

# WGSA believe in yourself, in others, in God

## 66

I truly believe the only way we can create global peace is through not only educating our minds, but our hearts and our souls.

-- Malala Yousafzai

Knowledge Organiser **Year 11** Spring 2 2021

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# **Homework Timetable**

You are expected to study the subjects shown on your timetable each day. Each day use a page of your exercise book to evidence your work: half a page per subject.

Week starting 22nd Feb	Subject I	Subject 2	Signed Off	Week starting 15th March	Subject I	Subject 2	Signed Off
Monday	English	Option I		Monday	English	Biology	
Tuesday	Maths	Option 2		Tuesday	Maths	Option I	
Wednesday	Physics	RE		Wednesday	Physics	Option 2	
Thursday	Chemistry	English		Thursday	Chemistry	RE	
Friday	Biology	Maths		Friday	Biology	English	
Week starting Ist March	Subject I	Subject 2	Signed Off	Week starting 22nd March	Subject I	Subject 2	Signed Off
Monday	English	Physics		Monday	English	Maths	
Tuesday	Maths	Chemistry		Tuesday	Maths	Physics	
Wednesday	Physics	Biology		Wednesday	Physics	Chemistry	
Thursday	Chemistry	Option 1		Thursday	Chemistry	Biology	
Friday	Biology	Option 2		Friday	Biology	Option 1	
Week starting 8th March	Subject I	Subject 2	Signed Off	Week starting 29th March	Subject I	Subject 2	Signed Off
Monday	English	RE		Monday	English	Biology	
Tuesday	Maths	English		Tuesday	Maths	Chemistry	
Wednesday	Physics	Maths		Wednesday	Physics	RE	
Thursday	Chemistry	Physics					
Friday	Biology	Chemistry					



## Y11 GCSE English Literature Knowledge Organiser: Blood Brothers by Willy Russell

Week 1: Context <u>Task:</u> Make a mix-and-match game using this contextual information which relates to the play.			Week 4: Plo paper. Shuffle
Margaret Thatcher		Prime Minister 1980s factory closures	The Narrator's
indigaree matchel	ST TAL		Song about Ma
Willy Russell		Liverpool, working class,	Mrs Johnstone
	hairdresser/teacher/playwright	Mrs Johnstone	
Marilyn Monroe		Model/actress/singer, 1950s, tragic	Mickey and Ed
			Mickey, Edwar
Skelmersdale		New Town, 1960s, rehousing	The Lyons fam
			The Johnstone
Liverpool	O'O.	Docks, mines, unemployment	
Family		Nuclear, patriarchal, housewives	Mickey and Ed
-			Mrs Lyons con

Week 2: Characters Task: Draw a quick picture of each character and write the words around it. Add one more word of your own to describe each character.

Week 3: Key words Task: Create flash cards and test yourself.

Mrs Johnstone: loving, naïve, superstitious Mrs Lyons: self-centred, manipulative, anxious Mickey: friendly, adventurous, depressed Edward: posh, educated, generous Sammy: aggressive, mean, criminal Linda: kind, feisty, protective



this	<b>Week 4: Plot summary</b> <u>Task:</u> Write out the events on diffe paper. Shuffle, then put in order. Keep the papers loose so you ca	erent pieces of in repeat this!
ros	The Narrator's introduction functions as a prologue	
103	Song about Marilyn Monroe	
	Mrs Johnstone gives Edward to Mrs Lyons	
	Mrs Johnstone loses her job	Act one
	Mickey and Edward meet	/ let one
	Mickey, Edward and Linda get in trouble with the police	
	The Lyons family moves away	
	The Johnstones are rehoused	
		•
	Mickey and Edward meet again	
1	Mrs Lyons confronts Mrs Johnstone	
	Edward goes to university; Mickey and Linda get together	
N	Linda is pregnant; Mickey and Linda get married	Act two
6	Mickey loses his job	/
	Mickey goes to prison for helping with a robbery	
R	Mickey becomes addicted to pills	
-1-1	Linda and Edward have an affair	
1	Mickey shoots Edward and the police shoot Mickey	
	nature vs nurture <u>Week 5: Themes</u>	social class

didactic tragedy narrator stage directions montage foreshadowing parallels contrast s motif Standard English	Teaches something, especially a moral. A serious story that ends in disaster. The person who tells a story. Instructions for the actors. A scene showing a series of events happening in a short amount of time. A hint about a future event. Similarities. Differences. A repeating image or idea. Any form of the English language accepted as a national norm.	family	Week 5: Themes Task: Make a mind map for each theme. Write details from the play that show each theme. superstition
Standard English	Any form of the English language accepted as a national norm.		

## Y11 GCSE English Language Knowledge Organiser: Paper 1 Reading (Section A)

#### Helpful vocabulary for Section

- Α
- impact •
- suggests
- illustrates
- demonstrates
- foreshadows
- indicates
- exemplifies
- This makes the reader..
  - auestion ٠
  - understand • imagine
- Question 1 (4 marks 5 mins) Question: List four things... **Top Tips**
- Only use the lines indicated
- Stick to the question
- Write in **full sentences**
- Include **quotations** where appropriate
- Don't repeat

#### Question 2 (8 marks 10 minutes) How does the writer use language to ... **Technical terminology**

- terms of address
- verbs

adjectives

alliteration

hyperbole

metaphor

oxymoron

pronouns

nouns

simile

#### Top Tips

- Only use the section indicated
- Stick to the **question** highlight
- important words
- Select references (probably quotations) judiciously
- •Remember: WHAT language is
- being used? WHERE is there evidence of it? WHY has it been used?
- Use technical terminology and always consider the effect •Aim for three points / paragraphs

- adverbs
- emotive language imagery noun phrases onomatopoeia personification sensory language subordinate/main clause triplets

## ACTIVITIES:

WEEK ONE: Design a crossword to test knowledge of ten of the terms on this page. Challenge: try to connect all of the words in your crossword grid. WEEK TWO: Look, cover, write, check information about Question 2. Challenge: check all of your spellings are correct. WEEK THREE: Choose two terms, then write a paragraph making a connection between the two terms. WEEK FOUR: make a poster to help students spot a metaphor. WEEK FIVE: Design a mind map to help students revise for this part of the exam...

#### Question 3 (8 marks 10 minutes) How does the writer use structure to... **Technical terminology** chronological contrast cyclical development dialogue end flashback/flash forward foreshadowing focus shifts lists narrative opening order paragraphs patterns repetition sentence structures simple, compound, complex single word sentences tense sentences Top Tips •Use the whole extract Select references judiciously •Remember WHAT structure is

being used? WHERE is there evidence of it? WHY has it been used?

- •Use technical terminology and always consider the effect
- •Aim for three points / paragraphs

#### **Question 4 Top Tips**

- Use the section indicated and stick to the question highlight important words from the quotation and the question
- Start with an evaluative comment: do you agree, partially agree or disagree with the given statement?
- •Remember WHAT language and structure methods are being used? WHERE is there evidence of them? WHY have they been used?
- Use technical terminology (see above for language and structure terminology you could use) and always consider the effect.

I agree with the statement because... The writer states...which creates the impression.... This reinforces the idea.... The reader feels... I get the impression... This seems to indicate...

## Y11 GCSE English Language Knowledge Organiser: Paper 1 Creative Writing (Section B)

#### **Question 5 Writing to Describe**

•Read the question carefully, establish the audience and purpose and then...

•PLAN carefully – use whatever form works best for you (mind map, paragraph plan, flow chart). Plan an idea for each paragraph then find some vocabulary and technique to go with each.

 Use a range of the writing to describe features throughout your writing. These include:

> Select and use adjectives carefully (sometimes in isolation, sometimes in groups)

 Use imagery techniques thoughtfully – simile, metaphor, personification (what are you comparing them to? Why?) Show, don't tell

Use sensory writing

Experiment with ambitious vocabulary

•Use a selection of different types of punctuation

, ... , . •Use a variety of different length and type of sentences for effect.

• Deliberately vary the way you start sentences: try to start with a fronted adverbial, prepositions or an -ing verb. •Remember topic sentences – these will be the introduction to the whole paragraph, try not to stray too far from what they say throughout that paragraph.

•Paragraph carefully, use a range of paragraph lengths for effect.



#### **ACTIVITIES:**

WEEK ONE: Write two paragraphs that each use a full range of punctuation. WEEK TWO: Look, cover, write, check information about writing to narrate. Challenge: check all of your spellings are correct.

WEEK THREE: Choose a picture from the internet on the topic of 'a walk on the beach' and use the guidance to create a WEEK FOUR: make a poster to help

students describe and narrate like a

WEEK FIVE: Read the WAGOLL and then rewrite it to make it more detailed and use more varied sentence structures.



#### **Question 5 Writing to Narrate**

•Read the question carefully, establish the audience and purpose and then...

•PLAN carefully – use whatever form works best for you (mind map, paragraph plan, flow chart). Plan an idea for each paragraph then find some vocabulary and technique to go with each.

 Use a careful selection of the descriptive features from the left of this sheet.

•Create tone and atmosphere by using carefully selected lexical fields, pathetic fallacy and imagery.

 Include dynamic verbs which drive the action forward.

 Include dialogue – correctly punctuated. But try to limit your use of direct speech so that you do not end up writing a movie script. :)

#### What A Good One Looks Like:

Screech! The black car swung round the dark, rain drenched street corner like an out-of-control roller coaster. With breaks squealing, the ominous juggernaut shattered the peaceful quiet of the midnight city street.

"Run!" shouted an anonymous voice; two men launched from the car onto the slimy, wet pavement. Their determined faces lifted from the asphalt and squinted into the darkness. Hundreds of watching eyes glinted back at them.

The shrieking of sirens could be heard in the distance. Like a rabbit caught in headlights, both men sprang to their feet and ran – they ran as if their lives depended on it. As they reached the nearest corner they dived to the floor and crumpled in waves of silent laughter. "Cut!" came a voice from the shadows.



Week 1 - State if the coordinate (2,7) lies on the line with an equation of y = 3x + 5. Why? Week 2 – State how you can use substituting in an expression to solve a simultaneous equation. Give an example. Week 3 – State how you can solve a simultaneous equation graphically.

Week 4 – State, with examples how you could solve a simultaneous equation by subtraction and addition.

Week 5 – *state*, with examples how you can solve simultaneous equation by adjusting one or both equations.



Week 1 – State, with examples how to add, subtract, and multiply numbers without using a calculator. Show your working. Week 2 – State with an example the method for dividing without using a calculator. Show your working. Week 3 – State, with examples how to add, subtract, multiply, and divide fractions.

Week 4 — State with examples how to round 5 different numbers to 1 significant figure. Week 5 – Estimate the value of the following: a) 9.8 x 3.1 b) 10.1 x 0.8 c) 12.2 x 10.1 Show your working.

## Biology 4.7. Ecology



decreased?

Section 1: Key Vocabulary		
Keyword	Definition	
Diffusion	The movement of particles from an area of high concentration to an area of low concentration.	
Osmosis	The movement of water from an area of high water concentration to an area of low water concentration.	
Active transport	The movement of particles from an area of low concentration to an area of high concentration. This needs energy.	
Stem cell	An unspecialised cell that has the potential to become any type of cell.	
Enzyme	A biological catalyst that speeds up the breakdown of food in the body.	
Transpiration	The loss of water vapour from a plant through the stomata.	
Pathogen	A disease-causing microorganism. A virus, bacteria, protist, or fungus.	
Respiration	A chemical reaction that releases energy from glucose using oxygen and produces carbon dioxide and water.	
Photosynthesis	The process by which green plants use sunlight to generate glucose and oxygen from carbon dioxide and water.	

#### Required practical 1: Using a light microscope



#### **Biology Paper 1 Revision**

#### Required practical 2: Investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue



- 1. Use a cork borer to cut five potato cylinders of the same diameter.
- 2. Trim the cylinders so that they are all the same length (about 3 cm).
- 3. Accurately measure and record the mass of each potato cylinder.
- Measure 10 cm3 of the 1.0 M salt solution and put into the first boiling tube. Label boiling tube as: 1.0 M salt.
- Repeat step 4 to produce the additional labelled boiling tubes containing solutions of 0.75M, 0.5M and 0.25M.
- Measure 10 cm3 of the distilled water and put into the fifth boiling tube. Label boiling tube as water.
- Add one potato cylinder to each boiling tube. Make sure you know the mass of each potato cylinder in each boiling tube.
- Record the masses of each potato cylinder in a table.

9.

- Leave the potato cylinders in the boiling tubes for 30 minutes in the test tube
- rack. 10. Remove the cylinders from the boiling tubes and carefully blot them dry with the paper towels.
- Re-measure the mass of each cylinder (make sure you know which is which).
- Record your measurements in the table. Then calculate the changes in mass of each potato cylinder.



Required practical 4: Investigate the effect of pH on the rate of reaction of amylase enzyme



- 1. add 0.5 cm<sup>3</sup> of amylase solution to a test tube
- 2. add 1 cm<sup>3</sup> of distilled water to another test tube
- set up a spotting tile, with a drop of iodine solution in the wells corresponding to the measurements to be taken
- 4. set up a series of water baths at different temperatures
- place the tubes in the different water baths and allow them to reach the required temperature
- add 2 cm<sup>3</sup> of starch solution to each test tube and start timing
- remove a sample from the tubes immediately and add to the spotting tile to test for the presence of starch
- 8. remove a sample every 30 seconds and test for starch
- record the time at which starch is no longer present for each tube

#### Required practical 5: Investigate the effect of light intensity on the rate of photosynthesis



- Set up a boiling tube containing 45 cm<sup>3</sup> of sodium hydrogencarbonate solution (1%). Allow the tube to stand for a few minutes and shake to disperse any air bubbles that might form.
- Cut a piece of the pondweed, Cabomba. The pondweed should be 8 cm long.
- Use forcepts to place the pondweed in the boiling tube carefully. Make sure that you don't damage the pondweed, or cause the liquid to overflow.
- 4. Position the boiling tube so that the pondweed is 10 cm away from the light source. Allow the boiling tube to stand for five minutes. Count the number of bubbles emerging from the cut end of the stems in one minute. Repeat the count five times and record your results.
- Calculate the average number of bubbles produced per minute. Repeat the experiment at different distances away from the light source.

#### Section 3: Understanding required practicals

- For each required practical, you should:
  - Write a hypothesis
- Write an equipment list
- Write a method
- Identify variables
- Write a risk assessment

## Separate

Section 1: Electricity key words Flashcards		Ph	iysics Pap	per 1	Section 4 draw a p	: Physics Paper 1 equations Flash of icture to represent each quantity ture each time the quantity is use	cards and (use the ed in an	
Keyword	Definition	Image		revision		equation	)	
					-	Work don (J)	e = force x distance (N) (m)	
Current	A flow of charge.	Refer	Section	3. Molecules and matter		Kinetic eı (J)	nergy = 0.5 x mass x speed <sup>2</sup> (kg) (m/s)	
			Re-writ	e in your own words.		Gravitatio	onal potential energy = mass x g x	height
Potential difference	The difference in energy between two points in a circuit (the difference has been transferred to		Solids a	nd liquids have a fixed vol	ume and	Elastic po (J)	tential energy = 0.5 x spring x ext constant (N/m)	ension <sup>2</sup> (m)
	the component).		cannot and hav	be compressed. Gases can ve no fixed volume.	be compressed	Efficiency	/ = <u>Useful Power/Energy Output</u> Total Power/Energy Input	(x100)
Charge	Current x time.	De .	Liquids Gases h by liqui	and gases can flow, solids ave the highest energy lev ds and then solids have the	cannot flow. els, followed e lowest energy	Weight = (N)	mass x gravitational field strength (kg) (N/kg)	
		Affection	levels.			Charge = (C)	current x time (A) (s)	
Resistance	How easily a current can flow through a material. If there is a high resistance, there is a low		Density Write a diagran	method for the practical n for your equipment list	, using the and the	Power = <u>E</u> (W) T	Energy (J) Time (s)	
	current.	BAC	density "Calcul	equation in section 6. ate the density of an irreg	gular object,	Potential (V)	difference = <u>Work done (J)</u> Charge (C)	
Power	The energy transferred per second.		like a ci	Displacement	î.	Power = o (W)	current x potential difference (A) (V)	
		LOW POWER HIGH POWER			Mejasuring	Power = o (W)	current <sup>2</sup> x resistance (A) ( <b>Ω</b> )	
Ohm's Law	Current and potential difference are directly proportional as long as			8	-30 on	Density = (kg/m <sup>3</sup> )	<u>mass (kg)</u> Volume (m³)	
	temperature remains constant.	Alpha	Sec	ction 5: Atoms and radiation	Answer the 6 marl	k question:	compare alpha, beta and gamm	na radiation
Section 2: E	lectricity required practical			What is it?	Charge?		Penetrating power?	lonising power?
Write a met diagram for	hod for the practical, using the circuit your equipment list	a	Alpha	Two protons and two neutrons.	+2 (due to having 2 no electrons)	protons and	Short range, absorbed by paper, skin and smoke for examples.	Highly ionising
changes wit	h length of wire"	Beta Gamma	Beta	One electron, emitted from the nucleus of an isotope.	-1 (due to being one without any protons)	e electron )	Medium range, absorbed by thin aluminium.	Medium ionising
Resistance = (Ω)	potential difference (V) current (A)	<b>N</b>	Gamma	An electromagnetic wave, energy.	0 (as it contains no p	particles)	Long range, absorbed by thick lead or concrete.	Low ionising

Section 1: Keywords FLASHCARDS		
Keyword	Definition	
Finite	A limited amount of resource	
Renewable	capable of being replaced by natural ecological cycles or sound management practices	
Potable water	Water that is safe to drink	
Desalination	the process of removing salt from seawater.	
Distillation water	Water from which impurities, as dissolved salts have been removed by one or more processes of distillation	
Sustainable	Able to be maintained	
Cations	Positively charged ions	
Anions	Negatively charged ions	
Bioleaching	Using bacteria to extract metals by producing leachate solutions containing metal compounds	
Phytomining	Extracting metals using plants to absorb metal compounds. The plants are then burned to produce ash and metals collected	
Electrolysis	Splitting with electricity, a method for extracting ions from compounds	

## Using Earth's resources Year 11 Separate

#### Section 2: Investigating rusting

iron + oxygen + water → hydrated iron(III) oxide
Test tube 1 will rust, both oxygen and water present
Test tube 2 will not rust as oxygen is excluded
Test tube 3 will not rust as calcium chloride removes water



#### Section 3: The Haber process

 $3H_2 + N_2 \Rightarrow 2NH_3$ 



Produces ammonia from hydrogen and nitrogen as use as a fertiliser

Explaining the Conditions:

High temp (back reaction is exothermic)

High pressure (less molecules right side)

Iron Nickel catalyst (speeds up reaction)

# Section 4: Desalination of water

- 1. Heat the liquid to vaporise
- 2. Thermometer monitors temperature
- 3. Pure water vapour travels down delivery tube
- 4. Ice condenses water vapour to liquid water
- 5. Solid salts left behind in test tube

Section 1: Key Vocabulary Look, cover, write		
<u>Keyword</u>	Definition	
Filtration	The technique used to separate substances that are insoluble in a solvent from those that are soluble.	
Distillation	Separation of a liquid from a mixture by evaporation followed by condensation.	
Atomic number	The number of protons in an atom.	
Mass number	The number of protons plus neutrons in an atom.	
lonic bond	The electrostatic force of attraction between positively and negatively charged ions.	
Covalent bond	The bond between two atoms that share one or more pairs of electrons.	
Displacement reaction	A reaction in which a more reactive element takes the place of a less reactive element in one of its compounds or in solution.	
Electrolysis	The breakdown of a substance using electricity.	
Endothermic	A reaction that takes in energy from its surroundings.	
Exothermic	A reaction that transfers energy to its surroundings.	

#### Section 2: The Atom

Draw and label a diagram of the atom. Complete the table below to show the mass and charge of the subatomic particles.

 Particle	Mass	Charge
Proton		
Neutron		
Electron		

## Trilogy Chemistry Paper 1 Revision

Required practical 1: Prepare a salt from an insoluble metal carbonate or oxide Make a poster

<u>Step 1:</u> Mix the metal oxide/carbonate with the acid until the solid is in excess.

Step 2: Filter the mixture into a conical flask.

<u>Step 3:</u> Pour the filtrate into an evaporating basin and heat above a Bunsen burner until two thirds of the solution has evaporated.

<u>Step 4:</u> Leave the remaining solution to crystallise over a period of a few days.



#### Key notes:

The name of the acid and metal oxide/hydroxide used will be given in the exam question so you should use the correct names of chemicals for step 1.

The three processes used during this practical are filtration, evaporation and crystallisation.

#### Required practical 2: Investigating temperature changes Make a poster



<u>Step 1:</u> Place the polystyrene cup inside the glass beaker to make it more stable.

<u>Step 2:</u> Measure an appropriate volume of each liquid, eg 25 cm<sup>3</sup>.

<u>Step 3:</u> Place one of the liquids in a polystyrene cup. Step 4: Record the temperature of the solution.

Step 5: Add the second solution and record the highest or

lowest temperature obtained.

#### Section 4: Knowledge recall Cue cards

<u>Ouestion</u>	Answer
1. State what reduction means.	When a metal compound loses oxygen.
2. Define a base.	A substance which neutralises an acid, including alkalis.
3. What would the products be when a metal oxide is reacted with an acid?	A metal salt and water.
4. What is the name of the salt formed from nitric acid?	Nitrates.
5. Name the three processes used to prepare a salt.	Filtration, evaporation and crystallisation.
6. Which metals will react with acids?	Any higher than hydrogen on the reactivity series.
7. What is a displacement reaction?	Where a less reactive metal is pushed out of its compound by a more reactive metal.
8. What would the products be when a metal carbonate is reacted with an acid?	A metal salt, water and carbon dioxide.
9. State the definition of neutralisation.	When an acid and base are mixed to produce a neutral substance.

#### Section 5: Reactions of metals Cue cards

- ) Metal + water → metal hydroxide + hydrogen
- 2) Metal + acid → metal salt + hydrogen
- 3) Metal + oxygen → metal oxide
- 4) Metal carbonate + acid → Metal salt + carbon

dioxide + water

#### Finish the following word equations:

- 1) Sodium + water →
- 2) Magnesium + hydrochloric acid →
- 3) Aluminium + oxygen →
- 4) Calcium carbonate + hydrochloric acid →
   Challenge: Can you write the symbol equations?

Section 1: Keywords FLASHCARDS		
Keyword	Definition	
Acceleration	A measure of how quickly velocity	
Acceleration	is changing	
Air resistance	The frictional force caused by air on	
	a moving object	
Contact force	A force acting between/on objects	
	that are touching	
	direction from an object's starting	
Displacement	position to its finishing position	
	F	
	An object undergoing elastic	
	deformation will return to its	
Elastic deformation	original shape once any forces	
	being applied to it are removed.	
	A state in which all the forces acting	
Equilibrium	on an object are balanced, so the	
Equilibrium	resultant forces are zero.	
Force	A push of a pull on an object caused	
	by interacting with something	
	A force that opposes an object's	
Friction	motion. It acts in the opposite	
	direction to motion.	
	An object undergoing inelastic	
Inelastic deformation	deformation will not return to its	
	applied to it are removed	
	applied to it are removed.	
	A vector quantity has both	
Mastar	magnitude (size) and direction.	
vector	Examples: Acceleration, force,	
	displacement, momentum, weight	
	A scalar quantity has only	
	magnitude (size) Examples Speed,	
Scalar	mass, time, temperature, distance	

## Physics – Forces Trilogy



#### Section 4: Motion graphs



Velocity time graphs: what is happening at A, B, C, D



## Section 2: Key equationsFLASHCARDS Question Answer

Newton's law	$Force = mass \times acceleration$
Moments	$moment = force \times distance$
Speed	Distance travelled = speed x time
Force	Force = Mass x acceleration
Acceleration	Acceleration = change in velocity/time taken

#### Section 5: Stopping distances

Stopping distance = thinking distance + braking distance



#### **Reaction times are affected by:**

Tiredness, Drugs, alcohol and distractions

#### Braking times are affected by:

- poor road and weather conditions, such as wet or icy roads
- poor vehicle conditions, such as worn brakes or • worn tyres



## **FIC**

Key vocabulary Flashcards	
Keyword	Definition
Transverse	A wave in which vibrates at right angles (perpendicular) to the direction of its movement
Longitudinal	A wave vibrating in the direction of (parallel) its movement
Wavelength	The distance from a point on one wave to the equivalent point on the adjacent wave
Amplitude	The maximum displacement of a point on a wave away from its undisturbed position
Crest	The highest point on a wave
Trough	The lowest point on a wave
Frequency	The number of waves passing a point each second
Reflection	The throwing back of a wave
Refraction	The changing of direction of a wave
Echo	A reflection of sound
Ultrasound	Sound with a very high frequency, useful in medical imaging
Electromagnetic Waves	Transverse waves that transfer energy from the source of the waves to an absorber

#### Equations Look, Cover, Write, Check

Wave equation	Wave speed (m/s) = frequency (Hz) x wavelength (m) $v = f \lambda$
Wave Period	Period(s)= $\frac{1}{\text{frequency (Hz)}}$ T= $\frac{1}{f}$

#### Section 4: Measuring Waves RP Put into flow chart

- 1. Set up the ripple tank as shown in the diagram with about 5 cm depth of water.
- Adjust the height of the wooden rod so that it just touches the surface of 2. the water.
- Switch on the lamp and motor and adjust until low frequency waves can 3. be clearly observed.
- Measure the length of a number of waves then divide by the number of 4. waves to record wavelength. It may be more practical to take a photograph of the card with the ruler and take measurements from the still picture.

#### **Physics:** Waves and electromagnetic waves

#### Electromagnetic Spectrum and uses

		Use
Short wavelength	Gamma rays and X- Rays	Medical Imaging And Treatments
Ì	Ultraviolet	Energy Efficient Lamps, Sun Tanning
	Visible Light	Fibre Optic Communications
	Infrared	Electrical Heaters, Cooking Food, Infrared Cameras
svelength	Microwaves	Satellite Communications, Cooking Food
Long wa	Radio Waves	Television and Radio

5. Count the number of waves passing a point in ten seconds then divide by ten to record frequency. Calculate the speed of the waves using: wave speed = frequency × wavelength.

6.



#### Infrared Radiation RP Flowchart

- 1. Place a Leslie cube on a heat-resistant mat. Fill it, almost to the top, with boiling water and replace the lid
- Leave for one minute. This is to enable the surfaces 2. to heat up to the temperature of the water.
- 3. Use the infrared detector to measure the intensity of infrared radiation emitted from each surface, or the temperature of the surface. Make sure that the detector is the same distance from each surface for each reading.



#### Waves on a String RP Flowchart

- 1. Attach a string or cord to a vibration generator and use a 200 gram (g) hanging mass and pulley to pull the string taut as shown in the diagram. Place a wooden bridge under the string near the pulley.
- 2. Switch on the vibration generator and adjust the wooden bridge until stationary waves can be clearly observed.
- 3. Measure the length of as many half wavelengths (loops) as possible, divide by the number of half wavelengths (loops). This is half the wavelength, doubling this gives the wavelength.
- The frequency is the frequency of the power supply. 4.
- 5. Calculate the speed of the waves using: wave speed = frequency × wavelength.







- Ascension the return of Christ to heaven
- Atonement reconciliation
   between God and humans
  - Blasphemy speaking disrespectfully about God or sacred things
  - Creed statement of Christian beliefs
- Ex nihilo From nothing
- Gospels the books of the Bible (Matthew, Mark, Luke and John), which are the only record of Jesus' life
- Grace God's gift which gives the strength to be good and holy
  - Holy Communion the Christian service of thanksgiving using bread and wine (also called Eucharist)
- Incarnation the belief that God took human form in Jesus
- Liturgy a set form of public worship
  - Sacrament an outward ceremony through which God's grace is given
- Stewardship looking after something so it can be passed on to the next generation

Task 2: Read through the following information and create a storyboard to help identify what the Incarnation was

The Incarnation is the Christian belief that God became a human being in Jesus. Christians believe that when Adam and Eve disobeyed God in the garden of Eden, they broke the previously perfect relationship between God and humankind. This meant that before the incarnation, it was only possible to have a partial relationship with God. However, through the incarnation (which led to the life, death and resurrection of Jesus) the power of sin was cancelled so that it became possible for humans to have a full relationship with God and go to heaven after death.

Christians believe that all human beings are children of God but by giving Jesus the title the only Son of God, they express their belief that Jesus was God in human form. Christians believe that this means that Jesus had two natures. In his human nature he was a human being, but in his diviner nature he was God. So, Christians believe that Jesus, the only Son of God, was both fully human and fully divine.

## Year 11: Religious Education - Christian Beliefs



Task 5: Create a pie chart from the 2011 Census what questions does it raise for you?

Task 3: From your own opinion, copy out and rank the following statements in order of importance

1 - It shows Christians that God cared so much about the world that he sent his Son to show humans what God is like and to teach them how to live

- 2 It is the basis of the Christian faith; without the incarnation of Jesus Christ, the Son of God, there would be no Christianity
- 3 In Jesus, humans can see what God is like. It is hard for humans to understand an infinite, non-material, omnipotent being, but an incarnate God brings God closer to human understanding
  - 4 Through the Incarantion, God began the process of salvation from sin, so making it possible for humans to have a full relationhsip with him and go to heaven after death

Task 4: Answer the following - Explain two reasons why Christians belive Jesus was God incarnate. In your answer you must refer to a source of wisdom and authority

Religion	People	%
Christians	33, 243, 175	59.3%
No religion	14, 097, 229	25.1%
No answer	4, 038, 032	7.2%
Muslim	2, 706, 066	4.8%
Hindu	816, 663	1.5%
Sikh	423, 158	0.8%
Jewish	263, 346	0.5%
Buddhist	247, 743	0.4%
Other	240, 530	0.4%

<u>Key Ierms –</u>	<u>Iask I – KEAD, COVE</u>	<u>K, WRIIE</u>
Key Terms	Definition	Image
Vaccine	Injection of weakened organisms to give the body resistance against disease	
Anaesthetic	Drugs given to make someone unconscious before or after surgery	<b>S</b>
Cholera	A bacterial infection caused by drinking water	
Antiseptic	Chemicals used to destroy bacteria and prevent infection	
Contagion	The passing of disease from one person to another	
Workhouse	Accommodation for poor people who could not afford to pay for rent and food	

## <u>History:</u> Industrial Medicine

#### Key Dates - Task 2 - Create a timeline

- 1798 Edward Jenner developed the first vaccine for smallpox
- 1842 Edwin Chadwick published the 'Sanitary Conditions of the Labouring Population'
- 1847 James Simpson developed chloroform as an anaesthetic
- 1854 John Snow's maps proved the source of cholera
- 1858 The Great Stink hits London
- 1861 Louis Pasteur's Germ Theory was published
- 1867 Joseph Lister used antiseptic to prevent infection
- 1875 The Public Health Act local councils had to provide sewers, drainage and fresh water
- 1882 Robert Koch identified bacteria that caused specific diseases

Key People – Task 3 – Create fact files for the following people:

- 1. Edward Jenner
- 2. Florence Nightingale

Research these key people, and include the following in their fact files:

- Date of Birth/Death
- Place of Birth/Death
- Nicknames
- Important roles/achievements
- Famous quotes

#### Key Figures – Task 4 – Create a mindmap

Research the following 'Key Medical Figures' and use them for the mindmap:

- 1) Edward Jenner
- 2) James Simpson
- 3) John Snow
- 4) Louis Pasteur
- 5) Joseph Lister
- 6) Robert Koch

Extension – Include something each individual was famous for

Key Words and Definitions – Task 5 – Create Flashcards

Create flashcards for the following key words, and find out their definitions

- Microbes
- Miasma
- Sanitation
- Compulsory
- Age of Enlightenment
- Spontaneous
- Smallpox

	High and Lo	w Pressure	Globa	al pattern of air circulation	Global Descer	iding cool, dry air	
High     Low       Pressure     Pressure       Caused by cold air sinking.     Caused by hot air rising.       Causes clear and calm     Causes cloudy, stormy       weather.     weather.			Atmosp scale m is distr	pheric circulation is the large- novement of air by which heat ributed on the surface of the Earth.	Atmospheric Polar cell Circulation Polar front Model Ferrel cell (GAC)	Polar easterlies Rising warm, Low pres	moist air isure Descending cool, dry air
V	* *		Hadley cell	Largest cell which extends from the Equator to between 30° to 40° north & south.	Hadley cell	ast Trade wings	
1			Ferrel cell	Middle cell where air flows poleward between 60° & 70° latitude.	Equatorial doldrums	ast Trade winds	Low pressure
1	2-4		Polar cell	Smallest & weakness cell that occurs from the poles to the Ferrel cell.	Horse latitudes	30° Mesterilles	Descending cool, dry air High pressure
1) 2)	What kind of pressur evidence this? (Look Copy the GAC model systems	e systems do we mostly ex out the window a hint). in fully annotated detail ar	perience in nd colour c	n the UK? How can you coded high and low pressure	Polar front Polar cell	Rising warm, Low pre Polar easterlies	, moist air sssure
3) 4) 5)	Create a storyboard o Where do you find tr Outline the different most effective and w	cartoon strip of the formati opical storms and WHY? W strategies manage tropical hy?	on of trop hat are the storms, w	pical storms. Jeir different names? Vhich one do you think is the	The challenge TROPICAL S	s of natural ha STORMS	zards:
	Formation of	Tropical Storms		Distribution	of Tropical Storms.	Management of	Tropical Storms
1	The sun's rays heats lar and autumn. This cause pa	ge areas of ocean in the summ is warm, moist air to rise over t rticular spots	er	They are known by many names clones (India) and typhoons (Jap that lies roughly 5-15	, including hurricanes (North America), an and East Asia). They all occur in a band ° either side of the Equator.	<u>Protection</u> Preparing for a tropical storm may involve	<u>Aid</u> Aid involves assisting after the storm
2	Once the temperature leads to a low pressu thunderstorm. This car tr	is 27°, the rising warm moist a re. This eventually turns into a uses air to be sucked in from th rade winds.	ir l	STAT.	Rection	construction projects that will improve protection.	commonly in LIDs.
3	With trade winds blow the rotation of earth thunderstorm w	ing in the opposite direction ar involved (Coriolis effect), the rill eventually start to spin.	ıd	HURRICANES	TYPHOONS	Development The scale of the impacts depends on the whether the country has the	<u>Planning</u> Involves getting people and the emergency
4	When the storm begi tropical storm (such a	ns to spin faster than 74mph, a is a hurricane) is officially born	HUF	RRICANES		resources cope with the storm.	with the impacts.
5	With the tropical storm sinks in the centre of condition call	growing in power, more cool a the storm, creating calm, clear ed the eye of the storm.	air	EQUATOR Areas in which	CYCLONES	Prediction Constant monitoring can help to give advanced	Education Teaching people about
6	When the tropical sto source (the warm ocea Eventually i	orm hits land, it loses its energy n) and it begins to lose strengt t will 'blow itself out'.	h.	form Typical path of storm	CYCLONES	warning of a tropical storm	storm.

#### Week 1 Make Flash cards

#### <u>To start off:</u>

Dans l'image ... Dans la photo... Il y a... Je vois... Je peux voir... La photo montre... In the image In the photo There is/ are I see I can see The photo shows...



#### Be specific!

- Au premier plan... Au deuxième plan... À gauche... À droite... Près de.. Devant..
- In the foreground In the background to the left to the right close to In front of

#### Week 2 Look, cover, write, check

What's there?



a man/woman

some people

lots of people

some trees

a scene of

some buildings

Un homme/une femme Des personnes Beaucoup de personnes Des édifices Des arbres Une scène de...

## Describing people

Il/elle a l'air ...he/she seems...Ils/elles ont l'air...they seem..Content(e)(s)happyTriste(s)sadFatigué(e)(s)tiredÉnervé(e)(s)angry

## French Describing a photo

#### <u>Week 3</u> Look , cover, write, check

#### What are they doing?

Il/elle est en train de He/she is... Ils/elles sont en train de They are... parler talking sourire smiling rire laughing se disputer arguing marcher walking working travailler jouer playin

> <u>Week 4</u> Make Flashcards

#### **Weather**

II y a du soleil II fait beau II fait mauvais II pleut II y a du vent II neige

it's sunny
it's nice weather
It's bad weather
it's raining
it's windy
it's snowing

## <u>Week 5</u> Look, write, cover, check

#### $(\cdot)$ **Opinion phrases** Je crois que... I think that I think that... Je pense que... J'imagine que... I imagine that... I suppose that... Je suppose que... Je dirais que... I would say that Il me semble que.. It seems to me that.. Cela me rappelle... It reminds me of... Do you like it? J'aime/j'adore la photo I like/I love the photo because parce que c'est it is beautiful beau I don't like/I hate Je n'aime pas/je déteste the photo la photo car because c'est plein de... it is full of couleur colour

Choose 5 photos and use the vocabulary on this page to describe them

#### GCSE ART AND DESIGN HUMAN CONDITION TERM 4

AO1 Develop ideas through investigations, demonstrating critical understanding of



sources

Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes

AO3 Record ideas,

observations and insights relevant to intentions as work progresses

A04

Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language



Task 1 Create Flash cards describing the methods of the artist's work you have used (AO1) Augustus John; tones, Fred Hatt; colour crayon. Loui Jover; mixed media and Francoise Neilly; thick paint marks and Day of the dead artists.





Task 3 Evaluate how you personally met all the Assessment Objects in this year's work. Artists Research A01, design ideas A02, drawing skills A03 and final piece A04. Task 4/5 Create a mini final piece (A04) using the materials you have at home, or a detailed annotated design, on the theme Human condition.



Task 2 Create a diagram to describe how to annotate your work.





Describes writing notes, using images and explaining your thoughts to show the development of your work.

#### Step 1- Describe

What is this an image of? What have you done here? What was this stage of the project for?

Step 2- Explain How was this work made? How did you produce particular effects? How did you decide on the composition?

#### Step 3- Reflect

Why did you use these specific methods? Why do particular parts work better than others? Why might you do things differently next time?



#### **Evaluation Questions**

Explain how you approached your final idea? What was it about? Go through the process of the whole project, which artists did you look at what drawings and paintings did you

which artists did you look at what drawings and paintings did you do?

How did all these experiments help you with your final piece? Talk about the variety of media/materials that you have used for

> your final piece? What works well about your ideas? What could you improve on your final ideas?

Task 1: Follow these important ideas at each stage, this is a guide of content for your log books

Year 11 - Key Stage 4 Performing Arts Component 3

During stage 1, devisers should respond to the brief and stimulus by highlighting and mind mapping their initial ideas.

During stage 2, deviser should carry out research and begin to develop. Their initial ideas.

The practical exploration of the initial ideas should take place at stage 3. During stage 4, devisers begin to structure their material. It is also at this stage where devisers develop clear characters.

During stage 5, devisers continue developing and adding detail to the piece The development of dialogue and scripting also happens at this stage.

Devisers, rehearse and refine during stage 6 of the rehearsal process.

During stage 7, further refining is required . The sourcing of props , set, music and costumes also happens at this stage. The 'Dress Rehearsal' usually happens at

stage 8 of the devised rehearsal process.



Imagination Target Audience Theatre in Education Message

Task3:

Update your

to-do list!

#### **Prioritising tasks**

Essential time management skills for devising a piece of drama. Each week, ensure that you complete a 'To do list'. This will ensure that you are using your rehearsal time wisely.

P Respond to brief and sti b Mind map ideas Practical exploration **b** Structure material D Character development Þ Script dialogue **b** Rehearse and refine Source props **Þ** Source set b Source music and or sound effects **b** Dress rehearsal

Task 4: Implement the Tier 2 Vocabulary into your work from the onset of Component 3

#### **Tier 2 Vocabulary Definition**

#### Compromise

An agreement or settlement of a dispute that is reached by each side making concessions .

#### Delegate

To choose or elect someone to take on a specific role or responsibility. Evaluate

To judge or calculate the quality, im portance, amount, or value of something.

#### Task5:

Use PEEL as a basis for your notes in your log books

#### PEEL

Point - Make a clear point of what you need to achieve Evidence - State how this would fit Explain - Why? How? Link – back to the original point

## Agencies

## **Music**

An agency is an organization (business) that provides a particular service on behalf of a business or an artist. There are many agencies within the music industry that are concerned with protecting the rights of work produced by the music industry, including the revenue generated by these works. It is important that you remember these and their acronyms.

#### MCPS

The Mechanical Copyright Protection Society represents their members' mechanical rights, whenever a piece of music is reproduced as a physical product. They then collect royalties for this.

#### PRS

Performing Rights Society represents their members' performing rights, whenever a piece of music is performed or played in any public space or place outside of the home. They then collect royalties for this in the form of licenses.

#### PPL

Phonographic Performance Limited licenses the right to play recorded music and music videos in public. They then collect royalties for this.

**Royalties** = Every time music is used commercially (played), a % of earnings is given to the artist, label, songwriter.... etc



#### **Trade Bodies**

A trade body is an organisation founded and funded by businesses that operate in a specific industry. An industry trade body participates in public relations activities such as advertising their trade, providing training for members and lobbying politicians about issues that affect their trade. However, its main focus is collaboration between companies and businesses. It is important that you remember these and their acronyms.

#### MPG (Music Producers Guild)

Represents the interests of all involved in the production of recorded music

- **Record Producer**
- Sound Engineer ٠



**Mastering Engineer** Software programmer ٠

**APRS (Association of Professional Recording Services** Represents those ho work in the audio industry.

- **Record Producer** ٠
- Sound Engineer ٠
- **Mastering Engineer** ٠
- Manufacturer ٠
- Live Sound Technician ٠

#### PLASA (Professional Lighting and Sound Association)

Represents those who supply technologies and services to events.

#### Task 1

٠

Look cover, write, check, information on Agencies Task 2 **Design a mind map on Trade Bodies** 

## Unions

A Union is an independent organisation that represents their members and stands up for rights of their members.

- monitoring employment conditions and contracts between employees and employers
  - advice for freelancers on tax and National Insurance (NI)
  - support in relation to negotiation of minimum rates of pay and working conditions
  - handling of disputes such as if there are contract disputes or if someone isn't paid
- other services networking opportunities, information about insurance and pensions, information and updates about changes to relevant legislation.



Each union represents a certain collection of industry job roles. It is important that you remember these and their acronyms.



## Hire Companies









hire company.

Task 3

Task 4



Create revision flashcards on Unions

Write a paragraph using the reasons

supplied of why you would use a

Task 5 Design a crossword on the

three organisations, Agencies,

Unions and Trade Bodies.

You need to know reasons why you might hire the following:

#### Sound and Lighting Equipment Hire

(1) Sound equipment such as P.A. systems are expensive. If a venue or band doesn't use it much then it is cheaper to hire

- (2) You get the technical expertise of the company
- (3) Equipment is high quality
- (4) The hire company sound engineers takes control of the sound and lights so the

artist can concentrate on the music

#### **Rehearsal and Studio Space Hire**

- (1) To record a song in a room with the best acoustics creates the best sound
- (2) Excellent acoustics (sound) for a rehearsal

#### Year 11 Hospitality & Catering - Food Choices There are SIX TASKS to complete (see Red Bold text)

Food Choice         Food choices for a balanced diet depend on many factors, such as:         • advertising and other point of sale information;         • cost and economic considerations;         • cultural or religious practices;         • environmental and ethical considerations;         • food availability;	Budgeting         There are many things that we can do to spend money wisely on food. Examples can include:         • eating the seasons:         • stocking up on food with a long shelf-life:         • taking time to plan meals and write a shopping list:         • cooking using one pot.         • making fake-aways rather than buying takeaways:         • using leftovers:	Personal Preferences         A number of factors can influence personal preferences, including:         • colour, size and shape of crockery and cutlery used;         • portion size;         • serving style;         • taste, aroma, texture, appearance, shape and colour of food.	Food certification and assurance scher Defined standards of food safety, guality of animal welfare. Food provenance: Knowing where food grown, caught or raised and how it was produced. Marketing: Promoting and selling product services, including market research and advertising. Religion: A particular system of faith and worship.
food <u>preterences</u> ;     food <u>provenance</u> ;     health <u>concerns</u> ;     individual energy and nutrient <u>needs</u> ;     portion <u>size</u> ;     social considerations.	<ul> <li>replacing branded items with cheaper <u>items</u>;</li> <li>comparing prices and shop around to find the cheapest <u>items</u>;</li> <li>growing your own food.</li> </ul>	Food Provenance Food provenance is about where food is grown, caught or reared, and how it was produced. Food certification and assurance schemes guarantee defined standards of food safety or animal welfare. There are many in the UK, including.	Seasonal food: Food grown at a particula of year. TASK 1: • List these Key Terms in full. Revis

#### Consumer Information

Information can help consumers make informed choices, including:

- advertising and marketing;
- media, online blogs/forums;
- packaging, nutrition and health claims; ٠
- point of purchase information and product placement
- recipe ideas.

**Cost and Economic Considerations** The cost of food and money available will influence people's food choices: If money is limited, people may choose to buy more basic items. Luxury items might then be selected for special occasions.

#### Food Prices

Food prices can and do change throughout the year and over time. This may be due to a variety of reasons, including:

- climate and weather natterns: .
- crop failure:
- . crop disease: ٠ seasonality
- ٠
- consumer demand agricultural costs increase
- fuel prices go up. ٠
- increased use of bio fuels.

#### **Cultural or Religious Practices**

People around the world choose to eat or avoid certain food due to their cultural or religious practices.

Religion	Pork.	Beef	Lamb	Chicken	Fish
Islam	×	Halal	Halal only	Halai only	1
Hinduism	x	X	1	1	1
Judaism	×	Kosher only	Kosher only	Kosher only	4
Sikhism	X	x	1	1	1
Buddism (strict)	×	x	x	x	x
Seventh- day Adventist Church	x	×	x	1	4
Rastafari movement	x	x	.X.	х	x

**Environmental and Ethical Considerations** 

Some considerations when buying food might be:

- fair trade;
- local food:
- genetically modified (GM) food:
- ٠ organic food:
- free range. ٠

#### Food Availability

Buying food when it is in season will often mean that the price is lower. Technology and the importation of food has allowed food to be available all year round. TASK 2:

Research Seasonality in the UK. Make notes on this task.





Marine Stewardship

#### SCADING **Health Concerns**

Ö

People may choose their food based on their own or their family's health and wellbeing:

- allergy and intolerance, e.g. lactose intolerance, coeliac disease, wheat allergy, diary allergy;
- body image.
- health issues, e.g. coronary heart disease, type 2 diabetes, inflammatory bowel disease, over or under malnutrition:

mental health.

#### Individual Energy and Nutrient Needs

The amount of energy and nutrients needed differs between different age groups and between males and females

Energy needs also depend on activity levels. For example, athletes will have much higher energy requirements due to their high level of physical activity.

## Advertising: Advertising is a form of communication for marketing and used to encourage, persuade, or manipulate an audience to continue or take some new action. Ethical: Relating to personal beliefs about what is morally right and urong 165 /85 s or r time To find out more, go to: https://bit.ly/3dpC9Fi

Portion Size Having a healthy, balanced diet is about getting the right types of foods and drinks in the right amounts.

Key Terms



#### Social Considerations

- Body image and peer pressure.
- Development of ready meals and a wider range of convenience foods.
- Development of labour saving devices. Lack of competence and confidence in
- the kitchen.
- Lack of time.
- · Living arrangement (e.g. living alone).

#### TASK 3 to 6:

- Consider your own household and create a mind map of the social and economic considerations . that affect your food choice. Explain how different this might be to your grandparents at your age. . Write out, and argument for why food provenance is important to some consumers. Include
- examples of UK food certification and assurance schemes.
- Make notes on each of the Headings on this sheet. This should be then transferred onto a Flash Card highlighting the main points.

## Creative Media

Tasks – Cross-sector exploration You must carefully select at least one media product from each of these three sectors: .audio/moving image. Publishing .interactive media products You will need to explore the relationship between each media product, its audience and purpose, by investigating:

the type and content of each media product the primary and secondary target audiences for each media product the purpose of each media product from the perspective of both the producer and the audience. Make sure you use media terminology accurately and present your outcomes to a high standard.

You will be asked to draw sketches of your ideas for both assessments in component 2 and the component 3 exam. Students achieving the higher grades will use the correct terminology in their writing. For you to do this you must memorise the terms below:



#### Creative Media

## Inside Page Further Key Terminology

You will be asked to draw sketches of your ideas for both assessments in component 2 and the component 3 exam. Students achieving the higher grades will use the correct terminology in their writing. For you to do this you must memorise the terms below:

