

Learning: The Ruskin Way

At Ruskin all students to **learn together** and **achieve high standards**. Students follow our **Core Values** to become a **Ruskin Learning Ready Student**.

RESPECT: A Ruskin Learning Ready student is **respectful** towards peers, teachers, support staff and visitors. Within our diverse school community, they demonstrate **kindness** and **tolerance**. They show **self-respect** by striving to be the best they can be and by being **organised** and **prepared** to learn.

HIGH ASPIRATIONS: A Ruskin Learning Ready student is **ambitious** both inside and outside of the classroom. They **love to learn** and appreciate all of the **opportunities** offered to them. Because of their high aspirations, they **strive** to be the **best** that they can be.

CONFIDENCE: A Ruskin Learning Ready student is **confident** in their **abilities** and **strengths**. They are **not afraid** to make mistakes and will **ask questions**. They take an **active role** in their learning and demonstrate **independence**.

WE ARE A COMMUNITY: A Ruskin Learning Ready student **works well** with others and is a **team player**. They **care** for others and are proud to be part of the **Ruskin community**.

A Ruskin Learning Ready Student

PREPARED:

- Has a good night's sleep
- Eats well and stays hydrated
- Arrives at school and lessons on time
- Wears their uniform correctly
- Enters the room calmly and is ready to learn

ORGANISED:

- Brings the correct equipment
- Manages their time appropriately
- Completes all work, including homework, to the deadline set and to the best of their ability

RESPECTFUL

- Is respectful, kind and tolerant of all people in our diverse school community
- Is a team player
- Listens to others without judgement
- Demonstrates self-respect and takes pride in their work and progress



CONFIDENT:

- Has confidence in their own abilities and strengths
- Is not afraid to ask for help and support
- Can communicate and read with confidence
- Is inquisitive and takes an active role in their learning

AMBITIOUS:

- Has high aspirations for themselves and their future
- Strives to be the best they can be
- Relishes the opportunities offered to them

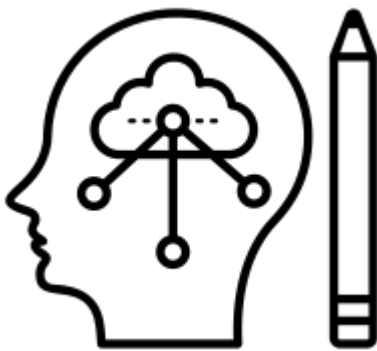
REFLECTIVE:

- Listens to and responds to their teachers' feedback
- Is able to identify their next steps and areas for improvement
- Strives to improve

Our Evidence-Informed Independent Learning and Revision Strategies



Quiz It – what can you remember about your Core Knowledge Questions? What more do you learn and remember?



Map It – use mind maps to create revision resources. These can then be used to learn the core knowledge.



Link It – what other subjects/topics that you have studied does this knowledge link to? Why and how does it link?



Independent Learning: How to Quiz It



Quiz It – what can you remember about your Core Knowledge Questions? What more do you learn and remember?

How you use this strategy depends on whether you are **rehearsing** (the information is new to you) or **retrieving** (trying to recall knowledge you have already learnt) The majority of your Quiz It work should be **Retrieval Practice** as this will help you to **remember more**.

Step 1: **LOOK**

- Pick a subject/topic and read over the Core Knowledge Questions (you may not pick all of them from one subject/topic depending on what you have learnt already).
- You may need to re-read.
- Copy out the questions on a blank template.

Step 2: **COVER**

- Turn over your Core Knowledge Questions or cover up them up.

Step 3: **WRITE**

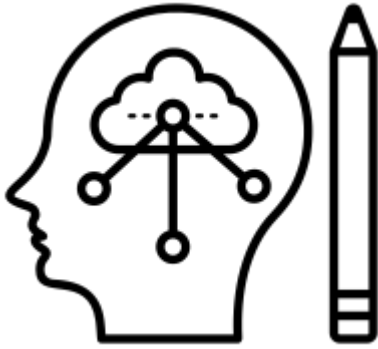
- On your blank template, write in the answers.
- Use black or blue pen.

Step 4: **CHECK**

- Uncover the answers.
- Using green pen, check your answer.
- Tick every correct item and correct any mistakes – this is the most important part of the process.

Step 5: **REPEAT**

- Complete the process again for any questions that you got wrong.
- Add more questions to your blank template and complete the process again.



Independent Learning: How to Map It

Map It – use mind maps to create revision resources. These can then be used to learn the core knowledge.

Step 1: Identify the knowledge

- Pick a topic that you wish to revise. This will go in the centre of your mind map.
- Have your Core Knowledge Questions ready.

Step 2: Identify the Core Knowledge Questions

- These questions will become the main branches of your mind map.
- Write out the questions carefully and leave space around them.

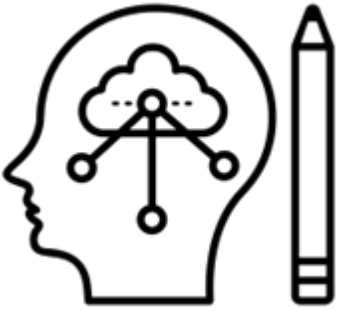
Step 3: Branch Off

- Branch off your Core Knowledge Questions with the answers.
- Copy the answers carefully.

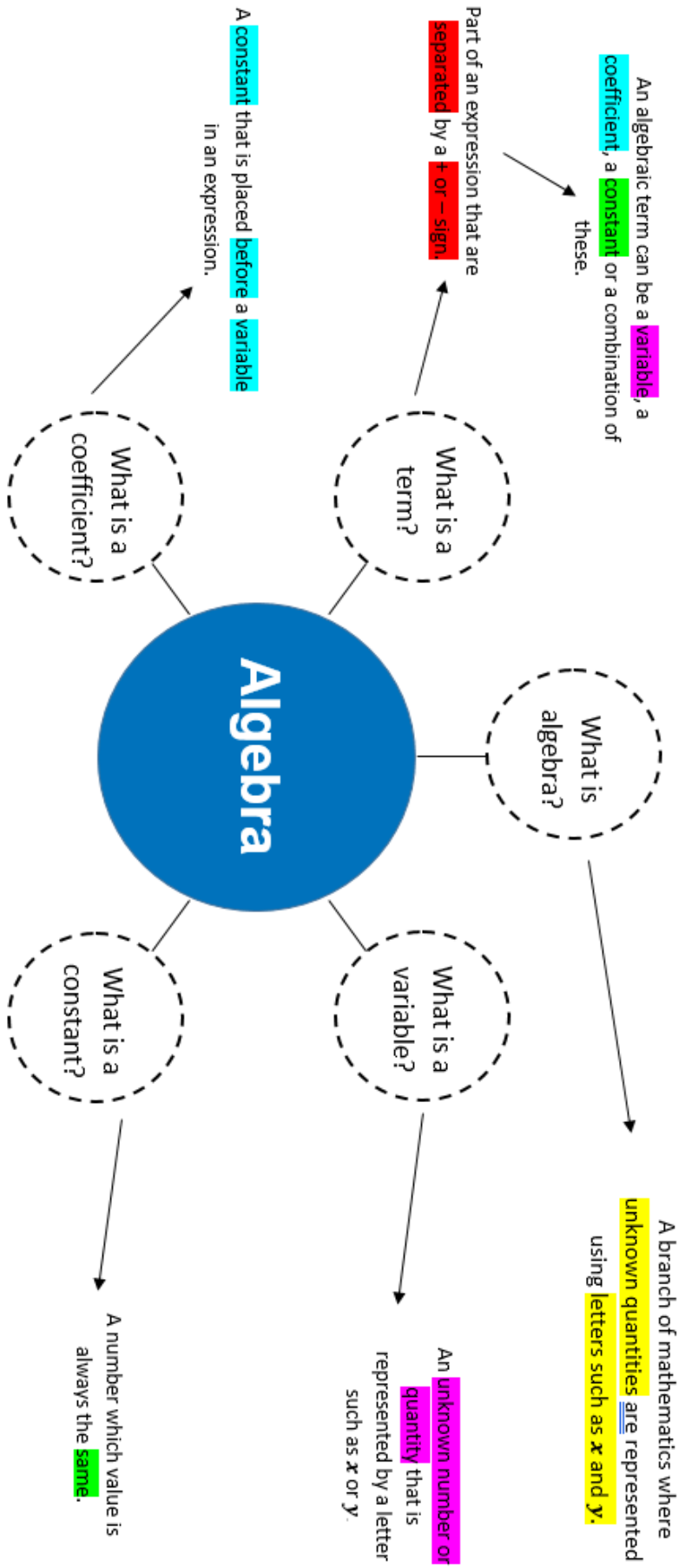
Step 4: Use Images and Colour

- Use images and colour to help answers stick in your mind.
- Highlight the key words that you need to remember.

Give yourself plenty of space to write the Core Knowledge Questions and the answers. You need to be able to visualise the information when you are trying to recall it.



MAP IT EXAMPLE



Independent Learning: How to Link It



What other subjects/topics that you have studied does this knowledge link to? Why and how does it link?

- Choose 2 Core Knowledge Questions from a specific topic.
- Write three sentences to show how these link to other topics that you have studied. Don't forget that these topics could be from different subjects and/or from learning that you did in a previous year.
- Use the Link It proforma to answer the two questions (using all of your knowledge) and also how they link together.

You could:

Compare and Contrast:

- X is similar to/different from Y because...
- X is more/less...than Y because...
- In a similar way to X, Y is...
- In a different way to X, Y is...

Cause and Effect:

- X happens because of Y...
- X and Y work together because...
- X happens because...

Support/Refute:

- X supports the ideas of Y because...
- X refutes the ideas of Y because...



LINK IT EXAMPLE



What is Photosynthesis?

Photosynthesis is the chemical reaction that makes glucose (the plant's food) using light energy. The reaction occurs between carbon dioxide gas from the air absorbed by the leaves and water which is absorbed through the roots. Glucose is made in the leaves and oxygen is released back into the air as a by product.

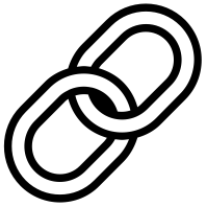


The link between them is that water is a necessary for **both** the process of photosynthesis and transpiration is the constant stream of water moving through the plant from roots to leaves.



What is Transpiration?

Transpiration is the loss of water from the plant as it moves into the roots, up the stem to the leaves for photosynthesis. Some water is lost through the leaves, by the stomata or pores by evaporation.



LINK IT EXAMPLE



Who is Scrooge?

Scrooge is a misanthropic miser whose obsession with money has corroded the important relationships in his life. At the start of the text, he is "solitary as an oyster". However, through his journey with the spirits he metamorphizes into a benevolent character. Through Scrooge, Dickens highlights our ability to change our worldview and shines a light on the importance of sharing



The link between Mr. Birling and Scrooge is that they **both** represent negative aspects of humanity—selfishness, greed, and a lack of empathy—but **they differ** in their responses to these characteristics. Scrooge ultimately experiences redemption and personal growth, **while** Mr. Birling's character serves as a critique of those who prioritise their own interests over social responsibility.



Who is Mr Birling?

Mr. Birling is a capitalist who holds conservative views. Despite his wealth, Mr. Birling is depicted as an insensitive and callous character. He is dismissive of the concerns of the working class. Mr. Birling's character is a representation of the narrow-mindedness and lack of social responsibility that Priestley criticises in the play. Through his character, Priestley explores themes of social inequality, responsibility, and the interconnectedness of individuals in society.

Year 10 Core Knowledge Questions

ART

1	What does techniques mean? (AO2)	The method used to complete the art work, can be generic such as painting or more focused such as blending.
2.	How could you use the 7 visual elements of art in your work? (<i>general</i>)	<p>Line- through exploring lines as a contour (outline), sketching. Lines can be used to give the impression of different textures and tones, as well as simply showing where the edge of an object meets space.</p> <p>Tone – exploring the light and dark areas of work.</p> <p>Shape – creating and exploring organic and geometric shapes within work. Using shapes to create patterns in a regular or irregular way.</p> <p>Space – considering the composition of work to show depth of perspective, or thinking about both the positive and negative space.</p> <p>Form – creating the illusion of 3D or creating in 3D.</p> <p>Texture – using mark making, collage or paint application to create an illusion or actual texture to the surface.</p> <p>Colour – consider contrasts, show emotion, look at colour harmonies, set a tone or mode.</p>
3	What does refinement mean? (AO2)	Refinement is the improvement of the idea. It does not involve radical changes, but it is about making small changes which improve the idea in some way.
4	What is colour theory? (AO2)	<p>Colour theory is the art and science of using colour.</p> <ul style="list-style-type: none"> • What impact does colour have? • Primary colours • Secondary colours • Tertiary colours • Harmonious colours • Complementary colours • Tint • Shade
5	What is experimentation? (AO2)	This is when you practice, experiment and trial different techniques to ensure they are suitable for the chosen final piece in intentions.
6	What does it mean by realising your intentions? (AO4)	This is the plan of something you would like to do or achieve through your work and is usually evidenced by your final piece.
7	What is a final piece (AO4)	A final piece is a single or series of works that conclude your project and the journey you have been on., it shows you realising your intentions. Your final piece should showcase how you have refined and developed your ideas as well as your use of materials, techniques and processes.
8	What are trials in art? (AO2)	Trials are where you are exploring a range of different materials, techniques and processes based on your ideas and inspired by your research. These help you to refine your ideas.
9	What are the three main components of AO1 that help develop your ideas?	Mind maps, mood/visual image board, artist research.

	(AO1)	
10	Why do you need to annotate your work? (AO1)	Helps to show you understand the task, learn how to analyse ideas and make good decisions about your work.
11	What presentation skills are needed? (general)	<ul style="list-style-type: none"> • Considered space and layout. • Neat and well written information. • Cutting skills demonstrated • Creative font or titles • Considered and appropriate embellishments and backgrounds.
12	What are the 5 main areas to include when analysing artwork? (AO1)	<ul style="list-style-type: none"> • Content - when you are looking at and discussing the subject of the work. • Visual elements of art – how have these been used in the work. • Materials or media – what has been used. • Process - how the work has been developed and made. • Evaluation – personal opinions about the work and how it can inspire your ideas.
13	What is a Visual Artists response (AO1)	A piece of art inspired by an artist, you could explore similar content/theme, style or use of materials, techniques and processes.
14	Why do you need to annotate your work? (AO1)	Helps to show you understand the task, learn how to analyse ideas and make good decisions about your work.
15	What does it mean to refine your work? (AO2)	The improvement of your work by making small changes and or manipulations.
16	What is content? (AO1)	Content is when you are looking at and discussing the subject of the work. <ul style="list-style-type: none"> • What is it? What can you see? • What does the artist call the work? • What is the theme of the work?
17	What is mood? (AO1)	Mood is looking at the communication of moods and feelings in art work. <ul style="list-style-type: none"> • How does the work make you feel? • Why do you feel like this? • Does the colour, texture, form or themes affect your mood?
18	What is process (AO1)	Process is how the work has been developed and made. <ul style="list-style-type: none"> • What materials and tools have been used? • What is the evidence for how it has been made? Painted, drawn, woven, printed, stitched, collaged etc.

1	Explain the types of activities in the pulse raiser and give examples?	Activities that gradually increase in intensity to increase the heart rate.
2	Explain the response of the cardiorespiratory system to the pulse raiser?	Increased heart rate Increased breathing rate Increased depth of breathing Increased supply of oxygen to the working muscles Increased removal of carbon dioxide
3	Explain the response of the musculoskeletal system?	Increased temperature of the muscles Increased pliability of the muscles Reduced risk of muscle strain.
4	Explain the types of activities in the mobiliser?	Activities that take the joints through their range of movement starting with small movements and making these bigger as the warm-up progresses.
5	Explain the response of the cardiorespiratory system to the mobiliser?	Slight drop in heart rate as intensity of exercise lowers. Slight drop in breathing rate as intensity of exercise lowers.
6	Explain the response of the musculoskeletal system to the mobiliser?	Increased production of synovial fluid in the joints to increase lubrication of joint and increase range of movement at the joint.
7	Explain the types of activities in the preparation stretch?	Activities to stretch the main muscles that will be used in the physical activity: Location of main muscles – deltoids, biceps, triceps, erector spinae, abdominals, obliques, hip flexors, gluteus maximus, quadriceps, hamstrings, gastrocnemius Types of static and dynamic stretching for each muscle group: – simple stretches – compound stretches
8	Explain the response of the cardiorespiratory system to the preparation stretch?	Slight drop in heart rate and breathing rate for static stretches Maintained elevated heart and breathing rate for dynamic stretches
9	Explain the response of the musculoskeletal system to the preparation stretch?	Extending muscles so that they are fully stretched and less likely to tear during the sport or activity session.
10	Explain how to adapt a warm up for different categories of participants?	Vary intensity of activities Low impact and high impact options Vary timing of warm-up – longer time frame for beginners, participants with low fitness levels and those aged 50 plus Types of stretch used – simple stretches for beginners, compound stretch for moderate to advanced participants.
11	Explain how to adapt a warm up to make it specific to a physical activity?	Introduction of equipment in the warm-up that is specific to the physical activity Using movements and activities from the physical activity in the warm-up Stretching the main muscles required for the specific physical activity.
12	List what you will include in your session plan?	Pulse raiser Mobiliser Preparatory stretches

		Timings, key points and equipment
13	Explain what you will consider with the organisation and demonstration of the warm up activities?	Space – areas used Equipment Organisation of participants Timing Demonstrations Positioning.
14	Explain how you would support participants as they take part in the warm up?	Observing participants Providing instructions Providing teaching points Providing feedback to participants.

BTEC SPORT – LEARNING AIM A

1	Give an example of a sport for each of the physical components of fitness? BASSFM	Body composition – low body fat, e.g. gymnastics, high muscle mass, e.g. sprinters Aerobic endurance – events/sports lasting more 30 minutes Muscular strength – activities requiring force, e.g. throwing events Speed – activities requiring fast movement, e.g. sprinting Flexibility – activities requiring a wide range of movement around a joint, e.g. gymnastics, martial arts Muscular endurance – events/sports lasting more 30 minutes
2	Give an example of a sport for each of the skill related components of fitness? CRABP	Coordination – any activity requiring the movement of two or more body parts and can include the use of sporting equipment, e.g. hand, eyes and tennis racquet to connect with the tennis ball. Reaction time – any activity where a quick decision or response to a stimulus is needed Agility – activities requiring quick changes of direction, e.g. dodging the opposition in a team game, freestyle skiing Balance – an activity requiring the control of the distribution of weight or to remain upright and steady Power – activities requiring explosive movement e.g. gymnastics, basketball
3	What are the basic principles of training and briefly explain each? FITT	Frequency – the number of training sessions completed over a period of time, usually per week Intensity – how hard an individual will train Time – how long an individual will train for Type – how an individual will train by selecting a training method to improve a specific component of fitness.
4	What are the basic principles of training and briefly explain each? SPORT RIVA	Specificity – training should meet the needs of the sport, or physical/skill-related fitness goals to be developed Progressive overload – in order to progress, training needs to be demanding enough to cause the body to adapt, improving performance

		<p>Reversibility – if training stops, or the intensity of training is lowered, fitness gains from training are lost</p> <p>Rest and recovery – to allow the body to recover and adapt</p> <p>Individual differences – training should meet the needs of an individual</p> <p>Variation – altering types of training to avoid boredom and maintain motivation to train</p> <p>Adaptation – changes to the body due to increased training loads</p>
5	What is heart rate?	The number of beats per minute.
6	How do you measure heart rate?	Use the pulse in your neck (carotid pulse) or on your wrist (radial pulse). Use your index and middle finger only.
7	How do you calculate max heart rate?	220 – age
8	What is training threshold?	To improve fitness from regular exercise you must push your heart rate above a certain level, known as the training thresholds.
9	What is the aerobic training threshold?	60-85 % of the maximum heart rate
10	What is the anaerobic training threshold?	85% + of the maximum heart rate
11	What is the Borg scale?	A simple method of rating perceived exertion (RPE) and is used to measure a performer's level of intensity during exercise. The scale is from 6 – 20.
12	Write the calculation which shows the relationship between RPE and heart rate.	$RPE \times 10 = HR \text{ (bpm)}$
13	List 3 pieces of Technology to measure exercise intensity.	Heart rate monitors Smart watches Apps

BUSINESS STUDIES

1	What is a stakeholder?	Anybody with an interest in the business
2	What are examples of internal stakeholders?	Owners Employees Managers
3	What are examples of external stakeholders?	Suppliers Local community Government Shareholders Customers Pressure groups
4	What is a pressure group?	A group that tries to influence public policy in the interest of a particular cause
5	What is the impact of stakeholders on business?	Could be conflict as they have different interests
6	What is e-commerce?	Buying and selling online
7	How can businesses communicate with	Apps



	customers digitally?	Text messages Websites Email Social media
8	Goods must be what, according to the Consumer Rights Act?	As described Fit for purpose Satisfactory quality
9	If a product does not meet the principles of the Consumer Rights Act, what is the customer entitled to?	Refund Repair Replacement
10	What does employment law cover?	Recruitment The equality act Wages (minimum wage) Health and safety
11	What penalties can be applied if businesses do not follow legislation?	Fines Prison Disqualification
12	How does the economy affect business?	Change of consumer income Unemployment Inflation Changes to interest rates Exchange rates Tax: <ul style="list-style-type: none"> • VAT • Corporation tax

COMPUTER SCIENCE

1	What is abstraction?	Focusing on only the important parts
2	What is decomposition?	Breaking down a problem
3	What is algorithmic thinking?	Creating a step by step instruction
4	Describe a linear search	Searching through a list sequentially
5	Describe a binary search	Searching through a list by repeatedly checking the half way point.
6	What are the 3 sort algorithms?	Bubble, merge, insertion
7	What are the key shapes in a flowchart?	Process=Rectangle Diamond=Decision Circle=Start/stop Parallelogram=Input/Output

DANCE - Alongside these Core Knowledge Questions, you are required to show critical appreciation of the Professional Set Works. AQA fact files and key knowledge documents are available in your Dance folders and on the school website.

1	What are actions?	What a dancer does.
2	What are the 8 key dance	Gesture, elevation, travel, transfer of weight, stillness, use of different body part,



	actions?	rotation, floorwork.
3	What is space in dance?	Where the dancer moves e.g. pathways, levels, directions, size of movements, patterns, spatial design.
4	What are dynamics in dance?	How the dancer moves e.g. fast/slow, sudden/sustained, acceleration/deceleration, strong/light, direct/indirect, flowing/abrupt.
5	What is relationship in dance?	Relationship refers to the connection that a dancer has to everything else: this can be space, to time, to music and to other dancers.
6	What are technical skills?	Dynamics, relationships, space, timing, actions, rhythmic content, style.
7	What are physical skills?	Mobility, Isolation, Stamina, Strength, Flexibility, Alignment, Balance, Posture, Extension, Control, Co-ordination
8	What are mental skills and attributes?	Systematic repetition, mental rehearsal, rehearsal discipline, planning a rehearsal, response to feedback, capacity to improve
9	What mental skills do we show when we perform?	Movement Memory, Commitment, Concentration and Confidence
10	Why and how do we warm up?	<ol style="list-style-type: none"> 1. Increase the heart rate 2. Pump oxygen to vital organs and muscles 3. Increase our internal body temperature 4. Mentally prepare for exercise <p>We would start with cardiovascular exercise, mobilise the joints and then stretch.</p>
11	How and why do we cool down?	<ol style="list-style-type: none"> 1. Absorb lactic acid back into the body 2. Decrease heartrate 3. Return the body to its pre-exercised state <p>Gentle stretches, roll down of the spine and slow movements.</p>
12	How do we improve our performances?	<ul style="list-style-type: none"> • Peer/Self or Teacher Assessment • Record your self on film and watch it back • Identify areas of strength and weakness and make these a key target • Rehearsal
13	What is choreography?	The art of making dances, the gathering and organisation of movement into order and pattern.
14	What is a stimulus?	Inspiration for an idea or movement.
15	What is a motif?	A movement phrase capturing an idea that is repeated and developed throughout the dance.
16	What is communication of choreographic intent?	The aim of the dance; what the choreographer aims to communicate.
17	What is the process of choreography	Researching, improvising, generating, selecting, developing, structuring, refining and synthesising
18	What are the main structuring devices and forms?	Binary, Ternary, Rondo, Narrative, Episodic, Beginning/Middle/End, Unity, Logical sequencing and Transitions
19	How do you develop a motif?	Add a move Subtract a move

		Change levels Change directions Change dynamic qualities Perform it backwards (retrograde) Change a body part
20	What are choreographic devices	Motif and development Repetition Contrast Highlights Climax Manipulation of number Unison and Canon
21	What is climax?	The most important part of the dance
22	What are highlights?	Small moments of interest in the dance, usually building up to the climax.
23	What are aural settings	Song, instrument, orchestral, spoken word, silence, natural sounds, found sounds and body percussion.
24	Why do we use aural settings in dance choreography?	Create a mood and atmosphere Contrast and variety Structure Relationships to the theme/ideas
25	Name the 4 different performance environments	Proscenium arch End stage Site sensitive In-the-round
26	How do you communicate the choreographic intent of a dance?	Consider: Mood(s) Meaning(s) Idea(s) Theme(s) Style/Style fusion(s)
27	What are the features of stage and set design?	Projections, furniture, structures, backdrops, screens and features such as colour, texture, shape, decorations and materials
28	What are the features of lighting?	Colour, placement, direction, angles, patterns etc
29	What are the features of properties (props)?	Size, shape, materials and how they are used etc
30	What are the features of costume?	Footwear, masks, make-up and accessories Colour, texture, material, flow, shape, line, weight, decoration and how they define character or gender, identify dancers, enhance or sculpt the body and enhance action.
31	What are the features of dance for camera ?	Placement, angles, proximity, special effects.



DT



Learning Together. Achieving High Standards.

1	<p><u>Identifying and investigating design possibilities.</u></p> <p>What is analysis of a context?</p> <p>What is analysis of information?</p> <p>What is a past/present professional?</p> <p>What are needs and wants of users?</p> <p>What is primary research?</p> <p>What is secondary research?</p>	<p>The breaking down of a given context. Consider how, why, when, where. User centred.</p> <p>Once information has been gathered we must complete an analysis to assess what is relevant and what are our findings.</p> <p>A designer from the past or present whose work could have influence over your designs.</p> <p>Needs and requirements of specific users or groups.</p> <p>Research that is conducted to gather first hand information for a current problem.</p> <p>When you consider research that has already been completed.</p>
2	<p><u>Developing a design brief and specification</u></p> <p>What is a design brief?</p> <p>What is a specification?</p> <p>What is ACCESS FM?</p> <p>What is a problem/opportunity?</p>	<p>A statement of what you intend to design and make.</p> <p>A list of what your product will be, broken down into the ACCESS FM headings.</p> <p>Aesthetics – Cost – Customer – Environment – Safety – Size – Function – Materials</p> <p>This is what you need to extract from the context to be able to write your design brief.</p>
3	<p><u>Generating and developing design ideas</u></p> <p>What is a design strategy/technique/approach?</p> <p>What is a social factor?</p> <p>What is a moral factor?</p> <p>What is an economic factor?</p> <p>What is a third party?</p>	<p>This can involve sketching, modelling, drawing, photography etc.</p> <p>These affect lifestyle such as religion, wealth, family etc.</p> <p>Honesty, fairness, equality.</p> <p>These affect the economy as a whole but also groups and individuals.</p> <p>Someone who your product is intended for or who may provide feedback on your product.</p>
4	<p><u>Manufacturing a prototype</u></p> <p>What is a logical sequence?</p> <p>What is a timeline?</p>	<p>This is the sequence in which your product will be made.</p> <p>This will show the stages of make in order and with time allocations to clearly show how long each step will take.</p>

	<p>What is manufacture?</p> <p>What are the working and physical properties and characteristics of materials?</p> <p>What is a surface treatment/finish?</p>	<p>The making of a product.</p> <p>Each material has properties that make them good for specific tasks, eg cotton is lightweight and absorbent. The properties of materials must be considered when designing a product, eg a steel pan handle would conduct too much heat and burn the user, whereas beech would be more appropriate as it is tough but a poor conductor of heat.</p> <p>Where a substance is applied to finish a product. This will enhance the finish. Could be paint, varnish, wax etc.</p>
5	<p><u>Analysing and evaluating design decisions and prototypes</u></p> <p>What is a response to feedback?</p> <p>What is a modification?</p> <p>What is an evaluation?</p>	<p>This is a considered response to feedback from a third-party.</p> <p>This is a change to a design or prototype.</p> <p>This is where a process and product is analysed and comments made. These comments are evaluative.</p>

ENGINEERING

1	What is a diode?	A semiconductor device with two terminals, typically allowing the flow of current in one direction only.
2	Some used of Diode	Turning AC to DC, mixing signals and performing digital logic.
3	What is a Zener diode?	A form of semiconductor diode in which at a critical reverse voltage a large reverse current can flow.
4	Some uses of Zener diode.	Voltage regulator, clipping circuits, noise reduction and temperature sensing.
5	What are logic gates?	Are devices that perform logical operations on binary inputs and produce a single binary output.
6	When does an AND gate output a logic 1?	When both inputs are a logic of 1
7	When does an OR gate output a logic 1?	When either inputs are a logic of 1
8	What does an inverter do?	It inverts the logic of the input. If the input is 1 then inverter will output 0 and vice versa.
9	When does an NAND gate output a logic 1?	It works as an inverter to an AND gate
10	When does an NOR gate output a logic 1?	It works as an inverter to an OR gate
11	What are truth tables?	A diagram of the outputs from all possible combinations of input.
12	Boolean Algebra	A shorthand way of writing down the function of logic gates
13	NAND Gate Implementation	Since the NAND gate is a universal gate, we can convert any circuit into a circuit consisting only of NAND gates.

14	Redundant gates	After NAND gate implementation, if there are two not gates one after the other they will be redundant and can be cancelled out.
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ENGLISH – Unseen Poetry and Literature Revision

1	What does the structure of a poem refer to?	The structure of a poem refers to the way in which it is set out to the reader.
2	What does the form of a poem refer to?	The form of a poem refers to how we describe the overarching structure or pattern of the poem.
3	What is a free verse poem?	A free verse poem does not have a rhyme scheme.
4	What is a rhyme scheme?	A rhyme scheme is when the poem has a structure whereby the lines rhyme. (AABB, ABAB etc)
5	What is the structural technique enjambment?	Enjambment is a poetic term for the continuation of a sentence or phrase from one line of poetry to the next
6	What is the structural technique caesura?	Caesura is a pause that occurs within a line of poetry, usually marked by some form of punctuation such as a period, comma, ellipsis, or dash.
7	What is iambic pentameter?	A line that contains 10 syllables: 5 stressed, 5 unstressed.
8	What are rhyming couplets?	Two lines that rhyme and complete one thought.
9	What is a simile?	A simile compares something else using the words 'as' or 'like'.
10	What is a metaphor?	A metaphor states one thing is another thing – not literally true.
11	What is an extended metaphor?	A detailed comparison that extends throughout a text/paragraph/lines.
12	What is personification?	When inanimate objects are given qualities of a human.
13	What is alliteration?	Alliteration is when words start with the same letter/sound.
14	What is sibilance?	Sibilance is the repetition of the 's' or 'sh' sound.
15	What is a semantic field?	Semantic field refers to when there are a group of words that relate to one another and fall under the same category.
16	What does the reader T/F/I mean?	TFI stands for what the writer thinks/feels/imagines.



17	What are the An Inspector Calls 10 Golden Quotations?	<ol style="list-style-type: none"> 1. <u>Stage Directions</u>: “pink and intimate” – “brighter and harder” 2. <u>Mr Birling</u>: “community and all that nonsense” 3. <u>Mrs Birling</u>: “girls of that class” 4. <u>Sheila</u>: “But these girls aren’t cheap labour – they’re people” 5. <u>Eric</u>: “I was in that state when a chap easily turns nasty” 6. <u>Gerald</u>: “Everything’s alright now Sheila [holds up the ring] what about this ring?” 7. <u>Edna</u>: “Give us more light, Edna” 8. <u>Eva</u>: “pretty” “ringleader” “trouble” 9. <u>Inspector</u>: “With their lives, their hopes and fears, their suffering and chance of happiness” 10. <u>Inspector</u>: “fire and blood and anguish”
18	What are the A Christmas Carol 10 Golden Quotations?	<ol style="list-style-type: none"> 1. <u>Scrooge Stave 1</u>: “hard and sharp as a flint” and “solitary as an oyster” 2. <u>Charity collectors</u>: “Are there no prisons? Are there no workhouses?” 3. <u>Charity collectors</u>: “If they would rather die they had better do it and decrease the surplus population” 4. <u>Marley</u>: “I wear the chain I forged in life” 5. <u>Marley</u>: “Mankind was my business” 6. <u>Scrooge Childhood</u>: “a solitary child, neglected by his friends” 7. <u>Belle</u>: “Another idol has displaced me... a golden one” 8. <u>Ignorance and Want</u>: “They are man’s” 9. <u>Scrooge Stave 5</u>: “light as a feather” and “merry as a schoolboy” 10. <u>Tiny Tim Final Line</u>: “God bless us, everyone!”
19	What are the Macbeth 10 Golden Quotations?	<ol style="list-style-type: none"> 1. <u>Witches</u>: “fair is foul and foul is fair” 2. <u>Macbeth Act 1</u>: “brave Macbeth” 3. <u>Lady Macbeth Act 1</u>: “unsex me here” 4. <u>Lady Macbeth Act 1</u>: “Look like the innocent flower but be the serpent under’t” 5. <u>Macbeth Act 1</u>: “Stars hide your fires let not light see my black and deep desires” 6. <u>Macbeth Act 2</u>: “Will all great Neptune’s ocean wash this blood clean from my hand?” 7. <u>Lady Macbeth Act 2</u>: “A little water clears us of this deed” 8. <u>Macbeth Act 3</u>: “O, full of scorpions is my mind” 9. <u>Lady Macbeth Act 5</u>: “Out damned spot, out I say!” 10. <u>Malcolm about Macbeth</u>: “dead butcher”
20	What are the poetry Golden Quotations?	<p><u>Ozymandias</u>: “Look on my works, ye Mighty, and despair!”</p> <p><u>London</u>: “mind-forg’d manacles”</p> <p><u>The Prelude</u>: “a huge peak, black and huge”</p> <p><u>My Last Duchess</u>: “half-flush that dies along her throat”</p> <p><u>Charge of the Light Brigade</u>: “someone had blundered”</p> <p><u>Exposure</u>: “merciless ice east winds”</p> <p><u>Storm on the Island</u>: “spits like a tame cat turned savage”</p>

		<p><u>Bayonet Charge</u>: “bullets smacking the belly out of the air”</p> <p><u>Remains</u>: “End of story, except not really”</p> <p><u>Poppies</u>: “Released a song bird from its cage”</p> <p><u>War Photographer</u>: “did not tremble then though seem to now”</p> <p><u>Tissue</u>: “light shine through” and “sun shines through”</p> <p><u>The Emigree</u>: “my city hides behind me”</p> <p><u>Checking Out Me History</u>: “Bandage up me eye with me own history”</p> <p><u>Kamikaze</u>: “which had been the better way to die”</p>
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ENGLISH – Spoken Language

1	What is non-fiction?	Text that are factual. They are usually informative.
2	What are some examples of non-fiction texts?	Diaries, newspapers, biographies, autobiographies, travel writing.
3	What does PAF stand for?	Purpose, Audiene and Form
4	What are the conventions of a speech?	<ul style="list-style-type: none"> • An engaging opening • Address the audience • Direct address and rhetorical questions
5	What is the artistic proof ethos?	How a writer creates or shows their credibility, usually by referring to their status.
6	What is the artistic proof pathos?	How a writer shows/appeals to your emotion, usually through emotive language or topics.
7	What is the artistic proof logos?	How a writer appeals to your logic, usually through the use of statistics or facts.
8	What are the features of DAFOREST?	<ul style="list-style-type: none"> • Direct address • Alliteration/anecdotes • Facts • Opinion • Rhetorical questions/repetition • Emotive language • Statistics • Triadic structure
9	What is body language?	Non-verbal signals that are used to communicate feelings.
10	What is tone in writing and in speech?	Tone in writing refers to the attitude with which you write. Tone in speech refers to how you sound when you say words out loud.
11	What are facial expressions?	Communication thoughts and feelings through the movement of your face.
12	What is body language?	Non-verbal signals that are used to communicate feelings.
13	What is a motif?	A reoccurring idea/phrase/image in a text.
14	What is anaphora?	Repetition at the start of a sentence.
15	What are inclusive pronouns?	Inclusive pronouns are words that include everyone e.g. we, us.
16	What is a hook?	A hook is the opening that aims to grab the reader’s

		attention.
17	What is hyperbolic language?	Exaggerated language used for effect.
18	What is an expert opinion?	Thoughts from someone who has experience and knowledge about a certain topic.
19	What do I need to do to deliver my speech successfully?	<ul style="list-style-type: none"> • Speak slowly and clearly • Give eye contact to the audience • Body language • Facial expressions
20	What does active listening mean?	Understanding a speaker and responding and reflection of what is being said.
21	What literacy/SPaG checks do I need to complete before handing in my work?	<p>When you check your work, you should ensure you have...</p> <ol style="list-style-type: none"> 1. Used capital letters correctly 2. Used the correct punctuation at the end of each sentence (e.g. full stop, question mark, exclamation mark) 3. Used paragraphs where necessary 4. Presented your work neatly and appropriately 5. Used the key words from the lesson 6. Used challenging vocabulary where necessary

FOOD AND NUTRITION

1	Name the macro nutrients (3)	Protein, fats and carbohydrate
2	Name the micro nutrients (2)	Vitamins and minerals
3	What is the function of fat in the diet(2)	Protection of organs, warmth to the body, energy , Vitamins EDK
4	What happens if there is excess fat in the diet (3)	Obesity, general health issues, heart problems, Blood pressure, CHD
5	What happens if there is a deficiency of fat in the diet (3)	Thin body frame, cold, look unhealthy, pale
6	What is another name for fat. (2)	Lipids
7	Which are good fats / healthy fats(2)	Unsaturated
8	How would you ensure that someone has healthy fats in their diet?(3) Give examples of food and dietary recommendations	Not to fry foods, eat good fats, use Fry lite,
9	What is butter made from (2)	Cream that is churned around
10	Name 4 uses of butter in cooking(4)	Melting, spreading, creaming, shortening, shallow frying
11	What is the nutritional value of butter (3)	Fat , vitamins A and D, sodium
12	How do you store butter (2)	In the fridge, fully covered, lidded container
13	Describe 3 facts about oils (3)	Liquid at room temperature, lighter than solid fat, easier to digest, versatile in cooking, natural

14	Give 3 examples of vegetable oils (3)	Sunflower, rapeseed, olive,
15	Name 3 uses of oil in cooking (3)	Frying, basting, marinating
16	Give 4 facts about margarine (4)	It is an inexpensive butter, Made from vegetable oils has vitamins added to it by law A and D
17	Give examples of high skills used in cooking and the NEA2 (3)	Portioning, pastries, bread making , fileting, piping
18	How many dishes do you have to cook in your 3 hour NEA2 practical exam ? (1)	3
19	What is an enriched bread (2)	A dough made with butter, sugar, eggs or oil. Softer and richer than normal bread
20	What does fortified mean (2)	Strengthened and added to eg margarine, bread

FRENCH - CORE KNOWLEDGE QUESTIONS FOR FRENCH SHOULD BE USED ALONGSIDE YOUR VOCABULARY BOOKLET.

1	What does 'je voudrais étudier' mean?	I would like to study
2	What does 'je voudrais être' mean?	I would like to be
3	What do we NOT use with jobs in French?	The (indefinite) article (un / une)
4	What year do French students finish secondary school (le college)	Year 10
5	What is 'le bac'	The equivalent of GCSE's
6	What is 'le lycée' and how many years do French students spend there?	College. 3 years
7	How do you form the future tense?	Use the pronoun for the person you are talking about and add the correct future ending to the verb in the infinitive Je regarderai = I will watch
8	What does 'si' mean?	if
9	What does the verb 'je dois' mean	I have to
10	What does the verb 'on peut' mean?	You can
11	What does 'il faut' mean?	It is necessary to
12	What does 'je voudrais' mean	I would like to
13	What type of verbs are pouvoir / vouloir /devoir / falloir	Modal verbs (they are followed by another verb, in its infinitive form)

GEOGRAPHY

1	How is the UK's population distributed?	It is unevenly distributed, with cities having a dense population and rural areas being sparsely populated.
2	Describe the location of Manchester?	Manchester is located in the UK. It is North West of England and close to other major cities including Liverpool.
3	Why is Manchester important globally?	Manchester is famous for its sport, transport hubs, shopping areas, medias centres and Universities
4	What is the CBD?	The central business district

5	What is an urban land use model?	An Urban Land-Use Model is a simplified diagram showing the pattern of land-use in a city, such as residential and businesses.
6	What are the four types of industry?	Primary, Secondary, Tertiary and Quaternary.
7	What is redevelopment?	This is when an area is given a new lease of life through investments and economic development.
8	What is greenspace	This is land that has not been built on, includes open spaces, parks and gardens
9	What are the social opportunities in Manchester?	There are a variety of theatres and cinemas, live music venues like Albert Hall, cinemas and restaurants as well as lively nightlife. There are a number of social clubs and recreational opportunities.
10	What is brownfield land?	Land that been built on before and is to be cleared and reused often in the inner city.
11	What is greenfield land?	Land that has not been built on before, often on the edge of a city in the urban rural fringe.
12	What is deprivation?	The degree to which an individual or an area is deprived of services and amenities.
13	How does urban regeneration improve an area?	Urban regeneration is about improving an area that has been experiencing a period of decline. Public money is used as an attempt to pump prime private investment into an area. Improvements will include greenspace, transport, facilities, buildings.
14	Why may people living in deprived areas have a lower standard of living?	Deprived areas are linked to poor access to education, healthcare and job opportunities
15	What are some of the challenges associated with living in Manchester?	<ul style="list-style-type: none"> • Decline in the city lead to unemployment and rundown areas • Urban sprawl has lead to loss of greenspace in the rural urban fringe due to the Trafford Centre • High unemployment as people don't have skills to work at Media City in the tertiary and quaternary sector • Students cannot afford to live and study there



1	What does 'ich möchte studieren' mean? Where does studieren go?	I would like to study At the end of the sentence/clause
2	What does 'ich will werden' mean? Where does werden go?	I want to be At the end of the sentence/clause
3	What do we NOT use with jobs in German?	The (indefinite) article (ein / eine)
4	What types/names of school are the closest to our word secondary school?	das Gymnasium or die Gesamtschule
5	What is das Abitur?	The equivalent of A' levels
6	What is die Oberstufe?	Sixth Form
7	How do you form the future tense?	Use the correct part of werden (matching with the pronoun) and put the infinitive of the other verbs at the end of the clause/sentence e.g. Ich werde auf die Uni gehen
8	What does 'wenn' mean?	if or whenever
9	What is a subordinating conjunction?	A conjunction which send the verb to the end of the clause/sentence.
10	What happens if you start a sentence with a subordinating conjunction?	Verb comma verb in the middle of the clause e.g Wenn ich älter bin, werde ich auf die Uni gehen
11	What does 'ich muss' mean?	I must
12	What does the verb 'Man kann' mean?	You can
13	How do you make most jobs feminine in German?	Add 'in' e.g Lehrerer Lehrererin
14	What are the three key auxiliary verbs in German?	haben, sein and werden
15	When do you use them as auxiliary verbs?	sein and haben are used to form the perfect tense werden is use to form the future tense



1	Which countries formed the Triple Alliance?	Germany, Austria-Hungary, Italy
2	Which countries formed the Triple Entente?	Britain, France, Russia
3	What were the four main causes of World War One.	Militarism Alliances Imperialism Nationalism
4	What was the aims of Weltpolitik?	1.) Strong Navy 2.) Large Empire 3.) Strong European power to influence European politics
5	What were the main consequences of the First Moroccan Crisis?	The Triple Entente (especially France and Britain's relationship) strengthened this further and divided Europe into two sides. France was angry with Germany – relations between the countries deteriorated (got worse). Britain became more suspicious of Germany because of their imperialism, and building a Navy. Germany had to stay out of Morocco and felt humiliated.
6	Which two countries wanted to take over Bosnia in 1908?	Austro-Hungary and Serbia
7	What were the main consequences of the Bosnian Crisis?	Austria-Hungary felt it had the full support of Germany. - Italy backed away from the Triple Alliance – it did not like how Austria-Hungary had behaved. - Russia had been humiliated. - It brought Britain, France and Russia closer together. - Serbia was forced to accept the annexation of Bosnia but was now determined to oppose Austria-Hungary.
8	What were the main consequences of the second Moroccan Crisis?	-Germany felt humiliated and was less likely to back down in future crises. - The German people became increasingly annoyed with Britain and France so it increased support for war within Germany. - Britain became more convinced that Germany wanted to dominate Europe. - Britain reached a secret naval agreement with France. This strengthened the Triple Entente. - Italy opposed Germany over Agadir which weakened the Triple Alliance. Germany became more reliant on Austria-Hungary.
9	What were the reasons behind the Schlieffen Plan?	Germany wanted to avoid a war on two fronts – being attacked by France in the west and Russia in the east. • The aim was to attack the French first and defeat them in six weeks by invading through neutral Belgium and the Netherlands. • Schlieffen argued that Russia would take a long time to mobilise so the Germans could defeat the French quickly and then move its army to the east to defeat the Russians. • A swift attack of France was the key to the success of the

10	Why did the Schlieffen Plan fail?	Russia mobilised after 10 days/ Britain declares war on Germany to defend Belgium/ Belgium does not let Germany through and puts up a fight
11	Trench Warfare was a war of attrition. What does this mean?	A war of attrition is where each side tries to wear down the other until resistance is no longer possible.
12	What was the race to the sea?	After the Battle of the Marne, the Germans tried to outflank (get around) the enemy armies. British and French troops moved to block them. This continued to the English Channel.
13	Why did the German Ludendorff Offensive of 1918 fail?	Although initially very successful, Germany lost 400,000 men and had no reserves to call on. German discipline war poor and they were badly fed and supplied.
14	What was the German aim at Verdun?	The aim was to 'Bleed France White'.
15	How many American civilians died when the Lusitania was sunk by a German Submarine in 1915?	128
16	Why did the Allied 7-day bombardment fail at the Battle of the Somme?	The Germans were dug deep underground in fortified bunkers.
17	What did Britain impose on Germany as soon as the war started and did not lift until 1919?	The blockade
18	Why did America join the war in 1917?	The two main reasons were: German Unrestricted Submarine Warfare and The Zimmermann Telegram
19	What weapon changed dramatically over the course of the war and by 1918 were quite advanced pieces of military equipment?	Aircraft
20	How many days a month would troops usually spend in the front line trenches?	Around 3 days
21	What was 'Unrestricted U-boat warfare'?	Unrestricted U-Boat Warfare was when German submarines attacked ANY boat travelling to Britain.
22	Why did Russia make peace with Germany in 1917?	Russian troops were poorly equipped and had suffered numerous defeats/ Russian troops were running away and deserting/ Communist revolution
23	What was the Allies 'Combined Arms Strategy' in 1918?	Combined Arms Strategy saw the Allies combine troops, aircraft, tanks, and artillery together to make a powerful attack
24	What weapon was first used by the British at the Battle of the Somme?	The Tank
25	What was the 'creeping barrage'?	The 'Creeping Barrage' fires artillery just in front of the advancing troops. The barrages 'creeps' forward according to certain times.
26	What happened to the Romanov family?	They were executed by Russian Communists

27	What did Austria-Hungary send Serbia following the assassination of Franz Ferdinand?	An Ultimatum. This contained 10 points that Serbia had to agree to or else there would be war.
28	How did the Alliance System cause World War One?	The Alliance System increased tension and rivalry between countries after the Moroccan Crises. It also meant that one crisis could trigger and 'drag' all of Europe into war.
29	How many weeks of food did Britain have left at the peak of unrestricted submarine warfare in 1917?	6 weeks
30	What was the main British aim at the Battle of the Somme?	To take German pressure off the French forts at Verdun
31	What were conditions in the trenches like?	Mud everywhere/ death a common sight/ lice/ trench foot
32	What was the original plan at Gallipoli?	The original plan was to sail the British Navy up the Dardanelles and bombard the Turkish capital into submission. No land invasion was originally planned.
33	Why was Passchendaele (1917) known as the Battle of Mud?	The battle area has experienced the worst rainfall in 30 years. Also, the artillery had destroyed the drainage system in the area so water overflowed and flooding occurred
34	What was the Ludendorff Offensive?	The Ludendorff Offensive was the last German attack to win the war. In 1918, experienced German troops attacked the Allies and quickly advanced 50 miles
35	What were weather conditions like at the Battle of Gallipoli?	In the Summer, extremely hot. Decaying corpses meant disease was rampant. However, during the winter, frostbite affected many soldiers.
36	What is meant by the term BEF?	The British Expeditionary Force
37	How many British casualties were there on the first day of the Battle of the Somme?	20,000 Dead 40,000 Wounded Total: 60,000
38	When was the first Dreadnaught released?	1906
39	Who won the naval battle: The Battle of Jutland, 1916?	Neither side won. Although Germany destroyed/ killed more ships/ sailors, Britain was able to maintain the Blockade
40	What date and time did the First World War officially end?	11am on 11 th November 1918
41	In what year did the United States join the war against Germany?	1917
42	Where did the allies sign the peace agreement?	Versailles
43	How much money did Germany have to pay to repair the damages of war?	Germany had to pay 132 billion gold marks (their currency before the Euro) to repair the damages of war. They became poor because of this.



HOSPITALITY AND CATERING

1	What is HASAWA?	Health and Safety at Work Act 1974
2	What is RIDDOR?	Reporting of injuries diseases and dangerous occurrences regulations 1995
3	WHAT IS COSH?	Control of substances hazardous to health regulations 2002
4	What is PPER?	Personal protective equipment at work regulations 1992 http://www.hse.gov.uk/pubns/indg174.pdf
5	What is MHR?	Manual handling operations regulations 1993
6	What are the duties of employers?	<p>To protect the health, safety and welfare of staff</p> <p>Carry out risk assessments</p> <p>To provide and maintain safe equipment and safe systems of work</p> <p>Safe use, handling, storage and transport of articles and substances</p> <p>Provide a safe workplace with a safe entrance and exit</p> <p>Provide information, instruction, training and supervision on how to work safely</p> <p>Provide a written safety policy</p> <p>Make sure there are toilets, places to wash and drinking water for workers</p> <p>Make sure that there is first aid provision</p> <p>Provide PPE for jobs if needed</p> <p>Have insurance to cover injury or illness at work</p> <p>Ventilation lighting and emergency exits</p> <p>Provide a health and safety law poster entitled “Health and Safety law: What you should know” displayed in a prominent position and containing details of the enforcing authority.</p> <p>To take care of themselves and others</p> <p>To follow safety advice and instructions</p> <p>Not interfere with any safety device</p> <p>To report accidents</p> <p>To report hazards and risks</p>
7	What is HSE	The Health & Safety Executive
8	What is a HSE	H.S.E stands for the Health and Safety Executive. The H.S.E will investigate any complaints and safety incidents.
9	What is an accident at work?	<p>All accidents, however minor, should be reported to your supervisor</p> <p>Similarly, all incidents of ill-health (caused from work) should also be reported</p> <p>Accidents include those that resulted in injury or damage and “near misses” – those which COULD have resulted in injury or damage</p> <p>Your supervisor will decide if the incidents needs to be recorded in the accident records</p> <p>Violent incidents are included (this includes verbal threats)</p>
10	What is HSE enforcement?	Magistrate’s court

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What is HSE enforcement?

Magistrate’s court

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		<p>£20,000 per offence Up to 6 months in prison Crown court serious offences Unlimited fines Imprisonment for up to 2 years</p>
11	What is Environmental regulation?	<p>There must be sufficient space to work safely and enough lighting and ventilation Workplaces must be kept generally clean and tidy Chairs must be safe and comfortable Temperature – must be “reasonable” Reasonable means at least 16oC for office work and 13oC where there is physical work In very hot weather, employers only need to provide local cooling e.g. fans</p>
12	What is moving & handling?	<p>You may be asked to lift, carry push or pull a load at work You should always follow safe practice when doing any moving and handling You should never attempt to move anything that is too heavy or difficult – ask for help Employers should provide equipment to help you to move heavy or difficult loads</p>
13	What is equipment?	<p>The term covers everything from a hand tool to a large machine like a stand mixer.</p>
14	What are control measures?	<p>Control measures are put in place by employers to protect staff from hazards and risks that have been identified</p>
15	What is covered by COSHH	<p>SUBSTANCES COVERED BY COSHH: Chemicals including cleaning chemicals Micro-organisms Dusts Medicines, pesticides, gases HSE list (Health and safety executive)</p>
16	What are possible COSHH related health problems?	<p>Contact causing irritation Sensitising substances Toxic fumes Carcinogenic Infectious Fire, explosion Environmental harm problems</p>
17	What are employees’ responsibilities under COSHH?	<p>Use control measures and facilities provided by the employer Ensure equipment is returned and stored properly Report defects in control measures Wear and store personal protective equipment (PPE) Removing PPE that could cause contamination before eating or drinking Proper use of washing, showering facilities when required Maintaining a high level of personal hygiene Complying with any information, instruction or training that is provided</p>

18	What are employers responsibilities under COSHH?	<p>Implement control measures to protect workers from hazardous substances.</p> <p>Preventing or controlling exposure to hazardous substances.</p> <p>Providing employees with information, instruction and training, and appropriate protective equipment.</p> <p>Ensuring that control measures are maintained, kept in full working order, and in a clean condition.</p> <p>Drawing up plans and procedures to deal with accidents and emergencies involving hazardous substances.</p> <p>Ensuring that any employees exposed to hazardous substances whilst at work are under suitable health surveillance.</p> <p>Carrying out a COSHH risk assessment.</p>
19	What has to be reported to HSE?	<p>Death</p> <p>Injuries resulting in over 7 days off work (7 day injuries)</p> <p>fractures (except fingers, thumbs and toes);</p> <p>amputation of limbs or digits</p> <p>loss or a reduction of sight;</p> <p>crush injuries</p> <p>serious burns (over 10%)</p> <p>unconsciousness caused by a head injury or asphyxia;</p> <p>any other injury needing admittance to hospital for more than 24 hours. Hypothermia.</p>
20	What is PPE?	PPE is equipment that will protect the user against health or safety risks at work.
21	What are Employees responsibilities under PPER	<p>You must wear the PPE if it has been provided for you. You could be held personally liable if you had an accident which could have been prevented by you wearing your PPE.</p> <p>You must care for it, store it and clean it as necessary;</p> <p>You must report any defects.</p>
22	What are Employers responsibilities under PPER?	<p>Provide the PPE (free) if a risk assessment has shown it to be necessary</p> <p>It must be exclusively for you and fit you comfortably</p> <p>Provide somewhere to store it</p> <p>Provide facilities for it to be cleaned and maintained</p> <p>Replace it when necessary</p> <p>Provide training (if necessary) in how to wear/use it properly</p>
23	What is manual handling?	<p>Any transporting or supporting of a load by hand or bodily force</p> <p>Lifting, putting down, pushing, pulling, carrying or moving</p>

24	What is a risk assessment?	The assessing of any risk in a given space or task
25	What is a hazard?	A potential danger
26	What are the top 4 injury types in H&C?	Cuts, Burns, Sprains and strains, Slips, trips and falls.
27	What is customer safety?	Keeping your customers safe

IMEDIA

1	What are the different types of character?	<ul style="list-style-type: none"> • Cartoon, doodle, photorealistic, geometric, minimalistic
2	What are the main feature of a character?	<ul style="list-style-type: none"> • Colour, shape, proportion
3	What are examples of non-physical characteristics?	<ul style="list-style-type: none"> • Personality, trope, super power
4	What are the two types of comic book?	<ul style="list-style-type: none"> • Western and Manga
5	What are the different communication bubbles?	<ul style="list-style-type: none"> • Speech, sound, scream, thought
6	What hardware could be used to create comic/characters	<ul style="list-style-type: none"> • Graphics tablet • Stylus • Touchscreen • Mouse/track pad • Digital camera • Scanner • Computer system • Physical modelling materials
7	How do you plan a comic book character	<ul style="list-style-type: none"> • Combination of thumbnail sketches and visualisation diagram.
8	How do you plan a comic book story	<ul style="list-style-type: none"> • Storyboard
9	What software do you use to create comics	<ul style="list-style-type: none"> • Comic life
10	What is the best dpi for web and print	<ul style="list-style-type: none"> • 100 and 300
11	What is the best file format for web and print	<ul style="list-style-type: none"> • PNG and TIFF

MATHS – FOUNDATION

1	What is a linear sequence?	The term to term rule is always the same added or subtracted
2	What is a Geometric sequence?	The term to term rule is always multiplied or divided by the same number
3	What is the Nth term?	This is a rule that gives the terms in a sequence when you put in different 'n' values
4	Name 2 other sequences?	Quadratic sequences and Fibonacci sequences
5	What is the line called that goes from one	Diameter

	side of the circle to the other through the centre?	
6	What is the edge of the circle called and what is the formula to find it ?	Circumference = $\pi \times \text{diameter}$ OR $2 \times \pi \times \text{radius}$
7	What is the formula to find the area of a circle?	Area = $\pi \times r^2$
8	Explain what a sector is?	A sector is made from two radii. To find the area of a sector = $\frac{\text{the angle}}{360} \times \pi \times r^2$
9	What is a tangent?	A tangent only touches one point on the outside of a circle
10	What is the formula to find the length of an arc?	$\frac{\text{The angle}}{360} \times \pi \times \text{diameter}$
11	What is a compound shape?	It is a shape made up of 2 or more other shapes
12	What is the formula to find the compound measure – SPEED?	Speed = Distance / Time
13	What is the formula to find the compound measure – PRESSURE?	Pressure = Force (N) / Area
14	What is the formula to find the compound measure – DENSITY?	Density = Mass/ Volume
15	What do the angles in a triangle add up to?	180 degrees
16	What are the four graphs we need to recognise?	<ol style="list-style-type: none"> 1. Straight line graph 2. Quadratic graph 3. Cubic graph 4. Reciprocal graph
17	What should be used to help to draw a graph?	A table of values
18	What are 2 lines that have the same gradient?	Parallel lines have the same gradient.

MATHS – HIGHER

1	How do you find the surface area of a prism?	Find the area of each face of the shape then add these together.
2	What is the formula for surface area of a cone?	$\pi r^2 + \pi r l$
3	What is a frustum?	The portion of a cone or pyramid which remains after its upper part has been cut off by a plane parallel to its base, or which is intercepted between two such planes.
4	How do you calculate density?	Mass \div volume
5	What do we mean by parallel lines?	Two lines that have the same gradient. They would never get closer together or further apart.
6	What do we mean by perpendicular lines?	Two lines that are at a right angle to one another. If you were to multiply the two gradients this would be equal to -1.
7	What would be the shape of a quadratic curve?	This looks either like a smiley face (u) or a sad face (n).
8	What would be the shape of a cubic curve?	This would be an s shape or a backward s shape.
9	What would be the form of the equation of a circle?	$x^2 + y^2 = r^2$
10	What does directly proportionate	As one variable increases the other also increases at the same rate

	mean?	(proportionally).
11	What does inversely proportionate mean?	As one variable increase the other decreases at the same rate.
12	What is a vector?	A quantity having direction as well as magnitude, especially as determining the position of one point in space relative to another
13	What do we mean by a scalar vector?	This would be when a vector is a multiple of another vector.
14	How do you add/subtract column vectors?	You add/subtract the top and the bottom vectors.
15	What are parallel vectors?	These are two vectors with a common factor but without a common point.

MUSIC

1	What is a Concerto?	A piece of music for a soloist and orchestra
2	What is a Concerto Grosso?	A piece of music for a <i>group of soloists</i> and orchestra <i>Concertino – the group of soloists</i> <i>Ripieno – the rest of the ensemble</i>
3	When was the Baroque Period?	1600 - 1750
4	Name 3 Baroque Composers	Bach, Handel, Vivaldi
5	When was the Classical Period?	1750 - 1820
6	Name 3 Classical Composers	Mozart, Haydn, Beethoven
7	When was the Romantic Period?	1820 - 1900
8	Name 3 Romantic Composers	Liszt, Brahms, Tchaikovsky
9	How big was the orchestra in the Baroque Period?	Small
10	How big was the orchestra in the Classical Period?	Medium-sized
11	How big was the orchestra in the Romantic Period?	Large
12	What were popular solo instruments in the Baroque Period?	Violin, Recorder or Flute, Oboe, Trumpet
13	What is the Continuo and who plays it?	A continuous bass line HARPSICHORD and Cello
14	What were popular solo instruments in the Classical Period?	Piano, Clarinet , Violin, French Horn, Flute
15	What were popular solo instruments in the Romantic Period?	Piano, Violin , Cello
16	Which period is the only 1 to have a harpsichord?	BAROQUE
17	In which period were the clarinet and piano invented?	CLASSICAL
18	What advances were made to Brass instruments in the Classical period?	Valves, to enable them to have a wider range of notes
19	What are the main features of a Baroque melody	Scalic Imitation Ornamentation Repeated Phrases

		Sequences																						
20	What are the main features of a Classical melody	Balanced Phrases Clear cadence points Simple and Elegant Ornamentation Often conjunct																						
21	What are the main features of a Romantic melody	Long phrases Wide Range Often Disjunct Chromaticism																						
22	What was the texture often like in the Baroque period?	Polyphonic																						
23	What was the texture often like in the Classical period?	Homophonic																						
24	What was the texture often like in the Romantic period?	Homophonic																						
25	What were the dynamics like in the Baroque period?	Terraced																						
24	What were the dynamics like in the Classical period?	Gradual Changes eg crescendos and diminuendos																						
25	What were the dynamics like in the Romantic period?	Wide range, eg sudden changes from very quiet to very loud and lots of crescendos and diminuendos																						
26	What was the mood like in the Baroque period?	One mood																						
27	What was the mood like in the Classical period?	More changeable but not overly dramatic																						
28	What was the mood like in the Romantic period?	Changeable and sometimes describing something eg an emotion, setting or story																						
29	What are the main Dynamics Terms?	<table> <tr> <td><i>Piano (p)</i></td> <td>Quiet</td> </tr> <tr> <td><i>Mezzo Piano (mp)</i></td> <td>Fairly Quiet</td> </tr> <tr> <td><i>Pianissimo (pp)</i></td> <td>Very Quiet</td> </tr> <tr> <td><i>Forte (f)</i></td> <td>Loud</td> </tr> <tr> <td><i>Mezzo Forte (mf)</i></td> <td>Fairly Loud</td> </tr> <tr> <td><i>Fortissimo (ff)</i></td> <td>Very Loud</td> </tr> <tr> <td><i>Crescendo</i></td> <td>Getting gradually louder</td> </tr> <tr> <td><i>Diminuendo</i></td> <td>Getting gradually quieter</td> </tr> <tr> <td><i>Sforzando</i></td> <td>Forced Note</td> </tr> </table>	<i>Piano (p)</i>	Quiet	<i>Mezzo Piano (mp)</i>	Fairly Quiet	<i>Pianissimo (pp)</i>	Very Quiet	<i>Forte (f)</i>	Loud	<i>Mezzo Forte (mf)</i>	Fairly Loud	<i>Fortissimo (ff)</i>	Very Loud	<i>Crescendo</i>	Getting gradually louder	<i>Diminuendo</i>	Getting gradually quieter	<i>Sforzando</i>	Forced Note				
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30	What are the main Tempo Terms?	<table> <tr> <td><i>Adagio</i></td> <td>Leisurely</td> </tr> <tr> <td><i>Lento</i></td> <td>Slow</td> </tr> <tr> <td><i>Largo</i></td> <td>Slow</td> </tr> <tr> <td><i>Andante</i></td> <td>Walking Pace</td> </tr> <tr> <td><i>Moderato</i></td> <td>Moderate</td> </tr> <tr> <td><i>Allegretto</i></td> <td>Quite fast</td> </tr> <tr> <td><i>Allegro</i></td> <td>Fast</td> </tr> <tr> <td><i>Vivace</i></td> <td>Very fast</td> </tr> <tr> <td><i>Presto</i></td> <td>Very fast</td> </tr> <tr> <td><i>Ritardando</i></td> <td>Gradually slowing down</td> </tr> <tr> <td><i>Rallentando</i></td> <td>Gradually slowing down</td> </tr> </table>	<i>Adagio</i>	Leisurely	<i>Lento</i>	Slow	<i>Largo</i>	Slow	<i>Andante</i>	Walking Pace	<i>Moderato</i>	Moderate	<i>Allegretto</i>	Quite fast	<i>Allegro</i>	Fast	<i>Vivace</i>	Very fast	<i>Presto</i>	Very fast	<i>Ritardando</i>	Gradually slowing down	<i>Rallentando</i>	Gradually slowing down
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		<i>Accelerando</i> <i>Rubato</i>	Gradually speeding up Free Time
31	What is a cadenza?	A solo section for the soloist alone, at the end of a movement in <i>Classical or Romantic</i>	
32	What does Virtuoso mean?	A very complex part for the soloist (Classical or mainly Romantic)	
33	What was the harmony like in the Baroque period?	Diatonic, Simple primary chords (I, IV, V)	
34	What was the harmony like in the Classical period?	Diatonic, Simple primary chords (I, IV, V)	
35	What was the harmony like in the Romantic period?	More complex, added chords, chromaticism, richer	

PE (CORE)

1	General What steps should you take, as a student demonstrating responsibility to their own learning, to ensure you are ready for a PE lesson?	I should ensure that I have my full PE kit. This includes: hair bobbles, plasters, socks, trainers, short/leggings/joggers/ top, jumper (no hood), water bottle. I know that I can bring skins, and warmer layers when necessary. If I need any medical equipment (such as inhaler), I know that I must bring that to my lesson.
2	General What transferable skills should a referee apply to their job role?	Any of the following are acceptable: Communication, Leadership, Decision Making, Time Management, Listening Skills, Teamwork, Organisational Skills.
3	General What sport uses Co-ordination? Provide an example of when it is used.	Tennis. Co-ordination is used in Tennis when players must consider the actions of the racket, the ball, their position.
4	Athletics What is the correct sprinting technique?	When sprinting I must consider taking large strides when running, keeping my head held up looking forward, using my arm to cut through the air.
5	Athletics In long jump what are the benefits of a run up?	The run up in the long jump allows me to generate speed and power to apply to my jump/flight into the sand.
6	Athletics What are some of the safety rules you should be following in shotput?	Safety rules for shotput include: 1. Not passing the shot into someone's hand, but placing it on the floor 2. Staying in the safe zone when it is not my turn 3. Not distracting those participants who are using heavy equipment.
7	Rounders What two bases can gain points? And what points can you gain?	2 nd and 4 th Bases are where you can gain points. At 2 nd base you can gain ½ a rounder. At 4 th base you can gain 1 full rounder.
8	Rounders What is the correct ready position for batting?	Standing side on to the bowler's box, ensuring that your dominant hand is at the back of the body. Hold the bat upwards slightly towards the back of the body. Head looking towards the bowler.
9	Rounders Why is communication between the fielders important?	The fielders need to communicate so that they can effectively retrieve the ball to either stump a player out or get the ball back to the bowler.

10	Tennis How do Tennis players use agility?	Tennis players use agility so that they can move around the court easier as they are able to change direction and position quickly because their weight is evenly distributed.
11	Tennis When does a tennis player apply their decision-making skills?	A tennis player applies their decision-making skills when they are receiving a shot. They decide on their body position, where they need to be stood on the court and what shot they need to make in response to how they are receiving the ball.
12	Tennis What is the correct serving technique?	Standing dominant foot behind, non-dominant foot in front. Throw the ball vertically into the air with the non-dominant hand, the dominant hand which is holding the racket makes a C shape starting at the bottom of the C. These two actions happen simultaneously. When the racket is at the top of the C and the ball is at its highest, the player hits the ball pushing forwards and down, whilst also transferring their weight onto their front foot.
13	Cricket How do you get a batsman out in Cricket?	The following options are acceptable: Bowler's ball knocks the wickets, the ball is caught from the batter's strike before hitting the ground, batter obstructs ball, if a batter knocks over the stumps, wicketkeeper strikes the batter out.
14	Cricket How do you score points in Cricket?	The batsman needs to get as many runs as possible between the wickets during their innings.
15	Cricket Why is Power important in cricket?	Power is important in cricket because the batter needs to apply power to the drive of the bat swinging with force towards the ball. A fielder and a bowler need to apply force when throwing the ball back to each other to try and get the batter out.

PHOTOGRAPHY

1	What do techniques mean? (AO2)	The method used to complete the photography work. This can be physical or digital manipulation of images.
2	How could you use the formal elements of photography successfully in your work? (general)	<p>Line- using leading lines, using line to frame subjects.</p> <p>Value – exploring the light and dark areas of work.</p> <p>Shape – creating and exploring organic and geometric shapes. Using shapes to create patterns in a regular or irregular way.</p> <p>Space – considering the composition of work to show depth of perspective, or thinking about both the positive and negative space.</p> <p>Texture – Using close up photography, considering the surface texture of subject matter.</p> <p>Pattern – Looking for patterns in your subject matter, creating patterns yourself to create interesting compositions.</p> <p>Colour – consider contrasts, show emotion, look at colour harmonies, set a tone or mood. Consider monochromatic</p>

		compositions.
3	What does refinement mean? (AO2)	Refinement is the improvement of the idea. It does not involve radical changes, but it is about making small changes which improve the idea in some way.
4	What is a Visual Artists response? (AO1)	A photograph inspired by the artist, you could explore similar content or theme, style or use of techniques, materials and processes.
5	What is experimentation? (AO2)	This is when you practice, experiment and trial different techniques to ensure they are suitable for the chosen final piece in intentions.
6	What does it mean by realising your intentions? (AO4)	This is the plan of something you would like to do or achieve through your work and is usually evidenced by your final piece.
7	What is a final piece (AO4)	A final piece is a single or series of works that conclude your project and the journey you have been on., it shows you realising your intentions. Your final piece should showcase how you have refined and developed your ideas as well as your use of materials, techniques and processes.
8	What is physical manipulation of an image? (AO2)	Editing an image physically without digital software. This could be weaving/collage/paint/stitch/burning/cyanotype/layering
9	What are the three main components of A01 that help develop your ideas? (AO1)	Mind maps, mood/visual image board, artist research.
10	Why do you need to annotate your work? (AO1)	Helps to show you understand the task, learn how to analyse ideas and make good decisions about your work.
11	What presentation skills are needed? (general)	<ul style="list-style-type: none"> • Considered space and layout. • Neat and well written information. • Cutting skills demonstrated • Creative font or titles • Considered and appropriate embellishments and backgrounds.
12	What are the 5 main areas to include when analysing artwork? (AO1)	<ul style="list-style-type: none"> • Content - when you are looking at and discussing the subject of the work. • Visual elements of art – how have these been used in the work. • Materials or media – what has been used. • Process - how the work has been developed and made. • Evaluation – personal opinions about the work and how it can inspire your ideas.
13	What do we need to consider when planning a photoshoot?	<ul style="list-style-type: none"> • Objective • Subject • Colour • Compositional Rules • Location • Time of Day/Lighting • Editing • Props • Make-Up • Model
14	What is a contact sheet?	<ul style="list-style-type: none"> • A contact sheet, also called a proof sheet is a photographic negative or positive print of all frames exposed in a single photoshoot. This allows the photographer to assess pictures for correct focus and composition, as well as to select the best for

		the printing or manipulation.
15	How do you analyse or evaluate a photo?	There are 4 elements to consider <ul style="list-style-type: none"> • Subject • Elements of art • Media • intent
16	Where do we store the digital portfolio?	One drive
17	How can you creatively compose a photograph?	<ul style="list-style-type: none"> • Mirror box • Water spray • Distortion • Movement • light
18	What is the minimum manipulation of a photo that you should explore using Photoshop?	Changing the brightness and contrast.
19	What are the compositional rules which can be used in photography?	<p><u>Rule of Thirds</u> For the rule of thirds, the image is split into 9 equal sections, using three grid lines. You need to position the most important elements of your scene along these division lines, or at the points where the line cross over (intersect). This will add balance to your images.</p> <p><u>Balancing Elements</u> You should balance the "weight" of your subject by including another object of lesser importance to fill the space.</p> <p><u>Framing</u> The world is full of objects which make perfect natural frames, such as trees, archways and holes. By placing these around the edge of the composition you help to isolate the main subject from the outside world</p> <p><u>Leading Lines</u> When we look at a photo, our eye is naturally drawn along lines. By thinking about how you place lines in your composition, you can affect the way we view the image, pulling us into the picture, towards the subject, or on a journey "through" the scene.</p> <p><u>Cropping</u> Cut out all unnecessary details to keep the viewer's attention focused on the subject.</p>

PSYCHOLOGY

1	What is a hypothesis?	A precise, testable statement of what the researchers predict will be the outcome of the study.
2	What is a null hypothesis?	There is no relationship between the two variables being studied (one variable does not affect the other).
3	What is an alternate hypothesis?	There is a relationship between the two variables being studied (one variable has an effect on the other).
4	Which variable do you measure?	The dependent variable.
5	Which variable do you manipulate?	The independent variable
6	What is an extraneous variable?	Any variable that you're not investigating that can potentially affect the outcomes of your research study.

7	Name two sampling methods	Random, Opportunistic, Systematic and Stratified.
8	What does matched pairs experimental design mean?	A matched pairs design is an experimental design where participants are matched in pairs based on shared characteristics before they are assigned to groups; one participant from the pair is randomly assigned to the treatment group while the other is assigned to the control group.
9	What is a strength of the repeated measures experimental design?	The advantage of this is that individual differences between participants are removed as a potential extraneous variable, as you compare both measures against the same participant.
10	What is a weakness of the independent groups experimental design?	Different participants need to be recruited for each condition, which can be difficult and expensive. There is a risk of participant variables (individual differences between participants) affecting the results between conditions, rather than solely manipulation of the independent variable.
11	What is interobserver reliability?	The extent to which two or more observers are observing and recording behaviour in the same way.
12	Name two types of study.	Observation, Case Study, Laboratory Experiment, Interviews, Field / Natural Experiment.
13	What is a strength of a laboratory experiment?	High control over extraneous variables means that they cannot confound the results, so a 'cause and effect' relationship between the IV and DV is often assumed.
14	What is a weakness of an observation?	Covert observations bring about some ethical issues, as people do not know they are being observed, they cannot give consent for it. In an overt observation, people may behave differently because they know that they are being watched.
15	What is counterbalancing?	Counterbalancing is a technique used to deal with order effects when using a repeated measures design. With counterbalancing, the participant sample is divided in half, with one half completing the two conditions in one order and the other half completing the conditions in the reverse order.
16	What is quantitative data?	Numerical data (numbers / values e.g. temperature, test scores).
17	What is qualitative data?	Descriptive data (weather conditions, moods).
18	What is the name of the body who deals with ethical issues in Psychology?	British Psychological Society
19	What is the difference between primary and secondary data?	Primary data refers to the first hand data gathered by the researcher himself. Secondary data means data from a previous study.
20	How do you calculate the mean?	Add up all of the numbers and divide by the number of values.
21	How do you calculate the mode?	The most common number.
22	How do you calculate the median?	Put all numbers in chronological order and find the middle number.
23	How do you calculate the range?	Put all of the numbers in chronological order and subtract the smallest number from the largest number.

RELIGIOUS STUDIES

1	Outline three reasons for war.	Self defence Greed Retaliation
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2	Outline the meanings of; - Self defence - Greed - Retaliation	Greed – Selfish desire for something more. This could be more money, or more power. Self-defense – When you’re acting to prevent harm to yourself or others. Retaliation – Deliberately harming somebody as a response to them harming you.
3	What is meant by ‘Nationalism’?	Being proud or loving your country/feeling like you belong to your country.
4	What’s the difference between ethnicity and nationality?	Ethnicity is your cultural background whereas your nationality is the country you belong to.
5	What’s meant by a ‘weapon of mass destruction’.	Any weapon that causes devastation on a large (or mass) scale.
6	Name three types of weapons of mass destruction.	Nuclear weapons. Chemical weapons. Biological weapons.
7	What harm does a nuclear weapon cause?	Nuclear weapons leave behind radioactive waste which causes burns and long term illnesses such as cancer and cataracts.
8	Give an example of a chemical weapon.	Gas is a form of chemical weapon. This was used during WW2 to murder millions of innocent people/
9	Give an example of a biological weapon.	A biological weapon could be a man-made virus which is introduced into society to target certain people.
10	What happened in Hiroshima?	At the end of WW2, America dropped an newly developed nuclear bomb on Hiroshima causing devastation.
11	What were the reasons behind what happened in Hiroshima?	The Japanese were continuing to fight at the end of the war and America decided to use a big show of force (through a Nuclear bomb) to end the war. America would argue that this needed to be done to end the war and stop more people losing their lives.
12	What is a refugee?	A refugee is a person who has been forced to leave their country to escape war, persecution or a natural disaster.
13	What is a prisoner of war and how should they be treated?	A person who has been captured and imprisoned by the enemy in war. The Geneva Convention states that they should be treated humanely at all times.
14	Name three of the criteria for a Just War.	a) The war must be declared by the government of a country. b) It must have a just cause. c) It must have a just intention. d) It should be the last resort. e) It must have a good chance of being successful and bringing about peace. f) It must be in proportion. (It should not kill too many people, especially if they are not involved in the fighting.)
15	What is a holy war?	A war that is fought to defend a religion or for a religious cause.
16	Give three reasons (suggested by Francis Bacon) about when a holy war is necessary.	<ul style="list-style-type: none"> • To spread the faith. • To retrieve countries that once belong to that religion but no longer do • To rescue members of the religion from 'the servitude

		<p>of the infidels' (other religions/non-believers)</p> <ul style="list-style-type: none"> To recover and purify consecrated places that are presently being 'polluted and profaned' To avenge blasphemous acts, or cruelties and killings of members of the religion (even if these took place long ago)
17	What's meant by the 'lawful authority'	The person/group who govern the country; this could be a king, queen or prime minister.
18	Define 'radicalisation'.	Radicalisation is when a person's views are slowly changed over time until the person becomes an extremist.
19	Define 'extremist'.	An extremist is a person with views that are set in stone and are very difficult to change. Often these views are very black and white.
20	Define 'terrorist'.	A terrorist is a person who acts on their extreme views and aims to cause terror and fear through violent acts.

SCIENCE – BIOLOGY

1	Define homeostasis?	The regulation of conditions inside the body to maintain a stable environment in response to changes in internal and external conditions.
2	Give two examples of conditions that need regulating?	Temperature, blood glucose content, water content.
3	What is a stimulus?	A change in the environment.
4	Define a negative feedback loop?	A mechanism that restores a level back to optimum in a system.
5	Define CNS?	The brain and spinal cord. It's where reflexes and actions are coordinated.
6	Name the three types of neurone?	Sensory neurone, relay neurone and motor neurone.
7	Give two examples of receptors?	Taste receptors, sound receptors, smell receptors and light receptors.
8	Name two effectors?	Muscles and glands
9	What is a reflex?	A fast, automatic response to a stimulus.
10	Define a synapse?	The connection between two neurones.
11	Do reflex arcs travel through the conscious part of the brain	No
12	How do nerve impulses travel between two neurones?	Chemicals diffuse across the gap and set off an electrical impulse in the next neurone.
13	What is meant by reaction time?	The time taken to respond to a stimulus.
14	What effect would caffeine have on reaction	It would increase the reaction time.

	time?	
15	Suggest two factors that could be tested to investigate reaction time?	Amount of caffeine consumed/amount of sleep/age
16	Name one control variable in the investigation?	Use the same person to catch the ruler/use the same hand/dropped from the same height
17	How could the test be improved?	Repeat the test and calculate a mean.
18	Why would using a computer to measure reaction time be favourable?	Measurements are more precise as they remove human error and more accurate as they record time in milliseconds.
19	What is a hormone?	Chemical messengers which activate target cells.
20	How are hormones carried around the body?	In the blood(plasma).
21	What are hormones secreted from?	Glands.
22	Which produces a faster response, nerves or hormones?	Nerves.
23	Where is the hormone insulin produced?	Pancreas.
24	What effect does insulin have on the body's cells?	The body cells take up more glucose from the blood.
25	What is type 1 diabetes?	A condition where the pancreas produces little or no insulin.
26	Give two ways type 2 diabetes can be controlled?	Eating a carbohydrate - controlled diet and exercising regularly.
27	Name the main male and female reproductive hormones?	Testosterone and oestrogen.
28	How long does the menstrual cycle last?	28 days.
29	What effect does FSH have on an egg in the menstrual cycle?	FSH causes an egg to mature in the ovaries.
30	Which two glands secrete the hormones that control the menstrual cycle?	The pituitary gland and the ovaries.
31	What are contraceptives used for?	Used to prevent pregnancy.
32	Which two hormones are found in the combined pill?	Oestrogen and progesterone.
33	Name one benefit of using the oral contraceptive pill?	It is over 99% effective/reduces the risk of some type of cancers.
34	What is IVF used for?	A process that can be used to help couples who are having difficulty having children.
35	Name one barrier method of controlling fertility?	Condoms/diaphragm.
36	Name the two hormones used to increase fertility?	FSH and LH
37	What is one problem with fertility treatment?	The success rate is low/too many eggs could cause multiple pregnancies.
38	Give one reason why IVF could be unethical?	(Unused embryos) Potential human lives are destroyed.
39	Which gland is thyroxine released from?	The thyroid gland.
40	What does negative feedback mean?	A mechanism that restores a level back to optimum in a system.
41	Give two roles of thyroxine in the body?	Regulate metabolic rate/stimulates protein synthesis for growth and development.
42	Name the glands that release adrenaline?	The adrenal glands.

1	What are pathogens?	A microorganism that causes disease.
2	How are communicable diseases spread?	Water, air and direct contact.
3	How can we prevent the spread of communicable diseases?	Being hygienic, destroying vectors, isolating infected individuals and vaccinations.
4	Recall names of examples of bacterial, viral, fungal and protist diseases?	Bacterial – Gonorrhoea and Salmonella Viral – HIV, tobacco mosaic virus and measles Fungal – Rose Black spot Protist – Malaria
5	Describe symptoms of these diseases.	Bacterial – Gonorrhoea (Pain on urinating and yellow/green discharge from vagina or penis) and Salmonella (stomach cramps, fever, vomiting and diarrhoea) Viral – HIV (Flu like symptoms), tobacco mosaic virus (Discoloured leaves) and measles (red skin rash and fever) Fungal – Rose Black spot (Purple/black spots on leaves) Protist – Malaria (repeating episodes of fever)
6	Explain how they spread and can be prevented from spreading.	<u>Spread</u> Bacterial – Gonorrhoea (STD) and Salmonella (Eating contaminated food) Viral – HIV (Sexual contact or exchanging bodily fluids), tobacco mosaic virus (infected leaves rubbing against healthy plants/contaminated tools) and measles (sneezing or coughing -droplets) Fungal – Rose Black spot (water or wind) Protist – Malaria (mosquitos are vectors) <u>Prevention</u> Bacterial – Gonorrhoea (Barrier methods and antibiotics) and Salmonella (Poultry vaccinations/cooking food properly) Viral – HIV (testing/Barrier methods/antiretroviral drugs), tobacco mosaic virus (treat leaves with disease to prevent spread) and measles (Vaccination when young) Fungal – Rose Black spot (Fungicides and stripping the plant affected of its leaves) Protist – Malaria (Stopping mosquitos from breeding/removing water sources)
7	Give two ways in which the skin helps to defend the body.	Skin acts as a barrier to pathogens and secretes antimicrobial substances which kill pathogens.
8	Give three ways in which white blood cells help to defend the body against disease.	Consuming them, producing antitoxins and producing antibodies.
9	What are vaccinations?	An injection to prevent the spread of a disease.
10	How do vaccinations work?	Injecting a small amount of dead or inactive pathogen. These carry antigen, which cause your white blood cells to produce antibodies to attack them. If live pathogens of the same type then appear at a later date then the white blood cells can

		rapidly mass produce antibodies to kill the pathogen.
11	How are painkillers and antibiotics different?	Painkillers relieve pain. Antibiotics kill or prevent the growth of bacteria.
12	Describe what aspirin and digitalis are used for and where they originate from.	Aspirin is used as a painkiller and to lower fever. Developed from a chemical found in willow. Digitalis is used to treat heart conditions and was developed from a chemical found in foxgloves.
13	Describe antibiotic resistance.	When bacteria mutate and sometimes these mutations cause them to be resistance to an antibiotic. Usually caused by the over prescribing of antibiotics.
14	What is a placebo?	A fake drug.
15	Name the stages of drug testing.	Pre-clinical trials Clinical trials Blind and double-blind trials.


SCIENCE – CHEMISTRY

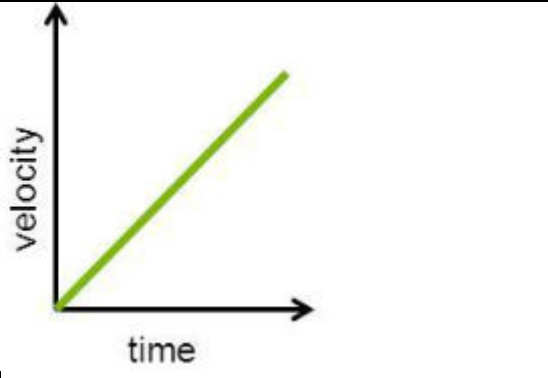
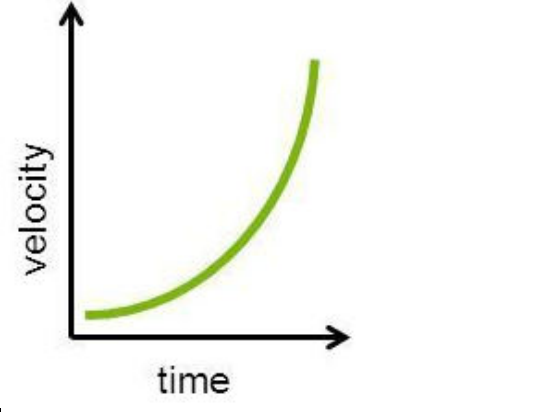
1	What are hydrocarbons?	Compounds formed from carbon and hydrogen ONLY.
2	When does complete combustion occur?	When there is a plentiful supply of oxygen. Carbon dioxide and water are produced.
3	What may be produced in incomplete combustion?	Carbon monoxide, particulates
4	What is crude oil?	A fossil fuel found in rocks that contains a mixture of different length hydrocarbons.
5	What physical property of the hydrocarbons in crude oil can be used to separate them?	Boiling point
6	What are the key stages of fractional distillation?	Heating, evaporation, rising up the fractionating column, cooling, condensing, collecting
7	Where do the longest chain hydrocarbons condense in the fractionating column?	Near the bottom where it is hottest as they have the highest boiling points.
8	What are the main uses of crude oil?	Fuel, petrochemicals, lubricants, detergents, solvents, polymers.
9	Why is cracking important?	Crude oil fractions from fractional distillation can be split up into smaller molecules. If this didn't happen we may not have enough fuel for cars, planes and other transport to meet the demand.
10	What are the two types of cracking?	Steam cracking: larger fractions are heated to a vapour and mixed with steam to a very high temperature. Catalytic: larger fractions are heated to a vapour and passed over a catalyst.
11	What is the general formula for an alkene?	C_2H_4 . Alkenes have a C=C double bond which is very reactive and they are used for making other chemicals, particularly polymers.

1	What is the rate of a chemical reaction?	The speed at which reactants are used up or products are produced.
2	What factors can affect the rate of reaction?	Temperature, concentration, surface area, the presence of a catalyst.
3	What does collision theory say?	A reaction will only take place when particles collide. They must collide with a minimum amount of energy needed to react. This is called the activation energy.
4	What two ways can be used to measure the amount of gas produced in a reaction?	Collect the gas in a gas syringe. Carry the reaction out on a mass balance.
5	How can you measure the formation of a solid product?	Look at a mark through the solution and time how long it takes to disappear.
6	What variable goes on the x axis of a rate of reaction graph?	Time
7	How is the rate of reaction calculated?	Amount of reactant used or amount of product formed / (divided by) time
8	Why does increasing the temperature of a reaction increase the reaction rate?	Reactant particles increase in kinetic energy, so there are more frequent collision that equal or exceed the activation energy for the reaction.
9	In a reaction at equilibrium, is there the same amount of product as reactant?	No. At equilibrium the amounts of products and reactants stays constant because the rate of the forwards and backwards reactions are the same.
10	How can you change the direction of a reversible reaction?	Change the conditions (temperature, pressure or concentration)
11	If the forwards reaction is exothermic, what is the backwards reaction?	Endothermic.
12	What does Le Chatelier's Principle state?	If a dynamic equilibrium is disturbed by changing the conditions, the position of equilibrium shifts to oppose the change.

SCIENCE – PHYSICS

1	What is a scalar quantity?	A quantity that has only a magnitude (size)
2	What is a vector quantity?	A quantity that has both magnitude (size) and direction.
3	List 3 examples of scalars and 3 examples of vectors.	Scalars – time, distance, mass Vectors – acceleration, displacement, forces
4	Give two examples of contact forces.	Friction, Air resistance, reaction force, tension
5	Give two examples of non-contact forces.	Gravitational Force, Magnetic Force, Electrostatic Force
6	State Newton's 3 rd Law of motion.	When two objects interact, they exert equal and opposite forces on each other.
7	Describe the forces in action between a moving car tyre and the road.	Weight, friction, reaction force
8	State Newton's 1 st Law of motion.	An object will remain in the same state of motion unless a resultant force acts on it.
9	What is meant by the term resultant force?	A resultant force is the sum of multiple forces acting on an object.
10	What is a free-body diagram?	A scale diagram that shows all forces acting on an object.

11	What will happen to an object if the forces acting on it are balanced?	It's motion will remain the same.
12	What will happen to an object if the forces acting on it are unbalanced?	There will be a resultant force, so the motion of the object will change.
13	What is a moment in Physics?	A turning force about a pivot.
14	Name two factors that can affect the size of a turning force?	Size of the force applied. Perpendicular distance from the pivot.
15	Give one example of a simple machine.	Levers – e.g. crowbars, taps, handles, door hinges.
16	Why do we use gears?	To change the size of a turning force.
17	What do we mean by the centre of mass of an object?	The place on an object where the weight force acts upon.
18	State what will happen when two moments are in equilibrium.	When two moments are in equilibrium there will be no change in the position of either lever about the pivot.
19	State the formula to calculate the speed of an object	Speed = Distance / time
20	On a distance time graph what does a flat line mean?	The object is stationary.
21	On a distance time graph what does an inclined line mean?	The object is moving at a constant speed.
22	How can you calculate the speed on a distance time graph?	Calculate the gradient (change in distance / change in time)
23	Describe the difference between speed and velocity.	Speed is a scalar quantity, where as velocity is a vector quantity.
24	How many seconds are there in 10.5 minutes?	$10.5 \times 60 = 630$ seconds
25	How can you calculate the acceleration of an object?	
26	What does the line on this velocity time graph show? 	The object is moving at a constant velocity.
27	What does the line on this velocity time graph show?	The object is moving with a constant acceleration.

		
28	What does the line on this velocity time graph show? 	The object is moving at a changing acceleration. As the gradient increases, the rate of acceleration increases.
29	State the formula that links Force, Mass and Acceleration.	
30	State Newton's 2 nd Law.	Force is directly proportional to acceleration (when mass remains constant) and mass is inversely proportional to acceleration (when force remains constant).
31	What is meant by Inertia?	The tendency of an object to continue in its current state (at rest or in uniform velocity)
32	Name a force which opposes the driving force of a car?	Friction
33	Define Stopping distance.	Stopping distance = Thinking distance + Braking distance
34	State 2 factors that can affect your braking distance.	Road conditions, Tyre conditions, Mass of the vehicle, velocity of the vehicle.
35)	State 2 factors that can affect your thinking distance.	Levels of tiredness, drug use, car's velocity, distractions, alcohol consumption.
36 HT	State the equation to calculate the momentum of an object.	
37 HT	State the units of momentum.	Kg m/s (Kilogram metres per second)
38 PHY & HT	Describe what happens to momentum in a closed system before and after a collision.	Momentum is conserved.
39 PHY & HT	Name the zone at the front of the car that is designed to lessen the force of impact.	Crumple Zone
40 PHY & HT	What needs to happen to the impact time to lessen the force of impact?	The impact time needs to be increased to lower the force of impact.
41 PHY & HT	Describe the factors for a car that can affect the impact force.	Mass of the car, Velocity of the car, impact time.
42 PHY & HT	Name the safety devices fitted in cars to increase the impact time.	Seatbelts and Airbags

43 PHY & HT	Describe how the length of the impact time can affect a person's momentum.	The greater the impact time, the lower the momentum.
44 PHY & HT	Describe the jobs of side bars and crumple zones in a crash.	They absorb the force of impact over a longer period of time, thus reducing the impact force.
45	State what is meant by an elastic material?	A material that will return to its original shape when the forces deforming it have been removed.
46	Describe how to measure the extension of a spring?	Measure the original length of the spring, attach the load to the spring, then measure the new length. Calculate the difference between the original and new length of the spring.
47	According to Hooke's law, what is the relationship between extension and force applied up until the limit of proportionality?	The extension of a spring is directly proportional to the force applied.
48	Explain what is meant by the limit of proportionality?	This is the point at which an elastic object will no longer return to its original shape when a load is applied to the material. The material has now been inelastically deformed.

SPANISH - CORE KNOWLEDGE QUESTIONS FOR SPANISH SHOULD BE USED ALONGSIDE YOUR VOCABULARY BOOKLET.

1	What does 'quisiera estudiar' mean?	I would like to study
2	What does 'quisiera ser' mean?	I would like to be
3	What do we NOT use with jobs in Spanish?	The (indefinite) article (un / una)
4	What year do Spanish students finish secondary school (el colegio)	Year 11
5	What is 'el bac'	The equivalent of GCSE's
6	What is the time? Son las cinco menos veinticinco.	4:35
7	How do you form the future tense?	Do not use the pronoun for the person you are talking about. add the correct future ending to the verb in the infinitive veré = I will watch
8	What does 'si' mean?	if
9	What does the 'tengo que + inf' mean	I have to
10	What does the verb 'puede ...' mean?	You can
11	What does 'se debe' mean?	You must

12	What does 'quisiera' mean	I would like to
13	What type of verbs are poder/ gustar/deber?	Modal verbs (they are followed by another verb, in its infinitive form)

