

## 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

## Independent Learning at Ruskin

**Independent Learning** is all about helping you to build on the knowledge that you learn in class so that you **know more, remember more, and can do more**. This means you will experience lasting changes in your **long-term memory**, and develop a deep understanding of what you cover in class.

When you have truly learnt something, you can:

- Remember it later
- Understand how it connects to other things you know
- Explain it in detail
- Apply it to different situations

**Quiz It, Map It, Link It** is a structured programme of **independent learning** and **revision activities** that will help you to do all of the above. By using your **Core Knowledge Questions Booklet** in multiple different ways, you will go from simply memorising the facts, to really understanding them, and being able to use the knowledge much more **confidently** and **effectively**.

### Our Core Values:



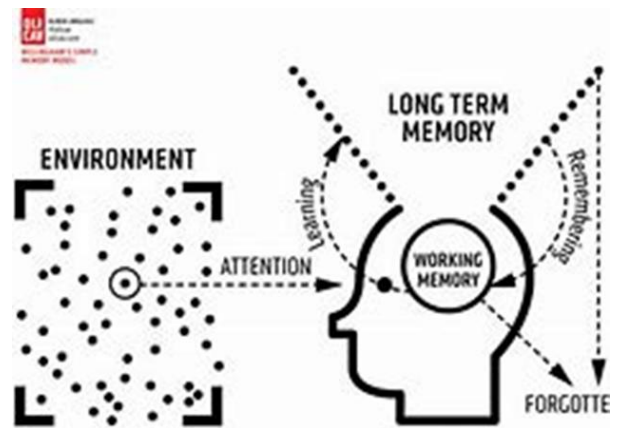
We want you to feel **confident** with the **new knowledge** that you acquire and you should feel **assured** about how best to learn this **new knowledge**. Your **Core Knowledge Questions Booklet** and **Quiz It, Map It, Link It** will help with this.



We want you to be the **best that you can be** and to **“think big”** for yourselves. By using your **Core Knowledge Questions Booklet** and **Quiz It, Map It, Link It**, you will demonstrate a **positive attitude to learning**, and also push yourself to reach your **goals**.



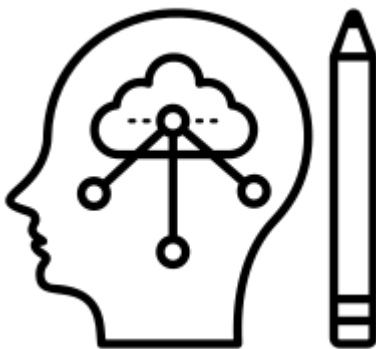
We want you to have **self-respect** and understand the important of working **independently**. Completing **Quiz It, Map It, Link It** activities highlights your ability to recognise your **strengths** and also **areas for development**.



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**

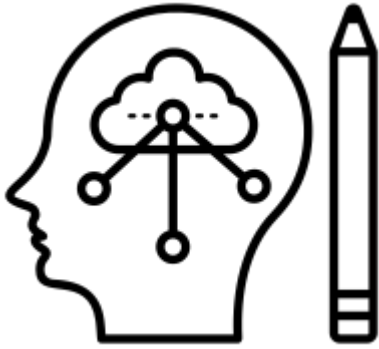
- On your blank template, write in the answers.
- Use black or blue pen.

### 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.

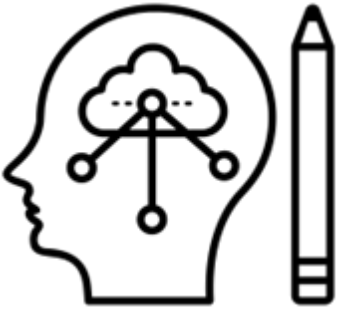
### Step 3: Branch Off

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

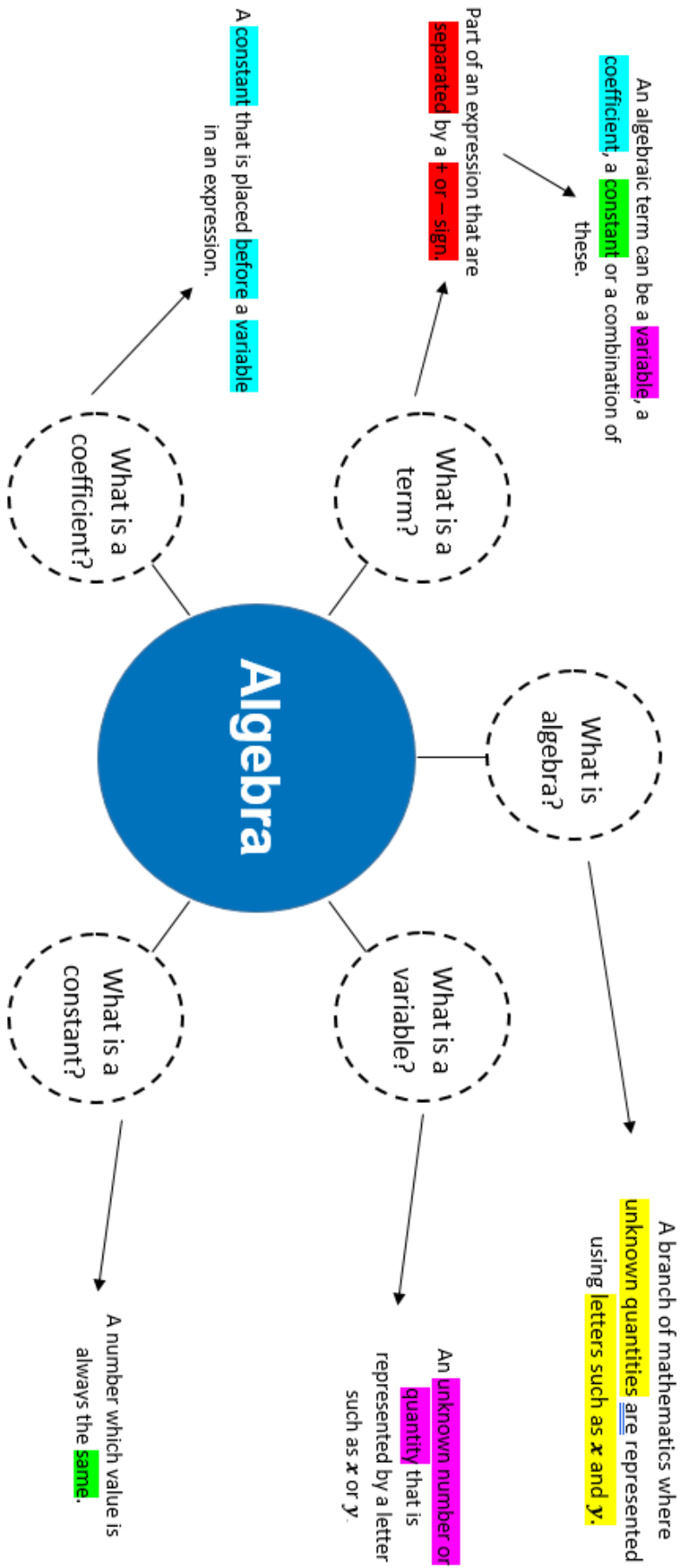
### Step 4: Use Images and Colour

- 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:**

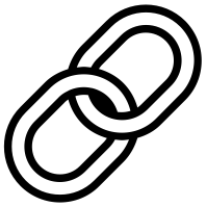
- X is similar to/different from Y because...
- X is more/less...than Y because...
- In a similar way to X, Y is...
- In a different way to X, Y is...

### **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.



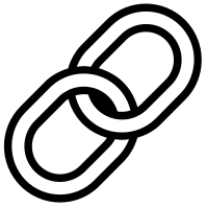
The link between them is that water is a necessary for **both** the process of photosynthesis and transpiration is the constant stream of water moving through the plant from roots to leaves.



### 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 5 key elements make a successful artist research (AO1)	<ul style="list-style-type: none"> <li>• Examples of the artists work</li> <li>• Title and Artists Name</li> <li>• Annotations</li> <li>• Visual artists response</li> <li>• Personal point of view</li> </ul>
2	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.
3	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.
4	What does it mean to refine your work? (AO2)	The improvement of your work by making small changes and or manipulations.
5	What is content? (AO1)	Content is when you are looking at and discussing the subject of the work. <ul style="list-style-type: none"> <li>• What is it? What can you see?</li> <li>• What does the artist call the work?</li> <li>• What is the theme of the work?</li> </ul>
6	What is mood? (AO1)	Mood is looking at the communication of moods and feelings in art work. <ul style="list-style-type: none"> <li>• How does the work make you feel?</li> <li>• Why do you feel like this?</li> <li>• Does the colour, texture, form or themes affect your mood?</li> </ul>
7	What is process (AO1)	Process is how the work has been developed and made. <ul style="list-style-type: none"> <li>• What materials and tools have been used?</li> <li>• What is the evidence for how it has been made? Painted, drawn, woven, printed, stitched, collaged etc.</li> </ul>
8	What is colour theory? (AO2)	Colour theory is the art and science of using colour. <ul style="list-style-type: none"> <li>• What impact does colour have?</li> <li>• Primary colours</li> <li>• Secondary colours</li> <li>• Tertiary colours</li> <li>• Harmonious colours</li> <li>• Complementary colours</li> <li>• Tint</li> <li>• Shade</li> </ul>
9	What are the primary, secondary and tertiary colours? (AO2)	<ul style="list-style-type: none"> <li>• Primary – red, yellow, blue. These can not be made but are used to mix all of the other colours.</li> <li>• Secondary – green, purple, orange. These are made by mixing two primary colours together.</li> <li>• Tertiary – are made by mixing a primary and secondary colour together.</li> </ul>

10	What are harmonious and complementary colours? (AO2)	<ul style="list-style-type: none"> <li>• Harmonious – next to each other on the colour wheel. Set of 3/5 that work well with each other.</li> <li>• Complimentary – are opposite each other on the colour wheel. They contrast each other</li> </ul>
11	What are tints and shades? (AO2)	<ul style="list-style-type: none"> <li>• Tint – when you add white to a colour to make it lighter.</li> <li>• Shade – when you add black to a colour to make it darker.</li> </ul>
12	What is - media and materials? (AO2)	Media/medium is the substance that an artist uses to make art. E.g. an acrylic painting is painted using the medium of acrylic paint. Materials, same as media but can also refer to the basis of the art work e.g canvas, paper, clay.
13	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.

### BTEC SPORT – LEARNING AIM A

1	Name the three types of sport and physical activity?	<p>1.Sports – competitive activities that involve physical exertion, have rules and regulations and a National Governing Body</p> <ul style="list-style-type: none"> <li>- Team sports</li> <li>- Individual sports</li> </ul> <p>2.Outdoor activities</p> <p>3.Physical Fitness Activity</p>
2	List 3 benefits of taking part in sport?	Improve fitness, meet new people, develop leadership skills, learn team work skills, resilience and self-confidence from competition.
3	Explain what outdoor activities are?	Activities carried out outdoors or in recreation areas that are adventurous.
4	List 3 benefits of taking part in outdoor activities?	Positive risk-taking activities, improved self-confidence and self-esteem, meet new people, learn new skills, time away from life stresses and electronic devices.
5	Explain what physical fitness activities are?	Activities to increase fitness.
6	List 3 benefits of taking part in physical activities?	Meet new people, set fitness goals, improve confidence, improve body composition, improve physical health.
7	Name the three provisions/sectors of physical activity?	Public sector Private sector Voluntary sectors
8	Briefly explain each provision/sector and their characteristics?	Public sector to include local authorities and school provision Private sector – provided by organisations who aim to make a profit



		Voluntary sectors – activities provided by volunteers who have a common interest in the sport /activity. Characteristics; funding source, aims, quality of provision, accessibility.
9	Choose one of the provisions and explain the advantages and disadvantages of sport to the participant?	Types and range of sport and physical activities provided Types and range of equipment available o cost of participation Access to different types of sport and physical activities Additional products or services to include creche facility, refreshment facilities, hire of equipment, access to sport sector professionals, e.g. sports therapist, personal.
10	Name 2 ways participants can be grouped?	Age, gender, disability and race.
11	State the different age groups of participants and put them in age order?	Primary school aged children (aged 5–11 years) Adolescents (aged 12–17 years) Adults (aged 18–49 years) Older adults (aged 50 years and up).
12	State 2 categories of disabled participants?	Visual, hearing and physical disabilities
13	Name 2 long term health conditions?	Asthma, type 2 diabetes, high blood pressure, coronary heart disease (CHD).
14	Explain the physical activity needs of participants?	Government recommended guidelines for types, frequency and intensity of physical activity for different types of participant. Physical health needs – improve fitness, body composition, sleep, immunity to help prevent illness, symptoms of long-term health conditions. Social health needs – meet new people, make friends, have fun, develop leadership and team working skills, decrease loneliness. Mental health needs – decrease stress levels, improve work life balance, decrease risk of depression, improve mood, increase self-confidence and self-esteem.
15	Name the 5 barriers to participation?	Cost, access, time, personal and cultural.
16	Explain 1 of the barriers to participation?	Cost of participation: – clothing – equipment – transport Access to sport or physical activity: – location of sport or physical activity – limited accessible transportation – resources – types of sport or physical activity available Time – lack of time due to other commitments: – family – school – work Personal barriers: – body image – lack of self-confidence – parental or guardian influence – limited previous participation – low fitness levels – extended time off from previous



		<p>participation – concerns that taking part in sport or physical activity may make existing health conditions worse</p> <p>Cultural barriers: – single sex sport or physical activity sessions – social norms of participating in unconventional clothing and availability of appropriate clothing to participate – lack of role models from own cultural background</p>
17	Explain 1 method to address the barriers to participation	<p>Cost: discounted pricing, hiring of equipment, free car parking.</p> <p>Access: public transport discounts, cycle hire to access, the facility, free parking, taster days, staff training to support all types of participant and their needs, increased range of provision of sports and physical activities, ramps, assistive technology.</p> <p>Time: creche facilities, extended opening hours</p> <p>Personal barriers: private changing rooms, allowing participants to wear clothing they feel most comfortable in, use of variety of images of people with different body shapes, parent and child activity sessions to create familial culture of sport, campaigns to increase participation.</p> <p>Cultural barriers: women only physical activity sessions staffed by females, diversity of staff working at sport or physical activity facility, staff training in cultural awareness.</p>

### BTEC SPORT – LEARNING AIM B

1	Give 2 examples of sports clothing?	Sports kit, waterproof clothing, training clothing, e.g. bibs.
2	Give 2 examples of sports footwear?	Trainers, studded boots, sport specific footwear.
3	<p>In terms of Sport specific equipment, give an example for each of the following:</p> <ul style="list-style-type: none"> <li>• Participant equipment</li> <li>• Travel related equipment</li> <li>• Scoring equipment</li> <li>• Fitness training equipment</li> </ul>	<p>Participation equipment, e.g. balls, rackets;</p> <p>Travel related equipment, e.g. kayak;</p> <p>Scoring equipment, e.g. goalposts;</p> <p>Fitness training equipment, e.g. dumbbells.</p>
4	Give 2 examples of protection equipment?	Mouth protection, head protection, eye protection, body protection, floatation devices
5	Give 2 examples of safety equipment?	First aid equipment – ice packs, bandages, defibrillator.



6	Give 1 example of equipment for people with disabilities or assistive technology?	Wheelchair, e.g. adapted wheelchair for wheelchair tennis
7	Give 2 examples of indoor facilities?	Sports halls, gyms;
8	Give 2 examples of outdoor facilities?	Outdoor pitches, climbing wall, artificial snow domes.
9	Give 2 examples of officiating equipment?	Whistle, microphone, earpiece.
10	Give 2 examples of performance analysis equipment?	Smart watches, heart rate monitors, applications.
11	Select 1 piece of sports clothing and explain how it would improve sports performance or experience?	State piece of equipment and explain how it improved thermoregulation, clothing designed to improve aerodynamics.
12	Select 1 footwear and explain how it improves sports performance?	Sport-specific new designs or materials; improve grip; rebound.
13	Select 1 piece of sports specific equipment and explain how it improves sports performance?	New materials for lightness and strength to include composite materials, e.g. a tennis racquet; new design of equipment to improve performance, e.g. golf driver design.
14	Select 1 piece of protection and safety equipment and explain how it improves sports performance?	Improved protection design; lighter weight; improved performance, e.g. shape of cycle helmets to improve aerodynamics.
15	Select 1 piece of equipment for people with disabilities or assistive technology and explain how it improves or support performance?	Prosthetics; sport-specific wheelchairs; equipment to support people with visual and hearing impairments.
16	Select 1 facility and explain how it stimulates environments to replicate competition in other locations?	Facilities that simulate environments to replicate competition in other locations; all weather surfaces; surfaces to reduce the risk of injury.
17	Select 1 piece of officiating equipment and explain how it improves sports participation?	Computer assisted systems; video assisted decision making.
18	Select 1 piece of performance analysis equipment and explain how it improves sports participation?	Action cameras, GPS, applications, sensors on sports clothing or equipment.



19	Explain why time could be a limitation of using technology?	Setting up, using equipment, compiling data, giving feedback to participant.
20	Explain why access to technology could be a limitation of using technology?	Equality and unfair advantages as not all participants have access to technology.
21	Explain why cost of technology could be a limitation of using technology?	Initial cost and follow-up maintenance of equipment.
22	Explain why accuracy of data provided by equipment could be a limitation of using technology?	Errors can take place which affects the reliability of data/information.
23	Explain why usability could be a limitation of using technology?	Specific training required.

### BTEC SPORT – LEARNING AIM C

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.





**BUSINESS STUDIES**

1	What are the financial aims and objectives for a start-up?	<ul style="list-style-type: none"> <li>• Survival</li> <li>• Profit</li> <li>• Sales</li> <li>• Market share</li> <li>• Financial security</li> </ul>
2	What are the non-financial aims and objectives for a start-up?	<ul style="list-style-type: none"> <li>• Social concerns</li> <li>• Personal satisfaction</li> <li>• Challenge</li> <li>• Independence</li> <li>• Control</li> </ul>
3	What is meant by “profit”?	The amount of revenue left over once costs have been deducted
4	What is “revenue”?	Money coming in
5	What are costs?	Money going out
6	What are the 2 main types of cost?	Fixed (stays the same) and variable (changes)
7	What does “break-even” mean?	Making neither a profit or a loss
8	What is interest?	An additional amount that a business must pay when borrowing money
9	What is the margin of safety?	How much sales can fall before break-even is reached
10	Why is cash important in business?	<ul style="list-style-type: none"> <li>• To pay overheads</li> <li>• To pay employee wages</li> <li>• To pay suppliers</li> </ul>
11	What does “Insolvent” mean?	A business that is unable to pay debt or owes more money than it makes
12	What is the closing balance?	The money in the bank at the end of each month
13	What are short term sources of finance?	Trade credit Overdraft
14	What are long term sources of finance?	<ul style="list-style-type: none"> <li>• Personal savings</li> <li>• Venture capital</li> <li>• Share capital</li> <li>• Loans</li> <li>• Retained profit</li> <li>• Crowdfunding</li> </ul>
15	What is limited liability?	The level of risk is limited to the amount of money invested – covered by the business, not the individual



16	What is unlimited liability?	The level of risk goes beyond the amount invested. Usually sole traders. The business owner's personal assets can be used to pay off debt
17	What are the options for starting up a business?	<ul style="list-style-type: none"> <li>• Sole trader</li> <li>• Partnership</li> <li>• Private limited company (Ltd)</li> <li>• Public limited company (PLC)</li> <li>• Franchise</li> </ul>
18	What is a sole trader?	Owned just by one person. They can hire other people though. They make all of the decisions and get to keep all of the profit. They have unlimited liability. Usually a service e.g. window cleaner, hairdresser, plumber etc....
19	What is a partnership?	A business set up by two or more people. All invest their own money but split the profits. All have an area of expertise. Can make decision making harder but the financial risk is split. Usually professionals e.g. solicitors, dentists etc....
20	What is a private limited company (Ltd)?	A business that is owned by shareholders. Usually friends and family that have all invested in the business. Has limited liability. Must publish all financial information.
21	What is a franchise?	When one business gives another permission to trade using their name and products in return for a fee and share of the profits e.g. Subway
22	What are the factors to be considered when choosing a business location?	<ul style="list-style-type: none"> <li>• Proximity to market (consumers)</li> <li>• Proximity to labour (workers)</li> <li>• Proximity to materials</li> <li>• Proximity to competitors</li> <li>• Nature of business activity (e.g. for imports/exports – need to be near to a port)</li> <li>• Impact of e-commerce</li> </ul>
23	What is the marketing mix?	The 4 Ps <ul style="list-style-type: none"> <li>• Price</li> <li>• Product</li> <li>• Promotion</li> <li>• Place</li> </ul>
24	What is product differentiation?	Designing a product with unique features that distinguish it from the competition
25	What is brand loyalty?	A customer's willingness to buy from one brand more than another
26	What does market share mean?	The percentage of the total sales of a product in a market by one business e.g. cola sales – Pepsi or Coca Cola?



27	What is the purpose of a business plan?	Outlines the details of the entrepreneur's idea. Usually used to gain capital (£)
28	What should be included in a business plan?	<ul style="list-style-type: none"> <li>• Business idea</li> <li>• Business aims and objectives</li> <li>• Target market</li> <li>• Forecast, revenue, cost and profit</li> <li>• Cash flow forecast</li> <li>• Sources of finance</li> <li>• Location</li> <li>• Marketing mix</li> </ul>

## COMPUTER SCIENCE

1	What is LAN?	A small area network where you own the hardware
2	What is a WAN?	Multiple connect LANs
3	What effects a networks performance?	Bandwidth, number of users, transmission media.
4	What hardware is required for a network?	NIC, switch, router, WAP, cables
5	What are the two network topologies?	Star and bus
6	What are the network protocols?	TCP/IP(transmission control protocol), HTTP(hyper-text transfer protocol), HTTPS(hyper-text transfer protocol)  FTP(file transfer protocol), POP (post office protocol), IMAP (internet message access protocol), SMTP (simple mail transfer protocol)
7	What are network layers?	Multiple similar protocols grouped together
8	What are the 3 types of malware?	Virus, worm, trojan horse
9	What is social engineering?	Manipulating the person rather than the device
10	What is a DDOS?	Flooding a network with request so it gets overloaded
11	What is a SQL injection?	Attacking a systems database
12	What is a brute force attack?	Attempting all different combinations of passwords



13	How can you protect a network?	Anti-malware, firewall, user access levels, 2FA, passwords
14	What are the laws which affect Computer Science?	Copyright, Data protection act, Computer misuse act
15	What does ethical mean?	Whether something is right or wrong
16	What does cultural mean?	How something impacts the way we live
17	What does environmental mean?	Whether something is good for the planet

**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.**

Dance Work	Dance Company	Choreographer
Artificial Things	Stopgap Dance Company	Lucy Bennett
A Linha Curva	Rambert Dance Company	Itzik Galili
Infra	The Royal Ballet	Wayne McGregor
Shadows	Phoenix Dance Theatre	Christopher Bruce
Within Her Eyes	James Cousins Company	James Cousins
Emancipation of Expressionism	Boy Blue Entertainment	Kenrick H2O Sandy

1	What are actions?	What a dancer does.
2	What are the 8 key dance actions?	Gesture, elevation, travel, transfer of weight, stillness, use of different body part, 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"> <li>1. Increase the heart rate</li> <li>2. Pump oxygen to vital organs and muscles</li> <li>3. Increase our internal body temperature</li> <li>4. Mentally prepare for exercise</li> </ol> <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"> <li>1. Absorb lactic acid back into the body</li> <li>2. Decrease heartrate</li> <li>3. Return the body to its pre-exercised state</li> </ol> <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"> <li>• Peer/Self or Teacher Assessment</li> <li>• Record yourself on film and watch it back</li> <li>• Identify areas of strength and weakness and make these a key target</li> <li>• Rehearsal</li> </ul>
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?	<ul style="list-style-type: none"> <li>• Add a move</li> <li>• Subtract a move</li> <li>• Change levels</li> <li>• Change directions</li> <li>• Change dynamic qualities</li> <li>• Perform it backwards (retrograde)</li> <li>• Change a body part</li> </ul>
20	What are choreographic devices	<ul style="list-style-type: none"> <li>• Motif and development</li> <li>• Repetition</li> <li>• Contrast</li> <li>• Highlights</li> <li>• Climax</li> <li>• Manipulation of number</li> <li>• Unison and Canon</li> </ul>
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: <ul style="list-style-type: none"> <li>• Mood(s)</li> <li>• Meaning(s)</li> <li>• Idea(s)</li> <li>• Theme(s)</li> <li>• Style/Style fusion(s)</li> </ul>
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

1	What is Empathise?	When we share and feel the same feelings as others. In particular, the user or target market of those we are designing for.
2	What is a circuit?	A circuit is a device made of other, smaller electrical devices that can move the flow of electricity through itself to power larger devices
3	What is a component?	An electric circuit contains components like batteries, switches, bulbs, resistors, and capacitors, connected in a continuous loop. This allows electricity to flow and power the components. Many different components can be used in a circuit.
4	What are the benefits of CAD/CAM?	More accurate than traditional hand drawn orthographic drawings. Faster to produce and less labour intensive. Multiple copies can be stored, printed and shared electronically. Can be easily edited and design modifications do not generate endless re-drawings of the original design.
5	What are the benefits of manufactured boards?	Sheet material is available in standardised thicknesses and sizes, eg it is rare to come across a tree that is 1,220 mm wide but manufactured boards can be produced in any width, length and thickness Manufactured boards tend to be made from waste from the production of wood planks or recycled timber, meaning fewer trees need to be cut down and the impact of deforestation is lessened
6	What are the health and safety rules in the workshop?	H&S stands for Health & Safety and it is the rules that must be followed at all times in the workshop to keep you safe.



7	What is ideate?	Ideate is when we look at a specification and create designs to solve a problem in line with the specification points.
8	What is a coping saw?	A coping saw is a type of bow saw used to cut intricate external shapes and interior cut-outs in woodworking or carpentry.
9	What is a tolerance?	The tolerance describes the acceptable deviation from a given dimension. (How far from accurate it can be).
10	What is marking out?	Marking out is a fundamental aspect of woodwork that involves the process of applying precise measurements and markings on a piece of wood to guide the cutting, shaping, and assembly of various woodworking projects.
11	What is soldering?	Soldering uses filler metal with a low melting point to join metal surfaces. Unlike welding, it does not involve melting the workpieces.
12	What is a resistor?	A resistor is an electrical component that restricts the flow of electrical current in a circuit.
13	What is a switch?	A switch is a component which controls the open-ness or closed-ness of an electric circuit. They allow control over current flow in a circuit (without having to actually get in there and manually cut or splice the wires). Switches are critical components in any circuit which requires user interaction or control.
14	What is an LED?	In the simplest terms, a light-emitting diode (LED) is a semiconductor device that emits light when an electric current is passed through it.

## ENGINEERING

1	What is a resistor?	A device having resistance to the passage of an electric current.
2	What is the equation do we use for resistors in series?	$R_T = R_1 + R_2 + R_3 \dots$
3	What is the equation do we use for resistors in parallel?	$R_T = \text{[Equation]}$
4	What is the E24 Series?	E24 Series is used for resistors having 5% tolerance. It has twenty-four preferred values, each of two significant digits
5	What is the variable resistor?	A resistor whose value of electrical resistance can be changed on demand





6	What is a thermistor?	An electrical resistor whose resistance is greatly reduced by heating, used for measurement and control.
7	What is a potentiometer?	Is a three-terminal resistor with a sliding or rotating contact that forms an adjustable voltage divider.
8	What is an LDR?	Light Dependant Diode
9	What is a reed switch?	Is an electromechanical switching device.
10	What is the rule of thumb for voltage dividers	When a load is connected across the output of a voltage divider the resistance of the load should be at least ten times greater than the resistance of the voltage divider.
11	What is a transistor?	Is a semiconductor device with three pins, the gate, the emitter and the collector.
12	What are the different uses for a transistor?	Transistors are used to amplify or switch electrical signals and power
13	What is a MOSFET?	The metal-oxide-semiconductor field-effect transistor. It is a type of field-effect transistor (FET). It has three pins, the gate, the drain and the source
14	What is voltage comparator?	Is an electronic circuit that compares two voltages and outputs a digital signal indicating which is larger.

## ENGLISH – POWER AND CONFLICT POETRY

1	What is <b>Bayonet Charge</b> about?	<ul style="list-style-type: none"> <li>• A soldier's experience of a charge towards enemy lines</li> <li>• Thoughts and feelings explored</li> <li>• The soldier questions the point of war</li> </ul>
2	What is a key language and structural feature of <b>Bayonet Charge</b> ?	<p><b>Language:</b> Violent imagery to show sights and sounds of war. Figurative language to emphasis horror and physical pain of charge</p> <p><b>Structure:</b> In medias res (in the middle of the action). First stanza the soldier is acting on instinct. Second stanza the soldier is still and begins to think about the situation. Final stanza the soldier gives up his thoughts and ideal and seems to have lost his humanity.</p>
3	What is <b>Remains</b> about?	<ul style="list-style-type: none"> <li>• Group of soldiers shoot man who's running away from a bank raid</li> <li>• The soldier telling the story questions whether the man was armed or not – this plays on his mind</li> <li>• He can't get the man's death out of his mind – he's haunted by it</li> </ul>



4	What is a key language and structural feature of <b>Remains</b> ?	<b>Language:</b> Gory/graphic detail of the man's death – horrors of war. Colloquial language is used which shows how desensitised to violence and death the speaker is. <b>Structure:</b> Begins as an amusing anecdote and quickly changes into a graphic description of a man's death. There is a clear volta at the beginning of the 5 <sup>th</sup> stanza where the soldier's tone, thoughts and emotions are changed by his guilt
5	What is <b>Charge of the Light Brigade</b> ?	<ul style="list-style-type: none"> <li>• Disastrous battle between British cavalry (soldiers on horseback) and Russian forces during the Crimean war</li> <li>• A misunderstanding ordered the soldiers into a valley surrounded by the enemy</li> <li>• The cavalry were only armed with swords and the Russian soldiers had guns</li> <li>• Many of The Light Brigade were killed</li> </ul>
6	What is a key language and structural feature of <b>Charge of the Light Brigade</b> ?	<b>Language:</b> Repetition is used to create a sense of impending doom. Adverbs like "boldly" and verbs like "charging" emphasise the men's bravery. Violent imagery is used to show strong sense of the violence of the battle. <b>Structure:</b> First three stanzas describe the charge of the men. Battle is described in the fourth stanza. Their retreat is described in the final stanza. The final stanza is the shortest and summarises the heroism of the brigade
7	What is <b>Kamikaze</b> about?	<ul style="list-style-type: none"> <li>• Kamikaze pilot setting off on his mission</li> <li>• The pilot turned around and didn't complete his mission</li> <li>• His daughter imagines what he must have been thinking</li> <li>• The pilot was shunned when he got home</li> </ul>
8	What is a key language and structural feature of <b>Kamikaze</b> ?	<b>Language:</b> Similes, metaphors and description of the power and beauty of nature. Direct speech used which makes the poem more personal. <b>Structure:</b> First five stanzas form one sentence covering the account of a pilot's flight. The end of the sentence represents the plane landing. Final two stanza deal with the fallout of the pilot's actions_
9	What is <b>Poppies</b> about?	<ul style="list-style-type: none"> <li>• Mother describes her son leaving home and joining the army</li> <li>• The mother's emotional reaction is explored</li> <li>• She describes helping him smarten his uniform ready to leave</li> <li>• After he leaves, she goes to places that remind her of him</li> </ul>



10	What is a key language and structural feature of <b>Poppies</b> ?	<b>Language:</b> Images of war and violence symbolise the son's new identity and the danger that he's in. References to Armistice Sunday and the war memorial raises the question of whether he is still alive. <b>Structure:</b> The poem is chronological, describing preparations for the son leaving, his departure and then what the mother does afterwards. However, the time frame is ambiguous – memories of the son's childhood are intermingled with memories of him leaving, and they're often not clearly distinguished.
11	What is <b>War Photographer</b> about?	<ul style="list-style-type: none"> <li>• A war photographer developing pictures from war</li> <li>• The contrast between safe and calm home is compared to war</li> <li>• Photographer remembers the death of a man and the cries of his wife</li> <li>• The speaker thinks that people do not care/understand war</li> </ul>
12	What is a key language and structural feature of <b>War Photographer</b> ?	<b>Language:</b> Emotive imagery reflects the horrors of war seen by the photographer and in the photos. <b>Structure:</b> Distinct change at the start of the third stanza, when the photographer remembers a specific death. In the final stanza, the focus shifts to the way the photographer's work is received
13	What is <b>Storm on the Island</b> about?	<ul style="list-style-type: none"> <li>• Narrator describes how a community thinks they're well-prepared for a coming storm</li> <li>• Confidence slowly fades away as the storm develops</li> <li>• The ending of the poem describes the fear as the storm hits the island</li> </ul>
14	What is a key language and structural feature of <b>Storm on the Island</b> ?	<b>Language:</b> Direct address is used by the narrator to involve the readers in his fear by speaking directly to "you". Violent imagery of the storm emphasises the danger and the effects of the storm. <b>Structure:</b> The poem shifts from security to fear. "But no:" seems to be a turning point (volta), with the slow pace of the monosyllabic phrase and the caesura reflecting the last moments of calm before the storm.
15	What is <b>Exposure</b> about?	<ul style="list-style-type: none"> <li>• Soldiers in WW1 trenches awake at night afraid of an enemy attack</li> <li>• Nature is described as their main enemy – it's freezing cold, windy and snowing</li> <li>• Men imagine returning home but the doors are closed on them</li> </ul>
16	What is a key language and structural feature of <b>Exposure</b> ?	<b>Language:</b> Bleak imager is used to show the men's pain: the awful weather and the lack of hope. Nature is repeatedly personified, making it seem the real enemy in the war. <b>Structure:</b> Eight stanzas with no real progression. The 1 <sup>st</sup> and last stanzas end with the same words, representing the monotony of life in the trenches.

17	What is <b>Ozymandias</b> about?	<ul style="list-style-type: none"> <li>• Narrator meets a traveller who tells him about a statue standing in the middle of the desert</li> <li>• Statue of king shows his face proud and he arrogantly boasts</li> <li>• However, the statue has fallen down and crumbled away so that only the ruins remains</li> </ul>
18	What is a key language and structural feature of <b>Ozymandias</b> ?	<b>Language:</b> Angry language which reflects the tyranny of the ruler: <i>“sneer of cold command”, “ye Mighty”</i> . <b>Structure:</b> Narrator builds up an image of the statue by focusing on different parts of it in turn. The poem ends by describing the enormous desert
19	What is <b>The Prelude</b> about?	<ul style="list-style-type: none"> <li>• Extract begins on a summer evening when the narrator finds a boat</li> <li>• A mountain appears on the horizon and he turns the boat around</li> </ul>
20	What is a key language and structural feature of <b>The Prelude</b> ?	<b>Language:</b> Dramatic language shows how nature is dark and threatening and will always be more powerful than man. <i>“a huge peak, black and huge”, “upreared its head”, “purpose of its own”</i> . <b>Structure:</b> There are three main sections with a distinct change (volta). In the final section, the tone becomes darker and more fearful when the mountain appears on the horizon.
21	What is <b>The Emigree</b> about?	<ul style="list-style-type: none"> <li>• The speaker talks positively about a city in a country she left as a child</li> <li>• The city may not be a real place – it could represent a time, person or emotion that the speaker has been forced to leave.</li> </ul>
22	What is a key language and structural feature of <b>The Emigree</b> ?	<b>Language:</b> Vocabulary associated with war, invasion and tyranny shows that the city may not be as perfect as the speaker remembers it <b>Structure:</b> The speaker’s memory of the city grows and solidifies as the poem moves on – the city becomes a physical presence for the speaker in the final stanza. Each stanza ends with “sunlight”, reinforcing the fact that the speaker sees the city in a positive light.
23	What is <b>Checking Out Me History</b> about?	<ul style="list-style-type: none"> <li>• Narrator talking about his identity and how it links to his knowledge of history</li> <li>• He was taught about British history but wasn’t taught about his Caribbean routes</li> <li>• . He mentions men and women from diverse backgrounds who should be celebrated</li> </ul>



24	What is a key language and structural feature of <b>Checking Out Me History</b> ?	<b>Language:</b> Agard repeatedly uses violent metaphors to show the cruelty of colonialism. The line “blind to me own identity” emphasises the deliberate nature of the abuse inflicted by colonial control. <b>Structure:</b> The poem alternates between historical and fictional figures from Caribbean and British culture, emphasising the differences between them. British figures are skipped over quickly, whereas the Caribbean figures are covered in more detail.
25	What is <b>Tissue</b> about?	<ul style="list-style-type: none"> <li>• First three stanzas talk about the importance of paper fragile, yet it still controls our lives</li> <li>• The final thirteen lines look at creating lines look at creating things, particularly human life</li> <li>• Life is more complex and precious than other things we create; it’s temporary</li> </ul>
26	What is a key language and structural feature of <b>Tissue</b> ?	<b>Language:</b> Light is presented as a positive force – it enables people to see and understand. There are lots of references to things being created. Man-made constructions like buildings and borderlines are compared with the creation of humans. <b>Structure:</b> There are three main parts to the poem, moving through ideas about history, human experience and the creation of human life. The final, single line stands out and focuses the reader on their own identity and how it’s created.
27	What is <b>My Last Duchess</b> about?	<ul style="list-style-type: none"> <li>• The Duke proudly points out the portrait of the Duchess (his former wife) to a visitor</li> <li>• The Duke was angered by the Duchess’s behaviour</li> <li>• He acted to stop the Duchess’s flirtatious behaviour, but he doesn’t say how he did this</li> <li>• There are strong hints that he had her murdered</li> </ul>
28	What is a key language and structural feature of <b>My Last Duchess</b> ?	<b>Language:</b> This poem is loaded with rhyme because of the rhyming couplets, however it is loaded with enjambment which can often mask the rhymes. There is a lot of imagery about possessing objects, as well as an abundance of personal pronouns. This suggests the Duke’s selfish and self-important character. <b>Structure:</b> The poem is a dramatic monologue. The Duke dominates the conversation and the messenger does not speak. The poet has used iambic pentameter to mimic the style of speech/ conversational tone.



29	What is <b>London</b> about?	<ul style="list-style-type: none"> <li>• The narrator is describing a walk around the city of London where everyone he meets is affected by misery and despair</li> <li>• The misery is relentless and nobody can escape – not even the young and innocent</li> <li>• People in power are behind the problems and do nothing to help</li> </ul>
30	What is a key language and structural feature of <b>London</b> ?	<p><b>Language:</b> Language reflects the hopelessness of the people. They appear hopeless as they are not able to help themselves “<i>mind-forged manacles</i>”, “<i>marks of weakness, marks of woe</i>”.</p> <p><b>Structure:</b> The ABAB rhyme scheme is unbroken and echoes the relentless misery of the city. It could also reflect the sound of his feet as he trudges through the streets.</p>
31	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"> <li>1. Used capital letters correctly</li> <li>2. Used the correct punctuation at the end of each sentence (e.g. full stop, question mark, exclamation mark)</li> <li>3. Used paragraphs where necessary</li> <li>4. Presented your work neatly and appropriately</li> <li>5. Used the key words from the lesson</li> <li>6. Used challenging vocabulary where necessary</li> </ol>

## ENGLISH – MACBETH

1	What is the correct terminology to use when writing about a play?	<ul style="list-style-type: none"> <li>• Playwright</li> <li>• Audience</li> <li>• Play</li> <li>• Stage directions</li> <li>• Acts</li> <li>• Scenes</li> <li>• Monologue</li> </ul>
2	What language do the witches use and why?	<p><i>Equivocation:</i> The use of ambiguous expressions in order to mislead</p> <p><i>Paradoxical couplets:</i> Words that seem to contradict one another</p>
3	What was life like in the Jacobean era?	Society was hierarchal with strict social classes arranged in tiers. Gender roles were structured as well with men working outside the house in business and politics and women performing housework and taking care of children.



4	What are Macbeth and Banquo's prophecies?	<p><i>Macbeth</i>: "All hail Macbeth, thou shalt be king hereafter!", "Thou shalt get kings though thou be none", "Beware Macduff!"</p> <p><i>Banquo</i>: "Lesser than Macbeth and greater", "Not so happy, yet much happier", "Thou shalt get kings, though thou be none".</p>
5	What is foreshadowing and how is it used in Macbeth?	<p>Foreshadowing means there is a warning or indication of a future event.</p> <ul style="list-style-type: none"> <li>"Hail to thee Thane of Glamis! All hail Macbeth! Hail to thee, Thane of Cawdor! (...) that shalt be king hereafter!" – the witches foreshadow Macbeth's crowning.</li> <li>Macbeth and Banquo's prophecies are examples of foreshadowing</li> <li>"Beware Macduff: Beware the Thane of Fife", "none of woman born shall harm Macbeth", "until Great Birnam wood to High Dunsinane Hill" – the apparitions predict Macbeth's fate</li> </ul>
6	What is the difference between a soliloquy and an aside?	<p><i>Soliloquy</i>: It is a speech in a play where the character speaks to themselves or the audience.</p> <p><i>Aside</i>: Speech in the play intended to be heard by the audience and unheard by the other characters in the play.</p>
7	What is hamartia and what is Macbeth's hamartia in the play?	A fatal flaw leading to the downfall of a character in a play, particularly the hero or heroine. Ambition is Macbeth's hamartia.
8	What is regicide?	Regicide is the killing of a king. It was considered one of the worst crimes to commit in the Jacobean era.
9	What are the events in Act 1 of Macbeth?	<ul style="list-style-type: none"> <li>The witches meet</li> <li>Macbeth the warrior</li> <li>The Witches' prophecies</li> <li>Lady Macbeth receives the news</li> <li>The Macbeths plot murder</li> <li>Macbeth has doubts</li> </ul>
10	What are the events in Act 2 of Macbeth?	<ul style="list-style-type: none"> <li>Macbeth has a vision</li> <li>Murder of King Duncan (offstage)</li> <li>Macduff asks questions</li> <li>The suspects flee</li> </ul>
11	What are the events in Act 3 of Macbeth?	<ul style="list-style-type: none"> <li>Banquo has suspicions</li> <li>Banquo dies</li> <li>Banquo's ghost appears</li> </ul>
12	What are the events in Act 4 of Macbeth?	<ul style="list-style-type: none"> <li>Macbeth visits the witches</li> <li>Macduff's family are murdered</li> <li>Macduff and Malcolm raise an army</li> </ul>

13	What are the events in Act 5 of Macbeth?	<ul style="list-style-type: none"> <li>• Lady Macbeth sleepwalks</li> <li>• The army advances</li> <li>• Lady Macbeth dies</li> <li>• Macbeth is killed</li> <li>• Malcom is crowned king</li> </ul>
14	What quotations are used to show the development of the character Macbeth across all acts?	<p><b>Act 1:</b> “brave Macbeth”, “valiant”, “too full o’ the milk of human kindness”, “great Thane”, “let not light see my black and deep desires”</p> <p><b>Act 2:</b> “Will all great Neptune’s ocean wash this blood clean from my hand?”, “Me thought I heard a voice cry, ‘Sleep no more!’”</p> <p><b>Act 3:</b> “Make our faces vizards to our hearts”, “O, full of scorpions is my mind, dear wife!”</p> <p><b>Act 4:</b> “tyrant”, “Life’s but a walking shadow”</p> <p><b>Act 5:</b> “I have lived long enough”, “dead butcher”</p>
15	What quotations are used to show the development of the character Lady Macbeth across all acts?	<p><b>Act 1:</b> “Look like the innocent flower, But be the serpent under’t”, “Unsex me here”</p> <p><b>Act 2:</b> “A little water clears us of this deed”, “my hands are of your colour but I shame to wear a heart so white”, “Give me the daggers”</p> <p><b>Act 5:</b> “Out, damned spot! Out, I say!”, “All the perfumes of Arabia will not sweeten this little hand”, “Here’s the smell of blood still”</p>
16	What is the relationship between Macbeth and Lady Macbeth like throughout the play?	<p>They often transgress the Jacobean gender expectations (women as submissive to their husbands) and Lady Macbeth often asserts her dominance over Macbeth, painting Macbeth as the weaker partner in the marriage: “Give me the daggers”, “Look like th’innocent flower but be the serpent under’t”. Also, after the killing of King Duncan, Macbeth is riddled with guilt (Will all great Neptune’s ocean wash this blood clean from my hand) yet Lady Macbeth is guilt-free (“A little water clears us of this deed”).</p> <p>Before Duncan’s murder, Macbeth is affectionate and caring towards Lady Macbeth; however, towards the end of the play he transforms into a callous tyrant who shows no remorse of grief for her death, even though he is aware she had become an anxious, nervous childlike wreck.</p>
17	What is the Great Chain of Being?	<p>This was the idea that everyone was ordered by God into his allotted place, with the king at the head. By killing the king and taking his place, Macbeth was subverting this natural order.</p>
18	What is the Divine Right of Kings?	<p>The divine right was the idea that claimed that kings were chosen by God and were his representatives on Earth. These kings had absolute power and could do what they liked.</p>





19	What are Shakespeare's intentions for the didactic play, 'Macbeth'?	Shakespeare wrote Macbeth as a tribute to King James I, who became king a few years before the play was first performed. Shakespeare also wanted to caution against abuses of power and the instability which follows from political violence.
20	How can I achieve more marks?	<ul style="list-style-type: none"> <li>• Thoughtful response supported with judicious, embedded quotations</li> <li>• Embedded subject terminology</li> <li>• Single word analysis</li> <li>• Layering of quotations</li> <li>• Useful links to contextual information of the Victoria era</li> </ul>
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"> <li>1. Used capital letters correctly</li> <li>2. Used the correct punctuation at the end of each sentence (e.g. full stop, question mark, exclamation mark)</li> <li>3. Used paragraphs where necessary</li> <li>4. Presented your work neatly and appropriately</li> <li>5. Used the key words from the lesson</li> <li>6. Used challenging vocabulary where necessary</li> </ol>

## FOOD AND NUTRITION

1	What purpose does carbohydrate have in our diet?	Provides energy, fibre
2	How would you describe it in terms of nutrients	Macro Nutrient, Vital nutrient
3	What foods provide carbohydrate	Pasta, potato, flour, Sugars
4	What categories of carbohydrates are there?	Simple, complex. Mono, Di, Poly
5	What happens if you eat too many carbohydrates	Put on weight. Obesity
6	What are the essential ingredients in pasta	Flour egg
7	What is the difference between white and brown flour?	More of the original grain is contained on brown. 85%. White = 75%. Bran and wheatgerm have been removed.
8	What is the technique used to make rough puff pastry?	Folding and layering. Addition of high amount of fat



9	Name 6 varieties of pasta	Lasagne, Ravioli, Spaghetti, Farfalle, Macaroni, Penne, Rigatoni
10	What is a ragu sauce	Tomato sauce used to accompany Bolognese
11	What is a successful time plan?	A time plan that combines all elements of preparation smoothly,
12	What is the NEA1 exam	A scientific experiment that investigates the characteristics of ingredients in cooking?
13	What happens if you do not eat enough carbohydrates?	Lack energy, lethargy, lose weight
14	What are the other macro nutrients?	Protein and fat
15	How many calories should an average male and female eat each day	2000 and 2500
16	What is energy balance?	When there is equity between intake and output of calories

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

1	What do dessin and EPS mean?	Art and PE
2	How to you say my favourite subject/subjects?	Ma matière préférée est Mes matières préférées sont
3	How do you say 'I like to study / I don't like to study	J'aime étudier / je n'aime pas étudier
4	What is the abbreviation for un professeur	Un prof
5	Which tense do you use with depuis	Present tense e.g. j'étudie le français depuis quatre ans
6	What are intensifiers	Words which intensify the adjective



7	What do these intensifiers mean? Très Assez Vraiment Trop	Very Quite Really too
8	When would you use a comparative?	To compare something to something else
9	What do plus que / moins que mean?	More than / less than
10	What is a superlative?	The most/best
11	What does le meilleur mean?	The best
12	What does le pire mean?	The worst
13	What type of verbs are pouvoir / vouloir/devoir / falloir	Modal verbs (they are followed by another verb, in its infinitive form)
14	What does il faut mean?	It is necessary to

## GEOGRAPHY

1	How are waves formed?	A wave is formed by wind blowing over the surface of the ocean. Friction with the surface of the water causes ripples to form and these develop into waves. Waves vary in size from a small ripple to a giant rogue wave, and some waves can travel thousands of miles before reaching land.
2	What are the size of waves influenced by?	<ul style="list-style-type: none"> <li>the FETCH (length of water the wind blows over)</li> <li>the STRENGTH of the wind</li> <li>how LONG the wind blows for</li> </ul>
3	How else can waves form?	<ul style="list-style-type: none"> <li>Waves can also form when <b>earthquakes</b> and <b>volcanic eruptions</b> shake the seabed. These waves are known as <b>tsunami</b> waves.</li> </ul>
4	What happens when the waves reach the coast?	<ul style="list-style-type: none"> <li>Despite the wavy surface in the open sea, there is <b>little horizontal</b> movement of water. This only occurs when the waves <b>break</b> and <b>surge</b> up the beach as they approach the shore.</li> </ul>

		<ul style="list-style-type: none"> <li>As the water starts to get <b>shallower</b>, the seabed interrupts the <b>circular motion</b> of the waves making them more <b>elliptical</b>. This causes the <b>crest</b> of the wave to rise up and eventually <b>collapse</b> onto the beach. The water that rushes up the beach is called the <b>swash</b> and the water that flows back towards the sea is called the <b>backwash</b>.</li> </ul>
5	Describe the features of constructive waves	These occur on wide, flat beaches where there is a strong swash and a weak backwash.
6	Describe the features of destructive waves	These occur on narrow, steep beaches where there is a strong backwash and a weak swash.
7	What is erosion	The wearing away of rocks by the action of water or the wind.
8	What are the four types of erosion?	<ul style="list-style-type: none"> <li>hydraulic action</li> <li>attrition</li> <li>abrasion</li> <li>solution</li> </ul>
9	What is weathering?	Weathering is the break-up of rocks in situ due to the exposure of the atmosphere.
10	Name 4 types of weathering	<ul style="list-style-type: none"> <li>Mechanical weathering – Freeze Thaw/exfoliation (aka Onion Skin)</li> <li>Chemical weathering</li> <li>Biological weathering</li> </ul>
11	What is mass movement?	Mass movement is the shifting of rocks and loose material down slope under the influence of gravity.
12	What are 3 examples of mass movement?	<ul style="list-style-type: none"> <li>Rock falls</li> <li>Slumping</li> <li>Landslides</li> </ul>
13	What is sub aerial weathering?	<b>Sub-aerial</b> processes are land based processes which alter the shape of a coastline. They're a combination of both <b>weathering</b> and mass movement
14	What is Coastal transportation?	Coastal transportation is the movement of material in the sea and along the coast by waves
15	Give 4 examples of coastal transportation	<ul style="list-style-type: none"> <li>Traction</li> <li>Saltation</li> <li>Suspension</li> <li>Solution</li> </ul>
16	Define Longshore drift	<b>Longshore drift</b> is a process of transportation that shifts eroded material along the coastline



17	Describe the process of longshore drift	<ol style="list-style-type: none"> <li>1. Waves approach the coastline at an angle</li> <li>2. Swash carries sediment up the beach at an angle</li> <li>3. Backwash carries sediment down the beach with gravity at right angles to the beach</li> <li>4. This creates a zig-zag movement of sediment along the beach</li> </ol>
18	What is coastal deposition?	Coastal deposition is when waves drop and leave behind the sediment they were transporting. It happens when the energy in the waves is lost as the flow of water slows down.
19	What are concordant and discordant coastlines?	<p><b><u>Concordant coastlines</u></b> Rocks are parallel to the wave front and therefore rates of erosion are similar along the coastline.</p> <p><b><u>Discordant coastlines</u></b> Differential erosion may occur, where bands of hard and soft rock outcrop at right angles to the sea.</p>
20	Describe the features of a headland	<ul style="list-style-type: none"> <li>• A headland is a section of land jutting out into the sea. It is made of hard rock.</li> <li>• A headland is surrounded by water on three sides</li> </ul>
21	Describe the features of a bay	<ul style="list-style-type: none"> <li>• A bay is a sheltered area of soft rock found next to the headland.</li> <li>• A bay is surrounded by land on three sides and usually has a beach</li> </ul>
22	Name the features of a stack formation	Blowhole – crack – cave – arch – stack - stump
23	Describe the formation of a wave cut platform	Destructive waves cause erosion at the foot of the cliff (1) between the high and low tide level. This process is called hydraulic action and abrasion. (1) Hydraulic action is when the water pushes air into small cracks, forcing the crack to widen due to pressure. Abrasion is when the sediment in the water attacks the cliff, scraping the surface. (1) This will eventually form a wave cut notch (1) (X on Figure 1). The notch is enlarged as hydraulic action and abrasion continues until eventually the overhanging cliff (Y on Figure 1) becomes unstable as it is not supported and collapses due to gravity (1). The collapsed rock is transported down the coast, leaving a wave cut platform (1).
24	What is a beach?	Beaches are found on coasts between high and low tide level. Beaches are deposits of sand that lies between the high and low tide levels. Most beaches are formed of sand and shingle (pebbles) as well as mud and silt. They are mainly found in bays because

		the waves that enter the bay are constructive waves that have a strong swash and build up the beach.
25	What is a berm?	A <b>berm</b> is a terrace on a beach that has formed in the backshore, above the water level at high tide. On broad beaches there may be three or more berms formed under different wave conditions. Berms are formed in calm weather when constructive waves transport material onto the beach, whilst existing berms are moved up the beach by storms and then new berms are formed changing the beach profile.
26	What happens to the particle size as we move upland on a beach?	Generally increases in size, as large material is thrown high onto the beach
27	What are sand dunes and what do they need to form?	Sand dunes are large heaps of sand that form on the dry backshore of a sandy beach. Form a sand dune to form, it needs: <ul style="list-style-type: none"> <li>• A large flat beach,</li> <li>• A large supply of sand,</li> <li>• A large tidal range, so there is time for the sand to dry,</li> <li>• An onshore wind to move sand to the back of the beach,</li> <li>• An obstacle such as drift wood for the dune to form against</li> </ul>
28	How are spits formed?	<ol style="list-style-type: none"> <li>1. Longshore drift transports sand along the coast.</li> <li>2. The coastline changes shape and the waves begin to lose energy.</li> <li>3. Deposition starts to build up at the <b>proximal end</b> and the spit grows out into the sea.</li> <li>4. The spit is exposed to changes in wind and wave direction which cause the <b>distal end</b> to hook back towards the land.</li> </ol>
29	How is a bar formed?	<ol style="list-style-type: none"> <li>1. A spit joins together two headlands.</li> <li>2. A bar cuts off the bay between the headlands from the sea.</li> <li>3. A lagoon can form behind the bar.</li> </ol>
30	Give 2 different types of coastal defence	<ul style="list-style-type: none"> <li>• Hard engineering</li> <li>• Soft engineering</li> </ul>



31	Give 7 examples of coastal management	<ul style="list-style-type: none"> <li>• Groynes</li> <li>• Rock armour</li> <li>• Sea walls</li> <li>• Gabions</li> <li>• Beach nourishment</li> <li>• Dune regeneration</li> <li>• Managed retreat</li> </ul>
32	Rivers What is the long profile of a river?	The long profile of a river shows the profile gradient and length of a river from a rivers source to its mouth. It is usually shown as a line graph with the source at the highest point on the line and the mouth at the lowest.
33	What are the 3 courses of a river?	Long profiles are also used to show the three courses of a river; upper, middle and lower.
34	How are waterfalls formed?  What is an undercut?  What is formed in front of a waterfall?	As it makes its way from source to mouth, a river flows over different types of rock. Tougher, more resistant rocks are less easily eroded than weaker rocks and they will perform 'steps' in the long profile of a river. These steps form waterfalls. The soft rock erodes more quickly, undercutting the hard rock. The hard rock is left overhanging and because it isn't supported, it eventually collapses A gorge and steep sided valley
35	What is a meander?	A meander is a bend in a river. They are found mainly in lowland areas and are extremely common in the middle course of a river.
36	How is an ox-bow lake formed?	A river with many meanders is called a <i>sinuous river</i> . The loops increase in size as erosion continues on the outside bank and deposition continues on the inside bank. As meanders grow, they migrate over the floodplain. As they migrate they may start to erode <u>towards each other</u> . Gradually the neck of the meander narrows until it is completely broken through (usually during a flood) to form a new straighter channel. The old meander loop is cut off by deposition from subsequent flooding to form an <u>ox-bow lake</u> .

37	What is a levee?	Levées are naturally raised river banks (ridges of sediment) found on either or both sides of a river channel, that is prone to flooding. They are found in a river's lower course. It is formed by flooding over many years and composed of gravel, stones and alluvium (silt).
38	What is a flood plain?	A flood plain is wide, flat area on marshy land on either side of a river, and found in the middle and lower courses. Flood plains are made from alluvium which is deposited when a river floods. Flood plains are used for farming as the soil is very fertile.
39	What is an estuary?	Estuaries are found at the mouth of a river, in its lower course where the river meets the sea. The water here is tidal, the river level rises and falls each day. The water floods over the banks of the river carrying silt and sand on to the valley floor. As the tide reaches its highest point, the water is moving very slowly as the river's velocity decreases, so the <u>sediment is deposited</u> . Over time, more and more mud builds up, creating large areas of mudflats. At low tide, the wide, muddy banks are exposed. Overtime, these mudflats develop into <u>saltmarshes</u>
40	What are the main causes of flooding?	Impermeable rock, hard dry soil, very wet soil, steep slopes, deforestation, building on flood plains.
41	Give examples of hard engineering used to mitigating river flooding. Give examples of soft engineering solutions.	Embankments, flood walls, straightening rivers, dams  Flood warnings, flood plain zoning, planting trees.

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

1	What do Erdkunde and Geschichte mean?	Geography and History
2	How to you say my favourite subject/subjects?	Mein Lieblingsfach Meine Lieblingsfächer
3	How do you make ich lerne positive and negative?	Ich lerne gern ich lerne nicht gern





4	What is the difference between Lehrer und Lehrerinnen?	Teachers: masculine form and feminine form
5	Which tense do you use with seit?	Present tense e.g. Ich lerne seit drei Jahren Deutsch
6	Which adjective endings go with einen/eine/ein (accusative case)?	Einen- en Eine-e Ein-es
7	What are reflexive verbs?	They have a separable prefix, which goes to the end of the sentence e.g. Ich stehe um sieben Uhr <b>aus</b>
8	What does man muss mean?	You have to/must
9	Where does the infinitive of the other verb go, if you are using man muss?	To the end of the sentence
10	What do you need to remember if you are using halb with the time?	It is half to the next hour e.g. halb vier = 3:30
11	What happens if you use weil/wenn as a conjunction?	The verb goes to the end
12	What does ich denke mean?	I think
13	What type of verbs are müssen/können and sollen?	Modal verbs ( they send the other verb, in its infinitive form to the end)
14	What does es war mean? Which tense is it?	It was Imperfect Tense

## HEALTH AND SOCIAL CARE

1	Define the term 'development'	Development is about the way children learn to use their bodies and gain skills.
2	Define the term 'growth'	The way babies and children's bodies get larger and heavier. It is a change in physical weight or height.
3	What is a life stage?	Life stages refer to different phases of life that all individuals pass through in normal lifetime.
4	List the 6 life stages	Infancy, childhood, adolescence, early adulthood, middle adulthood and later adulthood.



5	Define physical development	It includes development of each of your body systems and is affected by both inherited, genetic and lifestyle factors.
6	Define intellectual development	The growth of the brain and development of your thought processes. This includes things like memory, problem-solving and understanding the world around us.
7	Define emotional development	The growth and understanding of feelings. The ability to give love, care and affection and to feel secure linked to self-esteem.
8	Define social development	Making connections with people and becoming part of society. This includes your family, friends and community you live in.
9	Explain the term independence	This is about reaching for a stage when an individual cares for themselves and makes their own decisions. Becoming independent such as: feeding themselves, washing and dressing themselves. They can start to make their own decisions on what they want to eat too.
10	Define self-image	The mental picture we have of ourselves.  Influenced by: personal appearance, the media, comparing ourselves to others, things other people say about us.
11	Define self-esteem	How much you like, accept and respect yourself, how much you value yourself.
12	Define lifestyle	Lifestyle involves the choices made that affect health and development such as diet, exercise, opinions behaviours and interests. Can also be referred to as 'way or style of living'.
13	What is an expected life event?	Is an event that is likely to happen during your life; e.g. starting school
14	What is an unexpected life event?	This is an event that is not thought to be likely to happen in your life; e.g. going to prison.
15	Define physical events	A physical event makes changes to your body, physical health or mobility.
16	What does the term life circumstances mean?	This refers to choices that you make day to day within your life, e.g type of diet you eat.



17	What does the term redundancy mean?	This is when someone loses their job through no fault of their own.
18	What is formal support?	Formal support of the physical, emotional, practical support that is provided by trained professionals. E.g. doctor
19	What is informal support?	Informal support is the provided by family and friends, it is unpaid physical, emotional or practical support.
20	Explain social isolation	The absence of social interactions, contacts and relationships with family and friends, with neighbours on an individual level, and with 'society at large' on a broader level.
21	List 4 life events that could affect someone's emotional development during later adulthood	Isolation from peers, Loss of independence, Progressive deterioration of health, Loss of significant other, Loss of friends, Being ignored despite having wisdom and experience
22	Define primary care	This care is the first port of call when you access services. Includes services such as the GP, paramedic, pharmacist ect.
23	Define the term secondary care	This is the specialist care that individuals need due to extreme circumstances. For example, palliative care.
24	What is palliative care	This is the care that is provided to individuals who are coming towards the end of their life and need specialist care. This is normally funded by voluntary organisations subsidised by the NHS.
25	Define the term allied services	You are referred to allied services following a GP appointment to receive further in-depth tests and appointments with consultants.
26	What is the role of an occupational therapist?	They are there to support people who have difficulties carrying out essential daily activities such as cooking or self-care. They assess an individual for additional aids of support such as hand rails.
27	What is a podiatrist?	They provide essential foot care for individuals with diabetes, circulatory or nerve damage.
28	What is an orthoptist?	They work with adults and children who have eye disorders.
29	What is respite care?	The service provides temporary care for an individual, which will give the usual carer a short break.



30	What is domiciliary care?	This is care and support given at home by a care worker to help a person with their daily life.
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## HISTORY

1	What were the two main laws that made up Elizabeth's 'middle way' religious settlement.	Act of Supremacy (1559) Act of Uniformity (1559)
2	Elizabeth said she didn't want to 'see windows into men's souls' as part of her religious changes. What did she mean by this?	She was happy for people to appear to conform and thought this would naturally make Catholicism die out.
3	Who came to England in 1568 and sparked Catholic rebellions and plots against Elizabeth?	Mary – Queen of Scots
4	Who led the 1569 Northern Rebellion which included a plan for the Duke of Norfolk to marry Mary, Queen of Scots?	Earls of Northumberland Earls of Westmorland
5	What was the consequence of the papal bull issued by Pope Pius V in February 1570?	It excommunicated Elizabeth from the Catholic Church.
6	What was the name of Elizabeth's spymaster?	Francis Walsingham
7	Give a definition of a Jesuit priest	Jesuit missionaries arrived from Europe – they were totally loyal to the Pope and specially trained to persuade people to become Catholics.
8	From 1580, Jesuit priests were smuggled into England. How were they kept secret?	Stayed in country homes of wealthy Catholic families – priest holes.
9	Define a recusant	A recusant was someone who refused to attend Church
10	Which plot of 1571 involved a plan for the Pope and Spain to join forces invade England and overthrow Elizabeth?	The Ridolfi Plot



11	In the above plot, which Duke was arrested and executed for treason for his involvement?	Duke of Norfolk
12	Which plot of 1583 saw a plan to invade England with an invasion force led by the French Duke of Guise with financial support from Spain and the Pope	Throckmorton Plot
13	Which 1586 plot saw Mary implicated with secret letters being hidden in beer barrels?	Babington Plot
14	What happened to Mary, Queen of Scots as a result of the Babington Plot?	She was executed
15	In the 1580s, Elizabeth made laws against Catholics stricter. What was the fine per month for not attending a Protestant Church service?	£20
16	What happened to Catholic martyr Margaret Clitherow in 1586?	She was pressed to death due to her Catholic beliefs
17	Define a Puritan	A strict protestant - services very simple, no music, preachers wear plain black clothes
18	Which Archbishop of Canterbury, who refused to close down Puritan prayer meetings, was placed under house arrest until his death?	Edmund Grindal
19	What was the punishment for Puritan, John Stubbs, who wrote a pamphlet criticising Elizabeth for considering marriage to a French Catholic?	He had his hand cut off
20	What was the name of Mary, Queen of Scots second husband who died in suspicious circumstances in 1567?	Lord Darnley



21	What was the relationship between Mary, Queen of Scots and Elizabeth	Cousins
22	What prompted Elizabeth to sign Mary's death warrant in 1587?	Lord Burghley told her the Spanish forces had landed in Wales.
23	During which decade of Elizabeth's reign were harvests particularly bad?	1590s
24	Poverty was caused because some farmers enclosed their fields and instead of growing crops looked after which animals?	Sheep
25	Which local government officials looked after poverty related issues?	Justices of the Peace
26	The 1572 Vagabonds Act punished vagrants. What happened to someone who was repeatedly caught begging?	Vagrants repeatedly caught begging were put to death. For a first offence they were whipped.
27	The 1601 Poor Law set up places for genuinely deserving cases to live in. What were they called?	Almshouses
28	Which religious group opposed theatres?	Puritans opposed the theatre. They associated it with the Romans who had persecuted Christians.
29	Who was the first Englishman to circumnavigate the globe?	Francis Drake circumnavigated the globe 1577-80.
30	Which Elizabethan seaman established Roanoke "The Lost Colony" in North America?	Walter Raleigh
31	New ideas about education spread from the continent. What were these ideas linked to?	The Renaissance



## HOSPITALITY AND CATERING

1	What are the visible symptoms of food induced ill health?	<p>Visible symptoms of food poisoning, chemical poisoning, allergic reaction and food intolerance include:</p> <ul style="list-style-type: none"> <li>• Diarrhoea: a common symptom of most types of food poisoning bacteria and can also be a symptom of lactose intolerance.</li> <li>• Vomiting: a common symptom of most types of food poisoning bacteria, but may could also be caused by taking in chemicals accidentally added to food.</li> <li>• Pale or sweating/chills: a high temperature is a common symptom of E-coli and Salmonella.</li> <li>• Bloating: a symptom of lactose intolerance.</li> <li>• Weight loss: a symptom of gluten intolerance (coeliac disease).</li> </ul>
2	What are the non-visible symptoms of food induced ill health?	<p>Non-visible symptoms of food poisoning, chemical poisoning, allergic reaction and food intolerance include:</p> <ul style="list-style-type: none"> <li>• Nausea (feeling sick): the most common symptom for all types of food-induced ill-health.</li> <li>• Stomach-ache/cramps: abdominal pain is common symptom of lactose intolerance as well as a sign of an allergic reaction. Cramps may happen at the same time as diarrhoea.</li> <li>• Wind/flatulence: a common symptom of lactose intolerance.</li> <li>• Constipation: a symptom of Listeria food poisoning.</li> <li>• Painful joints: a symptom of E-coli food poisoning.</li> <li>• Headache: a symptom linked to Campylobacter, E-coli and Listeria.</li> <li>• Weakness: non-stop vomiting, and diarrhoea can leave a person feeling weak. Gluten intolerance (coeliac disease) can leave a person feeling tired because their bodies can't absorb the correct amount of nutrients</li> </ul>
3	What are the symptoms of allergic / anaphylactic reaction?	<p>Visible symptoms: red skin, a raised rash, vomiting, swelling of lips and eyes and difficulty breathing.</p> <ul style="list-style-type: none"> <li>• Non-visible symptoms: swelling of tongue and throat, nausea (feeling sick) and abdominal pain.</li> <li>• Anaphylaxis: a severe reaction to eating an allergen that can lead to death. An injection of adrenaline (for example, an EpiPen) is the treatment for an anaphylactic reaction</li> </ul>
4	What is Cross Contamination?	<p>Food poisoning bacteria can easily be transferred to high-risk foods. This is called cross-contamination</p>



5	How can we control cross contamination?	washing hands before and after handling raw meat and other high-risk foods. <ul style="list-style-type: none"> <li>• using colour-coded chopping boards and knives when preparing high-risk foods.</li> <li>• washing hands after going to the toilet, sneezing, or blowing your nose and handling rubbish</li> </ul>
6	What is physical contamination?	Physical contamination is when something which is not designed for eating ends up in your food. Physical contaminants include hair, seeds, pips, bone, plastic packaging, plasters, broken glass, flies and other insects, tin foil and baking paper, soil, and fingernails
7	How can we control physical contamination?	Physical contamination can be controlled by: <ul style="list-style-type: none"> <li>• food workers following personal hygiene rules</li> <li>• keeping food preparation and serving areas clean</li> <li>• checking deliveries for broken packaging</li> <li>• thoroughly washing fruits and vegetables before preparation</li> <li>• using tongs or gloves for handling food.</li> </ul>
8	What is Delivery temperature control?	The temperature of high-risk foods must be checked before a delivery is accepted. The food should be refused if the temperatures are above the safe range. Refrigerated foods = 0-5°C Frozen foods = -22°C to -18°C
9	What is storage temperature control?	High-risk foods must be covered and stored at the correct temperature. Temperatures must be checked daily. Refrigerator = 0-5°C Freezer = -22°C to -18°C Unwashed fruit and vegetables must be stored away from other foods
10	What is preparation temperature control?	High risk-foods need to be carefully prepared to avoid cross-contamination. A food probe can be used to make sure that high-risk foods have reached a safe core (inside) temperature, which needs to be held for a minimum of two minutes. Core temperature = 70°C
11	What is service temperature control?	Food needs to be kept at the correct temperature during serving to make sure it is safe to eat. Hot food needs to stay hot and cold food needs to stay chilled. Hot holding = 63°C minimum Cold holding = 0-5°





12	What is the role of the EHO?	The role of the Environmental Health Officer (EHO) is to protect the health and safety of the public. They are appointed by local authorities throughout the UK. In the hospitality and catering industry, they are responsible for enforcing the laws linked to food safety. They inspect all businesses where food is prepared and served to members of the public, advise on safer ways of working and can act as enforcers if food safety laws are broken.
13	What happens in an EHO inspection?	<p>The EHO can carry out an inspection of any hospitality and catering premise at any time during business hours – they do not need to make an appointment. During an inspection, the EHO will check to make sure that:</p> <ul style="list-style-type: none"> <li>• the premises are clean</li> <li>• equipment is safe to use</li> <li>• pest control measures are in place</li> <li>• waste is disposed properly</li> <li>• all food handlers have had food hygiene and safety training</li> <li>• all food is stored and cooked correctly</li> <li>• all food has best-before and use-by dates</li> <li>• there is a HACCP plan to control food hazards and risks.</li> </ul> <p>The EHO is allowed to:</p> <ul style="list-style-type: none"> <li>• take photographs of the premises</li> <li>• take food samples for analysis</li> <li>• check all record books, including fridge and freezer temperatures, cleaning schedules and staff training</li> <li>• offer advice on improving food hygiene and safety in the business.</li> </ul>
14	What is EHO and the law?	<p>If the EHO discovers problems with the food safety and hygiene in the premise, they are allowed by law to:</p> <ul style="list-style-type: none"> <li>• remove any food that may be hazardous so it can't be sold</li> <li>• tell the owners to improve hygiene and safety within a set time and then come back and re-inspect</li> <li>• close the premises if there is a risk to health of the public</li> <li>• give evidence in a court of law if the owners are prosecuted for breaking food hygiene and safety laws</li> </ul>



15	What happens if a complaint is made by a member of the public?	The EHO will immediately investigate any complaints of suspected food poisoning linked to a particular premise
16	What are Hygiene ratings?	When an inspection has been carried out, the EHO will give the business a food hygiene rating. The ratings are published on the Food Standards Agency website as well as on stickers displayed at the business. A rating of 5, or very good, represents the highest standard of food hygiene.

## IMEDIA

1	What is the purpose of a visual identity?	<ul style="list-style-type: none"> <li>Establish a brand and create recognition</li> </ul>
2	What are the components of visual identity?	<ul style="list-style-type: none"> <li>Name, logo, strap line</li> </ul>
3	What are the elements of visual identity?	<ul style="list-style-type: none"> <li>Graphics, typography, colour and layout</li> </ul>
4	What are the properties of an image?	<ul style="list-style-type: none"> <li>Resolution, dpi, transparency.</li> </ul>
5	What planning tools are used for graphics?	<ul style="list-style-type: none"> <li>Mood board, mind map, concept sketch and visualisation diagram.</li> </ul>
6	What tools are available to modify images on graphics software?	<ul style="list-style-type: none"> <li>Canvas tools (grids/guides)</li> <li>Drawing tools (shapes/pen)</li> <li>Image tools (brightness/contrast)</li> <li>Selection tools (wand/lasso)</li> <li>Layer tools (opacity/merge/shadows)</li> <li>Retouch tools (clone/heal/blur)</li> <li>Typography tools (text)</li> <li>Filters</li> </ul>

## MATHS – FOUNDATION

1	What is an expression?	A collection of terms, they don't have an "equal" sign ie/ $4x + 6$
2	What is a term?	A term is a number or variable ie. $2a$ or $4xy$ ...
3	What is an equation?	An expressions that has an equal sign ie/ $5a + 3 = 13$
4	What is an identity?	An equation which is always true ie/ $3(b+4) \equiv 3b+12$ $3b+4 \equiv 3b+12$



5	What is a formula?	A rule that helps you work out something, it has an equal sign. Use substitution
6	What do the following signs mean? $<<$ $>>$ $\leq\leq$ $\geq\geq$	Less than Greater than Less than or equal Greater than or equal
7	What does the closed circle represent on a number line?	Means $\leq$ or $\geq\leq$ or $\geq$
8	What does factorising mean?	To put brackets in
9	What does expand brackets mean?	Multiply each term inside the brackets by term outside the bracket
10	What is a translation?	The movement of a shape either left or right and up or down $(xy)xy$
11	What four transformations are there?	Translation, Reflection, Rotation, Enlargement
12	What 3 things are needed to describe a rotation?	The angle, The centre of rotation, and the direction
13	How do you find a scale factor?	Scale factor (S.f.) = $\frac{\text{New length}}{\text{Old length}}$
14	What are loci? (a locus)	Lines or regions showing all points that fit a given rule
15	What is a bearing?	A direction given as an angle. Bearings must be given as 3 figures ie/ 068 $\circ\circ$ not 68 $\circ\circ$
16	What are the 3 steps of a bearing?	1. Always go from North 2. Always go clockwise 3. Always have 3 figures
17	What does this : mean in ratio	A Part <u>to</u> another part



18	What does $\cup$ mean?  What does $\cap$ mean?	The Union of a sets (Everything inside the circles) Intersection of sets (Everything in the overlap)
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## MATHS – HIGHER

1	What is relative frequency?	How often something happens divided by all outcomes
2	What is cumulative frequency?	Cumulative frequency is the running total of frequencies in a frequency distribution
3	What does a box plot represent?	A box plot is a graph summarising a set of data. It shows how the data is distributed
4	What is a Histogram?	A Histogram looks very much like a bar chart, but there are important differences. The histogram bars are made using area.
5	What is the median?	The middle value of an ordered list
6	What are the quartiles and how do you find the range?	The Interquartile Range describes the middle 50% of values when ordered from lowest to highest
7	What is the radius of the circle?	The distance from the centre of a circle to any point on the circumference- (plural: radii)
8	What is the diameter?	The distance across a circle through the centre is called the diameter
9	What is the circumference?	The circumference of a circle is the distance around the circle
10	What is a segment?	A segment of a circle is the region that is bounded the circumference and a chord of the circle
11	What is a sector?	A sector of a circle is a pie-shaped part of a circle made of the <i>circumference</i> along with two radii.
12	What is the formula for circumference?	$\pi \times \text{diameter}$ $\pi \times \text{diameter}$
13	What is the formula for area of circle?	$\pi \times r^2$ $2\pi \times r^2$ where r is the radius.
14	What are Simultaneous Equations?	Simultaneous Equations are two equations who share the same solutions for their variables.
15	What are algebraic fractions?	Algebraic fractions are fractions with one or more variables



16	What is probability?	How likely something is to happen
17	What is a Venn diagram?	A Venn diagram uses overlapping circles or other shapes to illustrate the logical relationships between two or more sets of items
18	What is a frequency tree?	Frequency trees show the actual frequency of different events. It splits frequency into more specific quantities.

## MUSIC

1	In which decade would you hear Rock n Roll?	1950s and 1960s
2	Where did Rock n Roll come from?	America
3	How many beats are there in a bar in Rock n Roll?	4
4	What instruments are in Rock n Roll?	Lead singer, electric guitars, bass guitar, drums, (piano, saxophone)
5	What are the lyrics about?	Lyrics for teenagers: love, school, cars, holidays
6	What is the structure of Rock n Roll?	Simple structure: verse – chorus structure
7	What structure/chord sequence is R n R based on?	Based on 12-bar blues
8	What is the chord sequence of the 12-bar blues? (in roman numerals)	I I I I . IV. IV. I I V IV I I
9	Name 3 characteristic features of R N R	<ul style="list-style-type: none"> <li>• Call and Response</li> <li>• Catchy hook</li> <li>• Instrumental Solo (usually guitar)</li> </ul>
10	What is the tempo of R n R?	Allegro (Fast)
11	Name 3 Rock n Roll artists	Elvis Presley, Buddy Holly, Little Richard
12	When did Rock Anthems develop?	1970s
13	Where did Rock Anthems develop?	America



14	What pattern/chord sequence are Rock Anthems based on?	Rock songs were based on the 12 bar blues
15	What is the main instrumentation?	Lead electric guitar, rhythm guitar, singer, bass, drums
16	Which other instruments were added?	Strings, brass, woodwind, piano, keyboard or synthesizer
17	Name 3 effects used on guitars	Distortion, feedback, reverb
18	Name 6 other technologies used	Amplification, Microphones, Multi-tracking, editing, looping, sampling
19	Name 3 artists who performed Rock Anthems	Bon Jovi, Guns n Roses, Nirvana
20	Where would Rock Anthems be played?	Large stadiums
21	How many beats in a bar?	4
22	What are the purposes of Pop Ballads?	Pop and Rock ballads tell stories
23	What are pop ballads often about?	Sad, love songs
24	What is the tempo of a pop ballad?	Slow
25	What would the structure be?	Strophic, verse-chorus or through composed
26	What instruments are commonly used?	Piano, Guitar, Bass, Drums, Strings, Saxophone, Trumpet
27	What technology might aid the performance?	Microphones, Amplifiers, Synthesizers, Multi-Tracking, Autotune, Looping, Sampling, Editing, Mixing, Reverb, Echo/Delay
28	What would be added to a Rock ballad?	Heavy drums/amplified guitars
29	Which instrument is pivotal for a folk ballad?	Folk guitar
30	Name 3 Artists who would perform a pop ballad	Elton John, Leona Lewis, Ed Sheeran
31	What is the purpose of Film Music?	To enhance the characters, feelings, emotions and settings of a Film



32	What is a Leitmotif?	A recurring theme that represents a character, place or emotion
What do the following compositional devices that composers use in Film Music mean?		
33	• Ostinato	Repeated Pattern
34	• Chromaticism	Using all the semitones of the scale
35	• Drone	Long continuous sounds
36	• Repetition	Repeated notes
37	• Sequence	Repeated phrase at a higher or lower pitch
38	• Leitmotif	Recurring motif that represents a character, setting or theme
39	Name 3 famous Film Composers	John Williams, Hans Zimmer, James Horner

## PE (CORE)

1	Discuss how students should keep safe when taking part in PE	Proper and full warm-up Remove jewellery Listen to all instructions Follow the rules of the game/activity
2	Identify three careers that you can pursue through studying P.E. and Sports.	A range of careers related to sport (eg. Teacher, coach, sports psychology, nutrition, Sports Science, Logistics etc)
3	When you are acting as a leader/official in your PE lesson, what characteristics should you show?	Talk clearly Project your voice Follow the rules of the game Make sure you keep the score Stand is a clear and visible area of the pitch/court



4	What attributes make a good sports leader?	<ul style="list-style-type: none"> <li>● Skills (communication, organisation of equipment &amp; knowledge).</li> <li>● Advanced skills (activity structure, target setting, use of language, evaluation).</li> <li>● Qualities (appearance, enthusiasm, confidence)</li> </ul> Additional qualities (leadership style, motivation, humour, personality).
5	How much physical activity should children and young people do to keep healthy?	Aim for an average of at least 60 minutes of moderate or vigorous intensity physical activity a day across the week take part in a variety of types and intensities of physical activity across the week to develop movement skills, muscles and bones reduce the time spent sitting or lying down and break up long periods of not moving with some activity. Aim to spread activity throughout the day
6	What are the benefits of regular sport and exercise?	<ul style="list-style-type: none"> <li>• Boosts energy levels</li> <li>• Enhances your mood</li> <li>• Provides stress relief and releases happy chemicals</li> <li>• Supports relaxation</li> <li>• Decreases anxiety levels</li> <li>• Supports the daily function and improvements in the cardiovascular, respiratory, muscular and skeletal systems.</li> </ul>
7	What are the 3 components of a warmup?	Pulse raiser (running, skipping, etc) Mobility Stretches Sport Specific Drill
8	What happens to the body when we warm up?	Muscles require higher amounts of oxygen, heart rate and oxygen intake thus increases to transport oxygenated blood to the working muscles via the blood vessels. This increase blood flow prepares the body for exercise.
9	From any sport/activity of your choice, what skills (name 3) do you believe you have done well and think you are a strength.	Student reflective response.





## PHOTOGRAPHY

1	What 5 key elements make a successful artist/photographer research page (General)	<ul style="list-style-type: none"> <li>• Examples of the photographers/ artists work</li> <li>• Title and Photographers/Artists Name</li> <li>• Annotations</li> <li>• Visual artists response</li> <li>• Personal point of view</li> </ul>
2	What presentation skills are needed? (General)	<ul style="list-style-type: none"> <li>• Considered space and layout</li> <li>• Neat and well written information (in your own words)</li> <li>• Neat cutting skills</li> <li>• Creative fonts or titles</li> <li>• Considered appropriate backgrounds or mounts</li> </ul>
3	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.
4	Why do you need to annotate your work? (AO1)	<ul style="list-style-type: none"> <li>• Shows you have understood the content of the photograph or artwork</li> <li>• Shows you are analysing the piece</li> <li>• You are able to confidently evaluate the work of an artist or photographer or your own work</li> <li>• Enables you to discuss next steps and make decisions.</li> </ul>
5	What are the 3 things that make up the Exposure triangle	ISO, Aperture and Shutter speed
6	What is Digital Manipulation of an image (AO2)	Using photoshop or other software to creatively edit your images.
7	What types of digital manipulation have we practised?	<ul style="list-style-type: none"> <li>• Cropping</li> <li>• Adjustment of colour, position etc.</li> <li>• Merging images</li> <li>• Colour splash</li> </ul>
8	What is Physical manipulation of an image? (AO2)	Editing an image physically without digital software.
9	What types of physical manipulation	<ul style="list-style-type: none"> <li>• Paint</li> <li>• Stitch</li> </ul>
10	What are the 8 Formal Elements of Photography	<b>Line</b> - You can use lines in your composition to guide the viewer through your shot, or to a specific focal point, these are known as leading lines.



		<p><b>Value/Tone</b> - Concentrating on tone in your composition is to use variables of contrast, and light and dark areas to bring depth to your image.</p> <p><b>Colour</b> – Colour can set the mood of a photograph. Warm colours like red, orange, and yellow can bring about a happy emotion whereas tones of blue bring about a cold or gloomy feel. In most cases, colours act as a defining factor of the picture itself.</p> <p><b>Space</b> - The space surrounding your main subject in the photo is the negative space, whereas your main subject is the positive space. Although monotonous, the negative space enhances your image’s visual appeal to your viewer. Some examples of negative space include large plain areas in an image such as the sky, grass, or water.</p> <p><b>Shape</b> - When referring to shape in photography, this usually means a 2D outline of a subject, whereas form is referring to a shape that takes on more of a 3D appearance.</p> <p><b>Pattern</b> - Symmetry and repetition make attractive photographic subjects, and when you start looking, you’ll see a surprising amount of patterns around you in the natural and built environment.</p> <p><b>Texture</b> – Texture is the way in which something feels, focusing on the texture in your composition can bring your image to life by giving the viewer a tangible connection with it. Textures can be drawn out from all kinds of surfaces and environments, and to do this you can use a wide range of lighting scenarios and varying levels of depth-of-field.</p> <p><b>Light</b> - Lighting is one of the most important factors in creating a ‘good’ or successful photograph.</p>
11	What are the compositional rules which can be used in photography?	<p><b>Rule of Thirds</b> 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><b>Balancing Elements</b></p>



		<p>You should balance the "weight" of your subject by including another object of lesser importance to fill the space.</p> <p><b><u>Framing</u></b> 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><b><u>Leading Lines</u></b> 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><b><u>Cropping</u></b> Cut out all unnecessary details to keep the viewer's attention focused on the subject.</p>
12	What is a Photoshoot	A session during which a photographer takes a series of images of a predetermined subject. This could be a person, still life, or landscape.
13	What do we need to consider when planning a photoshoot?	<ul style="list-style-type: none"> <li>- Objective</li> <li>- Subject</li> <li>- Colour</li> <li>- Compositional Rules</li> <li>- Location/Time of Day</li> <li>- Editing</li> <li>- Props</li> </ul>
14	What is a Contact Sheet?	A contact sheet, also called a proof sheet, is a photographic negative or positive print of all the frames exposed in a single camera shot. This allows the photographer to assess pictures for correct focus and composition, as well as to select the best individual frame for printing.



**PSYCHOLOGY – PERCEPTION**

1	What is sensation?	The physical stimulation of sense receptor cells by the environment. E.g. rays of light hitting the retina in the eye or sound waves hitting the eardrum.
2	What is perception?	How the brain interprets the sensory information that it receives. E.g. people seeing different things from an ambiguous figure.
3	Name a visual illusion.	Ponzo, Muller-Lyer, Rubin's Vase, Kanizsa Triangle, Ames Room, A Staircase, Ambiguous Figures.
4	What is the difference between monocular and binocular depth?	Monocular depth cues mean we can judge depth with one eye. Binocular depth cues mean we need two front facing eyes to judge depth.
5	What are the 4 ideas from Gibson's direct theory of perception?	<ol style="list-style-type: none"> <li>1. We get sufficient information from the environment for perception e.g. depth, so we don't need inference.</li> <li>2. Optic flow patterns let us know that we are moving. This is a monocular depth cue.</li> <li>3. Perception is innate. We are born with this ability and do not learn this.</li> <li>4. The motion parallax is a monocular depth cue for judging the speed of movement.</li> </ol>
6	What are the 4 ideas in Gregory's constructivist theory of perception?	<ol style="list-style-type: none"> <li>1. Perception is a construction.</li> <li>2. Our brains fill in the gaps by making inferences.</li> <li>3. Visual cues help us make inferences e.g. depth.</li> <li>4. Nurture influences perception as we learn how to perceive things by interacting with the world.</li> </ol>
7	What is a perceptual set?	This is the tendency to notice certain aspects of the sensory environment whilst ignoring others. It is affected by culture, emotion, motivation and expectation.
8	What factors affect perception?	Culture (Hudson), Emotion (McGinnies), Motivation (Gilchrist and Nesberg), and Expectation (Bruner and Minturn).
9	What did Hudson study relating to perception?	If people from different cultures saw depth cues differently.
10	What is a galvanic skin response?	An indication of physiological (body) arousal. Often a response to stress or emotion e.g. increased heart rate, sweating and pupil dilation.
11	What did McGinnies study?	Whether things that cause us anxiety are more likely to be noticed than things that are emotionally neutral.
12	What did Gilchrist and Nesberg find?	That food deprived participants perceived the food pictures as brighter than they actually were.

13	What was the method of Bruner and Minturn's study?	An ambiguous figure that could be read of as a 'B' or '13' was used. Used an independent groups design. Participants were shown as a sequence of letters or a sequence of numbers. In each case the stimulus in the middle was the same and the participants had to report and draw what they saw.
14	What is convergence?	When looking at a close-up object, your eyes angle inwards towards each other (you become slightly cross-eyed). The extra effort used by the muscles on the outside of each eye gives a clue to the brain about how far away the object is.
15	What is a motion parallax?	Motion parallax is a type of depth perception cue in which objects that are closer, appear to move faster than objects that are far away
16	What is one example of a monocular depth cue?	Motion parallax
17	What is one example of a binocular depth cue?	Convergence

## RELIGIOUS STUDIES

1	What's meant by sin?	Sin is any action which separates humans from God and goes against Christian moral.
2	What's meant by original sin?	Original sin is the Christian belief that every human is born with a built in urge to do bad things and disobey God.
3	Where does original sin come from?	Original sin began in the Garden of Eden when Adam and Eve went against God's instructions and ate the forbidden fruit from the Tree of Knowledge of Good and Evil.
4	How was Jesus tempted in the wilderness?	Jesus was led by the Holy Spirit into the wilderness for forty days and forty nights, where he was starved and tempted by the devil. The devil offered him food, riches, and power and rejected them all to show he was strong willed and good.
5	Why is it important to face temptation?	Christians believe it is important to face temptation as those who are good and strong willed will overcome it; this helps God know who is good and who is bad.
6	Define atonement.	Atonement means making amends for something you have done wrong.
7	What does the word 'repent' mean?	To repent is to own up to/admit what you have done wrong and feel sorrow and regret for that.



8	Why should a person both repent and atone?	Repenting is a good first step as it shows a person has accepted that they have done wrong but it doesn't make a situation better. Atonement is the next step as you are making up for your wrongdoings.
9	Outline the Christian belief about 'The Day of Judgement'	Some Christians believe a day will come when every soul will be judged by God, this is known as the Day of Judgement. On this day, you will either go to Heaven or Hell.
10	Outline the Christian belief about 'personal judgement'.	Some Christians believe that God's judgement happens as soon as a person's body dies, the soul is judged by God immediately afterwards and you go to Heaven or Hell.
11	Who are the sheep and who are the goats in the Parable of the Sheep and the Goats?	The Sheep – Good souls who have lived by Christian morals and go to heaven. The Goats – Bad souls who have sinned and will go to hell.
12	How is Hell described in the Bible?	Hell is described as the absence of or separation from God where a soul 'ceases to exist'.
13	How is Heaven described in the Bible?	You will know God on a more personal level, it is a place of happiness where you're surrounded by all your favourite things.
14	What do the Roman Catholic Church teach about Purgatory?	Purgatory is a Roman Catholic belief that in the afterlife, some people who have sinned will go to Purgatory. This is a place where they will first need to be purified by a 'cleansing fire' before they are accepted into Heaven.
15	How are Christians influenced by their beliefs in the afterlife?	Christians will avoid sin in order to gain access to Heaven. Christians will follow The Ten Commandments and Christian morals in order to avoid Hell. Christians will spread the word of God to others in order to save them from Hell and ensure they too go to Heaven.

## SCIENCE – BIOLOGY

1	What is a genome?	The total DNA in an organism.
2	What are genes?	Sections of DNA found on chromosomes that code for a specific protein.
3	What is DNA made from?	Nucleotides



4	What are the 3 parts of a DNA nucleotide?	A phosphate group, a sugar group and one of four nitrogen bases.
5	What are the 4 letters used to represent the nitrogen bases in DNA?	ATCG
6	What is sexual reproduction?	Genes from 2 organisms (a father and a mother) are mixed.
7	What are the male and female gametes in animals?	Sperm and egg cells
8	Compared to a normal cell, how many chromosomes are in a gamete?	Half
9	What type of cell division produces gametes?	Meiosis
10	What cell division process happens in asexual reproduction?	Mitosis. One parent cell divides in two to make a new cell.
11	How many pairs of chromosomes are there in every human body cell?	23
12	What are the two types of sex chromosome?	X and Y
13	True or False: all females have two X chromosomes.	True. The XX combination allows female characteristics to develop.
14	What is a Punnett square?	A genetic diagram used to find the probability of inheriting a gene or characteristic.
15	What are alleles?	Different versions of the same gene.
16	What are the two possible types of alleles?	Dominant or Recessive
17	What is the mix of your alleles called?	Your genotype.
18	What is an example of an inherited disorder caused by a recessive allele?	Cystic fibrosis,
19	What is an example of an inherited disorder caused by a dominant allele?	Polydactyly. Babies are born with extra fingers or toes.
20	What are 3 arguments for embryo screening?	It will help stop suffering. Treating disorders costs a lot of money. Laws are in place to stop parents selecting features of their baby.
21	What are 3 arguments against embryo screening?	Suggest that people with genetic disorders are unwanted. People might try to create 'designer' babies. Screening is expensive.



22	What is variation?	Differences between individuals of the same species.
23	What are the two causes of variation?	The environment (environmental variation) or differences in genes (inherited variation)
24	What does mutation mean?	A random change in a gene that produced a genetic variant.
25	What is the theory of evolution?	All of today's species have evolved from simple life forms that first started to develop over three billion years ago.
26	What is the name of the theory that Charles Darwin proposed to explain evolution?	Evolution by natural selection. Only organisms that are the best fit for their environment survive and reproduce.
27	What are 5 causes of extinction?	Environmental change. New predator. New disease. Too much competition for food. Catastrophic event (e.g. volcanic eruption)
28	How do bacteria become resistant to antibiotics?	By the process of natural selection.
29	Why can bacteria evolve so quickly?	They reproduce rapidly to increase the population size of the antibiotic-resistant strain quickly.
30	What is selective breeding?	Humans choose which plants or animals are going to breed to produce offspring with useful or attractive features.
31	What is inbreeding?	Animals or plants that are the best are always used for breeding and they are all closely related.
32	What is a disadvantage of selective breeding?	The number of different alleles in a population are reduced. This can lead to health problems and make populations vulnerable to disease.
33	What is genetic engineering?	An organisms DNA is changed by cutting a gene out of one organism and putting it into another organisms cells.
34	Why might we produce GM crops?	To encourage resistance to herbicides, insects or disease to increase crop yields.
35	What is a fossil?	The remains of organisms from many thousands of years ago.
36	What are the 3 ways that fossils can form?	From gradual mineral replacement, from casts and impressions, from preservation in places where no decay happens.
37	How do fossils provide evidence of the origin of life?	Fossils show how much or little organisms have changed (evolved) as life has developed on Earth over millions of years.





38	What are the 5 kingdoms in the 5-kingdom classification system?	Animals, plants, fungi, prokaryotes, protists.
39	Who made up the 5-kingdom classification system?	Carl Linneaus
40	What are the smaller groups that the kingdoms are split into?	Phylum, Class, Order, Family, Genus, Species
41	What model of classification did Carl Woese propose after the development of microscopes?	The 3 domain system. All organisms fit into the 3 domains eukaryote, archaea or bacteria
42	What do evolutionary trees show?	Common ancestors

## SCIENCE – CHEMISTRY

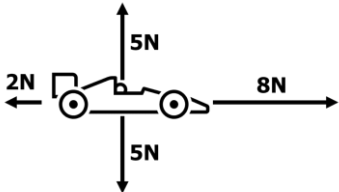
1	What is the rate of a chemical reaction?	The speed at which reactants are used up or products are produced.
2	What factors can affect the rate of reaction?	Temperature, concentration, surface area, the presence of a catalyst
3	What does collision theory say?	A reaction will only take place when particles 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)

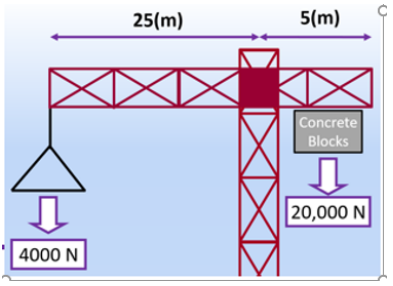
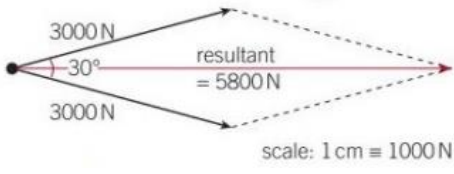


11	If the forwards reaction is exothermic, what is the backwards reaction?	Endothermic.
12	What does Le Chatelier's Principle state?	If a dynamic equilibrium is disturbed by changing the conditions, the position of equilibrium shifts to oppose the change.
13	What are hydrocarbons?	Compounds formed from carbon and hydrogen ONLY.
14	When does complete combustion occur?	When there is a plentiful supply of oxygen. Carbon dioxide and water are produced.
15	What may be produced in incomplete combustion?	Carbon monoxide, particulates
16	What is crude oil?	A fossil fuel found in rocks that contains a mixture of different length hydrocarbons.
17	What physical property of the hydrocarbons in crude oil can be used to separate them?	Boiling point
18	What are the key stages of fractional distillation?	Heating, evaporation, rising up the fractionating column, cooling, condensing, collecting
19	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.
20	What are the main uses of crude oil?	Fuel, petrochemicals, lubricants, detergents, solvents, polymers.
21	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.
22	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.
23	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.



## SCIENCE – PHYSICS

1	What is a scalar quantity?	A quantity that has a size (magnitude) with <b>no</b> direction.
2	What is a vector quantity?	A quantity that has both a size (magnitude) and a direction.
3	List 3 examples of scalar and vector quantities.	Scalar – Distance, Mass, Energy Vector – Displacement, Acceleration, Forces
4	Give examples of contact and non-contact forces.	Contact forces – Friction, Air resistance, water resistance, tension, normal contact force, Non-contact forces – Magnetic force, Electrostatic force, Gravitational force
5	Which force occurs when two surfaces are moving and in contact with each other?	Friction.
6	State Newton's 3 <sup>rd</sup> law of motion.	When two objects interact with each other, they exert equal and opposite forces.
7	What is meant by a resultant force?	The overall resulting force when multiple forces interact with an object.
8	 <p>Give the size and direction of the resultant force.</p>	6N to the right.
9	State Newton's 1 <sup>st</sup> law of motion.	If the forces acting on an object are balanced, then its motion will remain unchanged.
10	Describe what will happen to a car travelling at 60mph if there is no resultant force acting on it?	It will continue to travel at 60mph, as the forces are balanced.
11a (TRIPLE ONLY)	What is a moment?	A turning force about a pivot.
11b (TRIPLE ONLY)	What two factors can affect the size of a moment?	Distance force is applied from the pivot. Size of force applied.
11c (TRIPLE ONLY)	Give one example of a simple machine that can act as a force multiplier.	Crowbar, Spanner, door handle, bottle-opener, scissors.

11d (TRIPLE ONLY)	Give the equation to calculate moments.	Moment = Force x perpendicular distance from pivot
11e (TRIPLE ONLY)	Why do we use gears?	Low gears can be used to give a lower speed but a higher turning effect. High gears can be used to give a higher speed but a lower turning effect.
12	What is meant by the centre of an objects mass?	The centre of mass of an object is the point at which it's mass is thought of as being concentrated.
13 (TRIPLE)	What does it mean if two moments are in equilibrium?	The size of the turning forces are equal, therefore there will be no rotational force.
14 (TRIPLE)	 <p>Are the moments acting on the crane in equilibrium? Show calculations to support your answer.</p>	$25 \times 4,000 = 100,000\text{Nm}$ anti-clockwise moment. $5 \times 20,000 = 100,000\text{Nm}$ clockwise moment. The turning forces are balanced, therefore the moments are in equilibrium.
15 (HT Only)	What is a parallelogram of forces?	A scale diagram of two force vectors that we use to find a resultant force that does not act along the same line of action. 
16 (HT Only)	What is meant by resolving a force?	Resolving a force means finding perpendicular components that have a resultant force that is equal to the force

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

1	What is a comparative?	e.g More fun than Easier than
2	What is a superlative?	The most practical The hardest
3	When do we use the imperative tense?	Giving commands

4	Can you state 3 intensifiers in Spanish	Mucho Poco Bastante demasiado
5	Translate se debe, hay que, tener que	Useful ways of expressing what you have to do.
6	What is a preposition?	The position of a noun.
7	What does dibujo mean?	Art
8	What is the Spanish word for 'classmate'	El/la compañero/a
9	What are the different meanings of the verb 'llevar'	To take, carry, wear Llevarse = to get on with
10	When do we use the perfect tense?	I have ...ed He has ...ed
11	Translate 'he aprendido el vocabulario muy bien'	I have learnt the vocabulary really well

