people acted for themselves rather than in a socially responsible way.		DNA is still relevant today as the same themes that affected it when it was written still apply today such as surveillance and terrorism anxiety, bullying and anti-social behaviour. The play purposely doesn't use modern technology so that it can be produced anytime in the future and still be relevant.		The early 21 st century brought scientific advances in DNA research (human genome project). Scientists could compare human DNA to other animals to understand our ancestry. This relates when Leah compares humans to chimpanzees and bonobos (two animals who are almost 100% genetically identical yet in total opposite ways in their social circles). Knowledge about DNA and forensic science became widespread which helps the gang cover up the murder.

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