

## 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:**

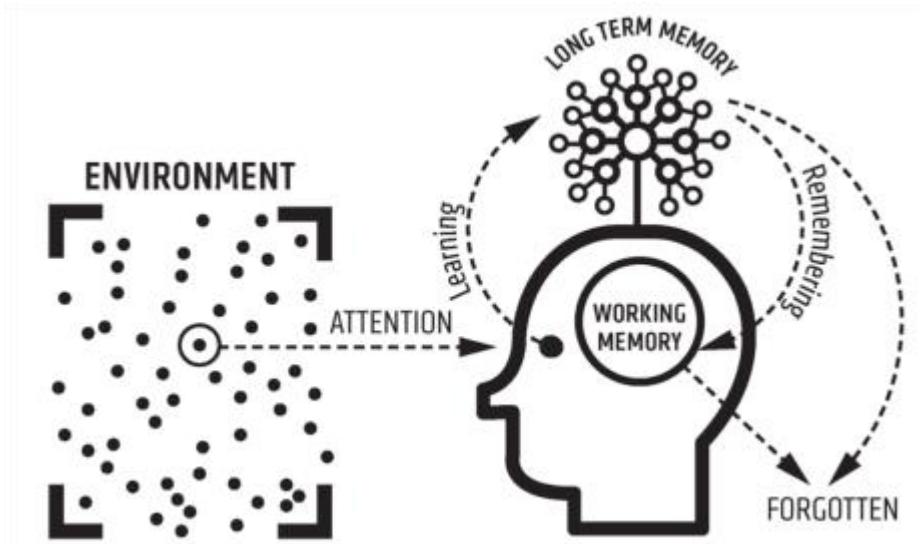
- Listens to and responds to their teachers' feedback
- Is able to identify their next steps and areas for improvement
- Strives to improve

## 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



### 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**, 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** activities highlights your ability to recognise your **strengths** and also **areas for development**.

## QUIZ IT



**Look, Cover, Write, Check**— 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 Look, Cover, Write, Check 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.

## Year 7 Core Knowledge Questions

## ART

1	What is an observational drawing?	A drawing 'from life' - something in front of you, focusing on capturing a likeness or realistic look.
2	What is LINE?	It is a path of a moving point and can vary in thickness. 'Line is a dot that has gone for a walk.'
3	What is TONE?	Tone is the lightness or darkness of a colour.
4	Why do we use tone in Art?	To help to make a drawing look 3D/realistic. To add depth to an image. To contrast light and dark.
5	What does COMPOSITION mean?	The layout or arrangement on the paper. The <b>space</b> within the work. Composition describes how each visual element is arranged or organized.
6	What is a timeline?	A chronological arrangement of events in the order of their occurrence. <ul style="list-style-type: none"> <li>• It's a line of history,</li> <li>• It's the progress over time</li> </ul>
7	What is an art period?	Art periods are usually based on historical eras. <b>Art Period:</b> a longer block of time including many different artists.
8	What is an art movement?	Art movements are decided by artists as a collective. <b>Art Movement:</b> a collection of artists and their works of art with a common philosophy or goal, technique, style, or time period.
9	What are the key characteristics of the art movement Cubism?	Artists would break up the subject into many different shapes and then repaint it from different angles. Famous Artists: Pablo Picasso, Georges Braque
10	When was the Cubism movement?	1908 - 1920
11	What are the primary colours?	Red, Blue, Yellow
12	Why are they known as primary colours?	They are a set of colours that can be mixed to make a wide range of hues.
13	What is a hue?	The noun hue means both the colour and a shade of a colour.
14	What are the secondary colours?	Purple, Orange, Green
15	How do you make a secondary colour?	Secondary colours are made by mixing equal parts of two primary colours together.
16	Can you give examples of how to mix the secondary colours?	Red + Yellow = Orange Red + Blue = Purple Blue + Yellow = Green
17	What are the warm colours?	Red, Yellow, Orange
18	What are the cool colours?	Blue, Green, Purple
19	Why are these warm and cool colours?	These are considered warm or cool hues - think of fire colours for warm colours, ocean/sea colours for cool colours. Warm colours and all the cool colours each have their own side of the colour wheel.

20	What does gradate mean?	To change or cause to change imperceptibly, from one colour, tone, or degree to another.
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## COMPUTING

1	Describe a way to stay safe online	<ul style="list-style-type: none"> <li>• Don't share your password</li> <li>• Have an anti-virus installed</li> <li>• Don't talk to strangers</li> <li>• Any other viable answer</li> </ul>
2	State 3 components inside a computer	<ul style="list-style-type: none"> <li>• CPU – central processing unit</li> <li>• RAM – random access memory</li> <li>• ROM – read only memory</li> <li>• Hard Drive</li> <li>• GPU – graphics processing unit</li> <li>• Motherboard</li> <li>• PSU – power supply unit</li> </ul>
3	State an input device	<ul style="list-style-type: none"> <li>• Keyboard</li> <li>• Mouse</li> <li>• Microphone</li> <li>• Bar code readers</li> <li>• Joystick</li> <li>• Light pen</li> <li>• Scanner</li> </ul>
4	State an output device	<ul style="list-style-type: none"> <li>• Monitor/Screen</li> <li>• Speakers</li> <li>• Printer</li> <li>• Plotter</li> <li>• Projector</li> <li>• Headphones</li> </ul>
5	What does a CPU do?	<ul style="list-style-type: none"> <li>• Brain of the computer</li> </ul>
6	What is the purpose of the Hard Drive?	<ul style="list-style-type: none"> <li>• Stores the long-term memory</li> </ul>
7	What is the purpose of the RAM?	<ul style="list-style-type: none"> <li>• Short term memory for active programs (stores what is currently open)</li> </ul>
8	What is the purpose of the Graphical Processing Unit (GPU)?	<ul style="list-style-type: none"> <li>• To add extra power to allow more complex graphics</li> </ul>
9	What is the purpose of the PSU?	<ul style="list-style-type: none"> <li>• To provide power to the computer</li> </ul>
10	What is the purpose of the Motherboard?	<ul style="list-style-type: none"> <li>• To connect all of the components together</li> </ul>
11	A GHz CPU will process how many instructions per second?	<ul style="list-style-type: none"> <li>• 1 billion</li> </ul>
12	Where is the CPU located?	<ul style="list-style-type: none"> <li>• On the motherboard</li> </ul>
13	What is meant by a CPU's 'Clock Speed'?	<ul style="list-style-type: none"> <li>• How many fetch decode execute cycles it carries out</li> </ul>
14	State an office software	<ul style="list-style-type: none"> <li>• Word</li> <li>• PowerPoint</li> <li>• Excel</li> <li>• Publisher</li> <li>• Access</li> </ul>

15	Explain a feature of Microsoft Word	<ul style="list-style-type: none"> <li>• Font, changes the way text look</li> <li>• Numbering, creates a numbered list</li> <li>• Font colour, changes the colour of text</li> <li>• Insert a table</li> <li>• Insert images</li> <li>• Dictionary</li> <li>• Thesaurus</li> <li>• Mail merge</li> </ul>
16	State a feature of Microsoft PowerPoint	<ul style="list-style-type: none"> <li>• Transitions</li> <li>• Slides</li> <li>• Animations</li> <li>• Insert sound</li> <li>• Insert video</li> <li>• Design templates</li> </ul>
17	Describe a feature of a trustworthy website	<ul style="list-style-type: none"> <li>• Has good spelling/grammar</li> <li>• Includes HTTPS on the link</li> <li>• References other websites</li> <li>• May have reviews</li> <li>• May be well known</li> </ul>
18	What does copyright stop?	<ul style="list-style-type: none"> <li>• Prevents copying without permission</li> </ul>
19	What are the consequences of breaching copyright?	<ul style="list-style-type: none"> <li>• Fine</li> <li>• Jail</li> </ul>
20	How long does copyright last?	<ul style="list-style-type: none"> <li>• 70 years</li> </ul>
21	What is plagiarism?	<ul style="list-style-type: none"> <li>• Copying somebody else's work and passing it off as your own (a form of copyright)</li> </ul>

## DRAMA

1	What is a duologue?	This is where you have two speakers.
2	What is a monologue?	A monologue is any speech of some duration spoken by a character to a second person.
3	What is cross-cutting?	Cross-cutting is a drama technique where two or more scenes are performed on stage at the same time.
4	What is characterisation?	Characterisation in drama is the process of producing a character through actions, words, and thoughts.
5	What is a gesture?	The use of hand or arms.
6	What is exaggerated acting?	When performing, the command 'bigger' is called and performers should exaggerate their physicality.
7	What are facial expressions?	A look on your face which shows emotions.

8	What does diction mean?	The use of words or phrases in speech.
9	What is eye contact?	Eye contact is used to reveal the status and relationship between characters.
10	What is non-verbal communication?	Non-verbal communication is facial expressions, gestures and movements.
11	What is projection?	The energy you give out to the audience.
12	What is posture?	The way an actor sits or stands.
13	What is gait?	The way an actor walks.
14	What is blocking?	The way an actor is facing and the distance between actors on stage.
15	What is pitch?	How high or low your voice is.
16	What is tone?	The way your voice is affected by emotion.
17	What is accent?	How your voice is affected by where you come from
18	What is volume?	How loud or quiet your voice is.
19	What is pace?	How quickly or slowly you speak.
20	What is pause?	Putting a break between words
21	What is emphasis?	Putting stress on a word or section
22	What are stage directions?	Any additional instruction for the actors that aren't spoken out loud. They need to be put in italics
23	What is dialogue?	A conversation between two or more people.
24	What are characteristics?	A feature or quality belonging typically to a person.
25	What is atmosphere?	Overall feeling created in a dramatic performance.
26	What does devise mean?	Devising is a group collaboration in response to a stimulus leading to the creation of a piece.
27	What is a scenario?	A scenario is an outline of a plot or a dramatic work.

28	What is role play?	Role play is when you take on a specific role of a character and act them out.
29	What is hot seating?	A rehearsal technique to explore more about a character.
30	What is role on the wall?	A drama technique that helps explore a character's emotions and actions. You collectively create a character and their traits.
31	What is a still image?	A photograph still in time.
32	How do you show emotions in Drama?	Use your body language Use facial expressions Consider the background and situation of the character
33	How do you use your voice in Drama?	Projection Diction Accent Volume Pitch Tone
34	How do you create a character?	Give them a history and situation Consider how they act and re-act Think about how they stand, sit, talk etc
35	What does it mean to 'sustain a character'?	You should stay in character throughout the performance.

## DT

1	What does health and safety mean?	Health and safety: regulations and procedures intended to prevent accident or injury in workplaces or public environments.
2	Why is health and safety important?	Health and safety is important because it helps to prevent avoidable workshop accidents. E.g. Wearing goggles when using the machinery to prevent injury.
3	What are the 3 golden rules of a workshop?	<ul style="list-style-type: none"> <li>• No teacher, no entry</li> <li>• You must be trained before you touch</li> <li>• Wear the right gear to work in here</li> </ul>
4	What is a risk assessment?	Risk assessment: careful examination of what could cause harm to people during a practical activity.
5	Why is a risk assessment important?	To identify health and safety hazards and evaluate the risks presented within the workshop.
6	What is typography?	Typography: the art and design of text.



7	Why is measuring important?	Measuring is important because it helps us describe the world around us in accurate, standard ways that others can understand.
8	What is a mind map?	A mind map is a diagram for representing tasks, words, concepts, or items linked to and arranged around a central concept.
9	What is a bug-house?	Is a human-made outdoor structure, usually created from natural materials.
10	What is an existing product?	A product that is already on the market for sale and that is similar to the one you are designing
11	Why is work presentation important?	To convey information on the page clearly.
12	What is isometric drawing?	A type of 3D drawing technique that uses 30-degree angles.
13	What is orthographic drawing?	A type of drawing technique that shows 2D views of a 3D object from each angle.
14	What is sketching?	A sketch is a rapidly executed freehand drawing that is not usually intended as a finished work.
15	Why are different drawing techniques important?	To allow everyone to understand a project and to get ideas down on the page.
16	What does design development mean?	To adapt and change a design idea to make the product work better.
17	Why is a final design drawing important?	To allow a designer to begin to make 3D models from drawings with correct measurements and scale to continue development.
18	What is a cutting board?	A thick plastic board that protects the table underneath from cutting marks when making
19	What is a Stanley knife?	A protected blade that retracts and extends when in use
20	What is the health and safety of using a Stanley knife?	<ul style="list-style-type: none"> <li>• When carrying the Stanley knife the blade should be fully retracted and aimed at the floor</li> <li>• Sit down when cutting with the Stanley knife</li> <li>• Use a cutting board when cutting with a Stanley knife</li> <li>• Have the Stanley knife as horizontal (flat) as possible when cutting as this allows more control over the blade</li> </ul>
21	What is corrugated card?	A paper and board which has a zig zag internal construction to provide cushioning and protection. Used predominantly in cardboard boxes
22	What is modelling?	Modelling is the construction of 3D products from sketches
23	Why is 3D modelling an important element in design?	Modelling allows the designer to understand the 3D shape of a sketched product idea, understanding the product size and the product finish
24	What is a prototype?	A prototype is a model of a design that is not the finished product, a prototype can be adapted and changed. It is a one-off product to evaluate a design idea.

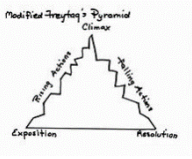
25	What is a tenon saw?	A medium sized saw that is used for larger straight cuts in wood
26	What is a wooden vice?	2 pieces of wood attached to a clamp on the side of the work bench, used to keep work still when cutting
27	What is a coping saw?	A smaller sized saw that is used for smaller details and curved cuts in wood
28	What is a file?	A metal flat tool with a handle that is used to make the edges of cut wood smooth to the touch
29	What is sandpaper?	A tough and thick piece of paper with a varying amount of 'grit'. Used to make wood edges smooth to the touch.
30	What does sandpaper grit mean?	The grit is a rating of the size of the abrasive particles embedded in the sandpaper.
31	What are the golden rules of health and safety with the hand tools?	<ul style="list-style-type: none"> <li>• Always walk in the classroom</li> <li>• Always point the blades towards the floor</li> <li>• Always wear the right protective gear when using hand tools</li> </ul>
32	What does sustainability mean?	Environmental sustainability is the responsibility to conserve natural resources and protect global ecosystems
33	Why is sustainability important?	Sustainability is important for preserving our planet and natural resources like water and air.
34	What does a sustainable future mean?	Building a sustainable future and cultivating sustainable ways of living will reduce pollution and protect habitats of plants and animals.
35	What are the 6Rs?	<ul style="list-style-type: none"> <li>• Reduce</li> <li>• Reuse</li> <li>• Refuse</li> <li>• Recycle</li> <li>• Rethink</li> <li>• Repair</li> </ul>
36	Why is corrugated cardboard sustainable?	Corrugated cardboard is sustainable because it can be recycled and does not go into landfill
37	What is landfill?	Landfill is where rubbish gets buried into the ground.
38	What are the negative effects of landfill?	Items buried into landfill will not break down over time, this can lead to harmful chemicals leaking out into the soil. This is called soil pollution.
39	Why is it important to be accurate when measuring?	So that the model fits together and functions as designed when it is fully made
40	What does high quality finish mean?	High quality finish: a product that has been constructed with a high level of detail and care and is completed to a high quality.
41	What is CAM?	Computer Aided Manufacture.
42	What is CAM equipment?	<ul style="list-style-type: none"> <li>• 3D printer</li> <li>• Laser cutter</li> </ul>
43	What is CAD?	Computer Aided Design.
44	Why is CAD and CAM important in the modern designing world?	CAD and CAM speed up the design, making and feedback process between designers and users.

45	What are wood finishes?	Wood finishes are substances that are painted on wood to change the way the wood looks
46	What does ACCESSFM mean?	<ul style="list-style-type: none"> <li>• Aesthetics</li> <li>• Cost</li> <li>• Customer</li> <li>• Environment</li> <li>• Size</li> <li>• Safety</li> <li>• Function</li> <li>• Material</li> </ul>
47	What does evaluate mean?	To understand good and bad points about a design.
48	Why do we evaluate?	To improve and to reflect on past work so you can improve.
49	What is feedback?	Feedback are comments made from your teacher, peers or yourself. This included positive points about your work and what you could improve on.

### ENGLISH – The Legend of the Minotaur

1	What is a sentence?	A sentence is the basic unit of language which expresses a complete thought. A sentence must contain a subject and a verb.
2	What is a main clause?	A main clause makes sense on its own (contains a subject and a verb).
3	What is a subordinate clause?	A subordinate clause does not make sense on its own; it is dependent on the main clause.
4	What are the three sentence forms?	<p>Simple – a simple sentence contains a subject and a verb and is one complete thought</p> <p>Compound – a compound sentence is made up of two main clauses separated with a conjunction (for, and, nor, but, or, yet, so)</p> <p>Complex – a complex sentence is made up of a main clause and a subordinate clause connected to each other with a subordinating conjunction</p>
5	What are the four types of sentences?	<p>Declarative – a statement</p> <p>Imperative – a sentence that gives a command/instruction</p> <p>Interrogative – a sentence that asks a direct question</p> <p>Exclamative – a statement that expresses strong emotion</p>
6	What are capital letters and full stops and when do I use them?	<p>Capital letters are upper-case letters used at the beginning of a sentence or a proper name and may be used to show respect.</p> <p>Full stops are used to end a sentence when that sentence has expressed a complete thought or idea.</p>
7	What is a comma and its function?	A comma is a punctuation mark ( , ) that indicates a pause between parts of a sentence or separating items in a list.

8	What is a comma splice?	A comma splice is when a comma is used to link to main clauses (which should instead be linked by a semicolon, conjunction or split into two sentences) E.g. <i>he loves cooking, He's great at making curries.</i> ❌ <i>He loves cooking; he's great at making curries.</i>
9	What is a paragraph?	A paragraph is <i>a section of writing which consists of one or more sentences grouped together</i> , which deal with one subject or element of the writing as a whole.
10	What is past tense?	A <b>tense</b> expressing an action that has happened or a state that previously existed.
11	What is present tense?	A <b>tense</b> expressing an action that is currently going on or <b>habitually</b> performed, or a state that currently or generally exists.
12	What is future tense?	A <b>tense</b> expressing an action that has not yet happened or a state that does not yet exist.
13	What is first person?	A type of narrative in which the <b>protagonist</b> relates their story using the first person, i.e. using the pronoun 'I'.
14	What is second person?	Second person narrative <i>uses the pronoun "you" to address the reader.</i>
15	What is third person?	Third-person is <i>an objective point of view where the person/people are being narrated by an external voice using third-person pronouns like 'he/ she/ they.</i>
16	What is word class? (Nouns, Pronouns, Adjectives, Verbs, Adverbs, Prepositions)	<p><b>Nouns</b> are naming words (person, place, thing). Proper nouns are capitalised (city, name, company, countries etc). Concrete nouns is a physical object in the real world (scissors, car, table). Abstract noun refers to an idea or concept and cannot be physically touched (guilt, fate, love).</p> <p><b>Pronouns</b> take the place of proper nouns in a sentence. (I, he, she, they, it).</p> <p><b>Adjectives</b> are words that describes a noun (<i>terrible</i> book, <i>dirty</i> shoe).</p> <p><b>Verbs</b> can be used to describe an action that's doing something. (singing, floating, bubbling).</p> <p><b>Adverbs</b> describes a verb (<i>quickly</i> hide, <i>quietly</i> move).</p> <p><b>Prepositions</b> are words that tell you where or when something is in relation to something else (under, on, inside).</p>
17	What are the rules of speech?	<ul style="list-style-type: none"> <li>• A new speaker needs a new line.</li> <li>• You should use a capital letter at the start of each piece of speech.</li> <li>• Punctuation (question marks, full stops and exclamation marks) go inside the inverted commas.</li> <li>• If the person who is speaking is named before the speech, you must use a comma before the first set of inverted commas. For example: <i>Captain Tom exclaimed, "Let's go and do some more laps of the garden!"</i></li> </ul>

18	What is Freytag's Pyramid?	<ol style="list-style-type: none"> <li>1. Exposition</li> <li>2. Raising action</li> <li>3. Climax</li> <li>4. Falling action</li> <li>5. Resolution</li> </ol> 
19	What do I need to do to write an engaging exposition?	<ul style="list-style-type: none"> <li>• Uses sensory language to set the scene: <i>what can you see/taste/touch/smell hear?</i></li> <li>• Hook your reader: start with a question/speech/exclamative</li> <li>• Use foreshadowing to hint to something later</li> <li>• Create intrigue about the characters</li> </ul>
20	What are golden sentences?	A carefully crafted sentence to elevate your creative writing. For example, If, if, if, then, The more, the more or a DE:DE sentence.

### ENGLISH – 19<sup>th</sup> Century Crime

1	What are the conventions of Crime fiction?	A murder of an innocent victim, an isolated setting, a number of suspects with motives, red herrings (misleading information), a murder weapon, a denouement (ending where all is resolved/explained).
2	What is fiction?	Texts that are not based on fact. They describe <i>imaginary</i> events.
3	What are the examples of fiction texts?	Mystery, thriller, science fiction, romance, horror etc.
4	What is non-fiction?	Text that are factual. They are usually informative.
5	What are the examples of non-fiction texts?	Diaries, newspapers, biographies, autobiographies, travel writing.
6	What is formal language?	Formal language is professional and sophisticated language. This is often use with people we do not know or when communicating with someone in power.
7	What is informal language?	Informal language is casual language that may involve slang. This is often used with people we are close to.
8	What are the features of a letter?	<ul style="list-style-type: none"> <li>• Addresses (Yours on right side, theirs on left)</li> <li>• Date (right hand side)</li> <li>• Dear _____,</li> <li>• Yours sincerely (when you know them)</li> <li>• Yours faithfully (when you do not know them)</li> </ul>
9	What does protagonist mean?	The leading (main) character in a story.

10	What does antagonist mean?	A character who opposes the story's main character: their enemy or rival.
11	What does connotation mean?	A connotation is an idea or feeling which a word creates for a person in addition to its literal or primary meaning.
12	What is a concrete noun?	A concrete noun is something that can be perceived with the five senses e.g. table.
13	What is an abstract noun?	An abstract noun is something non-physical that you cannot perceive with your senses e.g. strength.
14	What is a preposition?	Words that tell you where or when something is in relation to something else (under, on, inside).
15	What are writer's intentions?	What the writer is trying to achieve. What is the purpose/intent for writing?
16	What is subject terminology?	Word that connect to the subject. This can be words class (adjective), techniques (simile) etc.
17	What is a theme?	A running idea throughout a text e.g. a theme of love, a theme of nature.
18	What is sensory language?	Describing using your 5 senses: sight, touch, sound, smell, taste.
19	What is show, don't tell?	Refers to describing something through detail rather than stating explicitly. For example, instead of saying your character is scared, show this through describing how their lip was trembling etc.
20	What is tension?	Tension in a literary context is the sense something ominous is right around the corner.

## FOOD

1	What does hygiene mean?	Hygiene: acts of cleanliness that are necessary for health
2	What is contamination?	Contamination: making something harmful or unsuitable by contact with something unclean
3	What is bacteria?	Bacteria: microscopic living organisms that can be harmful to health. Bacteria: A group of micro-organisms which are too small to see with the naked eye. Bacteria usually multiply by splitting into two (see binary fission), each bacterium being capable of independent existence.
4	What does personal hygiene mean?	care for one's bodily health and wellbeing, through cleanliness.
5	Why is hand washing important?	Hand washing is one of the most important actions you can take to help prevent contamination.

6	What are the 10 human sources of contamination?	The human sources of contamination are – Hair, Ear, nose and throat, Skin and hands, Gut, Clothing, Wounds and Jewellery
7	Why is personal hygiene important?	Food handlers touch and handle most foods many times a day. People are sources of contamination. Infected handlers are dangerous
8	What are the common symptoms of a foodborne illness?	Vomiting, Diarrhoea, Nausea, Abdominal and stomach pains and Fever/high temperature
9	What is the difference between food hygiene and personal hygiene?	Food hygiene is about ensuring the food is safe, personal hygiene is about ensure you are clean for health and safety
10	What are the 4Cs?	Cleaning, cooking, cross- contamination, chilling.
11	What is cross contamination? Cooking? Cleaning? Chilling?	Cross contamination: the spread of bacteria Cooking: to heat food to make it safe to eat Cleaning: to reduce the spread of bacteria Chilling: keeping food at a low temperature to slow the growth of bacteria.
12	Why should you not store sharp knives in a utensil drawer? How should they be stored?	Because the can injure when trying to find something in the drawer. They should be store on a magnetized bar, knife block, sectioned drawer or knife kit.
13	What are the two types of basic knife grips?	The claw grip and the bridge hold.
14	What is a risk assessment?	A risk assessment involves looking closely at something and deciding if there are any hazards that may be cause a risk to people. A risk assessment is used to figure out what needs to be done to prevent the risk from happening.
15	What is enzymic browning?	Enzymic Browning: chemical process which occurs in fruits and vegetables by the enzyme polyphenol oxidase, which results in brown pigments.
16	Why should we eat fruit and vegetables?	<ul style="list-style-type: none"> <li>• They are rich in nutrients, fibre and vitamins</li> <li>• Dietary fibre from vegetables, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease.</li> </ul>
17	What is the Eatwell guide?	The Eatwell Guide shows how much of what we eat overall should come from each food group to achieve a healthy, balanced diet.
18	What are vitamins?	Chemicals found naturally in food to perform specific functions in the body.
19	What nutrients can be found in fruit and vegetables?	<ul style="list-style-type: none"> <li>• Carbohydrate:</li> <li>• Vitamins A, C, B group, E and K</li> <li>• Calcium and iron</li> </ul>
20	What are the two different categories that vitamins fit in to?	Water/Fat soluble vitamins Fat-soluble vitamins (A, D, E, and K) are absorbed by fat, while water-soluble vitamins (everything other than these four) are dissolved in water.
21	Why do we need to have vitamins in our diet?	To avoid deficiencies such as Vitamin C – Scurvy, lack of calcium - rickets

22	What is a deficiency?	Lacking in what is needed.
23	What does appearance mean with food preparation?	The way it looks/is presented.
24	What does aroma mean?	An odour arising from spices, plants, cooking, etc., especially an agreeable odour; fragrance.
25	What is sensory perception?	Sensory perception of food refers to how the food's properties stimulate each of our senses, including sight, hearing, touch, smell, and taste
26	What are the 5 senses?	5 senses –smell, sight, hearing, taste and touch.
27	Why do we need carbohydrates in our diet?	Carbohydrates are the body's main source of energy, they help us to perform all our daily functions. Without carbohydrate we would be very tired.
28	How are carbohydrates mainly produced?	Carbohydrates are produced mainly by <i>plants</i> during the process of <i>photosynthesis</i> .
29	What is glucose?	Blood sugar. The body converts the carbohydrate into glucose, also known as blood sugar. Glucose is absorbed into the blood stream and carried to all the cells and organs. Glucose is used by the brain for energy.
30	What are the two types of carbohydrates?	Complex carbs (starch) and Simple Carbs (sugar)
31	What does complex carbs provide?	Breaks down slowly, providing longer lasting energy.
32	What does simple carbs provide?	Breaks down quickly, providing immediate energy, then a crash!
33	what are proteins?	Proteins are the nutrients that make up the tissues of our body like muscles or bones for example. They also transport some vitamins and boost our immune system.
34	What are the two types of protein?	Animal and vegetable.
35	What does protein provide us with?	Help to grow and stay healthy – body uses protein to make new cells for growth and repair damaged tissue
36	What are protein rich foods?	Fish, meat, eggs and beans.
37	What are amino acids?	Units which proteins are constructed. There are 9 that can only be obtained through diet.
38	What do amino acids do?	Break down food, grow and repair body tissue, make hormones and brain chemicals, provide an energy source, maintain healthy skin and hair, build muscle, boost immune system, sustain a normal digestive system.
39	What is calcium and why do we need it in our diet?	A mineral element that is essential in the diet for building bones and teeth and for many processes in cells.
40	What does it mean to be lactose intolerant?	A disorder arising from an inability to digest lactose because of low levels of the enzyme lactase. People with lactose intolerance may experience diarrhoea, gas and bloating after eating dairy products.



41	What is a dairy alternative product?	Plant-based products used as a substitute for milk, yogurt, cheese, or other dairy products. E.g. soy, rice, nuts, oats, coconut.
42	Why would you need a dairy alternative product?	Some people need to avoid dairy products and cows' milk because their bodies cannot digest lactose. Some people also choose not to have dairy products for other reasons – for example, because they follow a vegan diets.
43	What is lactose?	A sugar present in milk. Lactose is a disaccharide (galactose in chemical combination with glucose).
44	What type of foods do we measure? What type of foods do we weigh?	Weigh dry food, measure wet food.
45	What measurements do we weigh in in food?	Grams or kilograms.
46	What measurements do we measure in in food?	Millilitres or litres.
47	Why do we needs fats in our diet?	Insulation, uptake of fat soluble vitamins, essential fatty acids, flavour, grease, growth, development and repair, thermoregulation, protection.
48	What is thermoregulation?	Temperature control.
49	What are the two types of fats?	Visible and invisible.
50	What are fats?	Fats are composed of fatty acids and glycerol. Fats are an important part of a healthy, balanced diet. They provide essential fatty acids and carry the fat-soluble vitamins A, D, E and K. They can be visible or invisible in food.
51	What are saturated fats?	Mainly from animal sources, solid at room temperature. Found in meat, butter, cream, eggs. Bad for you.
52	What are unsaturated fats?	Mainly from plant sources. Liquid at room temperature. Found in plants, oils, fish, seeds and nuts.
53	Why are saturated fats bad for you?	<ul style="list-style-type: none"> <li>• Can lead to being overweight</li> <li>• Increased risk of obesity which could shorten life span and cause personal, social and psychological issues.</li> <li>• Increased risk of high cholesterol</li> <li>• Increased risk of Type 2 diabetes</li> <li>• Increased risk of heart disease, heart attacks and strokes</li> <li>• Increased risk of high blood pressure</li> </ul>
54	What is a time plan? What should it include?	A step by step guide of how to prepare and make a dish in a given time. Includes timings, methods and health and safety points.
55	What is sensory vocabulary?	words used to describe characteristics of food.
56	What is Sensory evaluation?	The process of testing food, using the senses to assess the qualities or attributes of food products.
57	Why is food packaged?	<ul style="list-style-type: none"> <li>• To keep the foods safe and hygienic</li> </ul>

		<ul style="list-style-type: none"> <li>To protect the food from damage or contamination</li> <li>To preserve the food and extend its shelf life</li> <li>To prevent tampering with the food</li> <li>To attract customers to buy it</li> <li>To make the food more presentable for selling</li> <li>To provide information about the food product</li> <li>To make handling, transportation and storing easier</li> </ul>
58	what are food labels for?	To inform and educate consumers about food products they choose to buy.
59	What is a traffic light label for on food packaging?	To provide a colour-coded overview of nutritional information in a product.
60	Why is there the traffic light labels on products?	So consumers can make more informed choices with food.
61	How many calories should we be eating each day?	2000 for women, 2500 for men
62	What is energy intake?	The energy provided to the body by food and drink.
63	What is energy balance?	The relationship between energy consumed (in food) and energy used (e.g., through exercise). Any sustained imbalance between energy intake and energy used will lead to gain or loss in weight
64	What are calories?	A unit of energy in food. Can be measured in kilocalories (kcal) or kilojoules (kJ)
65	What does BMR stand for? What is it?	Basal metabolic rate (BMR): The amount of energy used over a period of time, when the body is at complete rest and in a fasting state.
66	What are high risk foods?	Certain foods are more likely to carry food poisoning bacteria than others – protein rich foods, fish, eggs, dairy, rice
67	What are the symptoms of food poisoning?	<ul style="list-style-type: none"> <li>Vomiting</li> <li>Diarrhoea</li> <li>Fever/Temperature</li> <li>Cramps</li> <li>Cold sweats</li> </ul>
68	How can you prevent food poisoning?	<ul style="list-style-type: none"> <li>Keep hot food hot</li> <li>Keep cold food refrigerated</li> <li>Cook food properly – to reach 75°C</li> <li>Separate raw and cooked foods</li> <li>Keep kitchen and equipment clean</li> <li>Wash hands with soap and dry thoroughly</li> </ul>
69	What conditions do bacteria need to grow quickly?	Food warmth time and moisture
70	What is the danger zone?	Temperatures between 5-63°C where bacteria will most readily multiply

1	What is a noun? What is special about nouns in French?	The name of a person, place, object or thing. All nouns are masculine or feminine.
2	What does gender mean in MFL?	Which groups nouns belong to.
3	What is an article?	The words the, a, some.
4	What is the definite article?	The word the
5	What are the 3 definite articles in French? What happens to the definite article if a singular noun starts with a vowel?	Le, la, les It becomes l'
6	What is the indefinite article?	A, some
7	What are the 3 indefinite articles in French?	Un, une, des
8	What is the word for 'and' what type of word is it?	Et It is a connective
9	What is a cognate?	A word in another language that looks or sounds like it's English meaning
10	What is a false friend?	A word in another language that looks or sounds English but does NOT mean the same

## GEOGRAPHY

1	What is Physical Geography?	The study of the processes that shape the Earth's surface, the animals and plants that inhabit it, and the spatial patterns they exhibit
2	What is Human Geography?	The study of the interrelationships between people, place, and environment, and how these vary spatially and temporally across and between locations
3	What is environmental Geography?	The study of how humans interact with the physical environment and what effect each has on the other
4	What are the 7 continents?	<ul style="list-style-type: none"> <li>• Europe</li> <li>• Africa</li> <li>• North America</li> <li>• South America</li> <li>• Asia</li> <li>• Oceania</li> <li>• Antarctica</li> </ul>

5	What is the equator?	An imaginary line that runs around the earth separating the southern and the northern hemisphere.
6	What are the 4 main directions on a compass?	North, East, South & West
7	What do contour lines on a map show?	The height of the land.
8	What countries make up the United Kingdom?	England, Wales, Scotland & Northern Ireland.
9	What are Biomes?	Biomes are areas of our planet with similar climates, landscapes, animals and plants
10	How are the highest mountain ranges Created?	They are created by tectonic plates pushing together and forcing the ground up where they meet.
11	What is a river?	A river is a moving body of water that flows from its Source (where it starts) on high ground, across land, and then into another body of water.

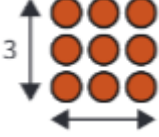

## HISTORY

1	What is the difference between a source and an interpretation?	A source is something from the time and the interpretation is someone's viewpoint of events (how they <b>INTERPRET</b> the events). An example of a source might be a diary entry, an interpretation might be a modern textbook.
2	What is bias?	Presenting or recalling events in a certain way – often to prove a point. It means having a one-sided view of events.
3	What is meant by 'chronological order'?	It means in order of when something happened.
4	How long is a century?	100 years
5	How long is a millennium?	1000 years
6	How long is a decade?	10 years
7	. When did Edward the Confessor die?	January 1066
8	Who were the three contenders for the English throne following Edward the Confessor's death? Why did they believe they had a right to the throne?	<ul style="list-style-type: none"> <li>Harald Hardrada – he had succeeded Magnus I of Norway in 1046. Magnus had been promised the Kingdom of Denmark by Harthacnut who was King of England in 1040-2.</li> </ul>

		<p>In 1064 Harald gave up trying to rule Denmark and switched to England instead.</p> <ul style="list-style-type: none"> <li>• William of Normandy – Edward the Confessor had promised William the English throne in 1051 because William had helped him to secure the English throne.</li> <li>• Harold Godwinson – he was Edward the Confessor’s brother-in-law. He was the only Englishman to claim the throne. He had crushed a Welsh uprising for Edward in 1063.</li> </ul>
9	Who attacked the north of England in September 1066?	Harald Hardrada the Viking from Norway
10	Which 2 sides fought at the Battle of Hastings?	English V Normans (Harold Godwinson V William of Normandy)
11	How did William the Conqueror control the English?	He built motte and bailey castles which were designed to intimidate the English and protect William’s men from attack. These were later replaced by stone and concentric castles. He introduced the Feudal System where he lent land to those who provided him with knights and loyalty and it also kept the peasants in their place. Finally, he commissioned a great survey of England and everything within it – this knowledge gave him great power.
12	What do change and continuity mean in history?	Change is how significant events change the course of history. Continuity means how things stay the same.

## MATHS

1	What is place value?	Place value is the value of a digit depending on its position within a number e.g. what is the value of the digit 3 in the integer 315?																											
2	What are the column headings of a place value table?	<table border="1"> <thead> <tr> <th colspan="3">Millions</th> <th colspan="3">Thousands</th> <th colspan="3">Ones</th> </tr> <tr> <th>Hundred millions</th> <th>Ten millions</th> <th>Millions</th> <th>Hundred thousands</th> <th>Ten thousands</th> <th>Thousands</th> <th>Hundreds</th> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>100 000 000</td> <td>10 000 000</td> <td>1 000 000</td> <td>100 000</td> <td>10 000</td> <td>1000</td> <td>100</td> <td>10</td> <td>1</td> </tr> </tbody> </table>	Millions			Thousands			Ones			Hundred millions	Ten millions	Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones	100 000 000	10 000 000	1 000 000	100 000	10 000	1000	100	10	1
Millions			Thousands			Ones																							
Hundred millions	Ten millions	Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones																					
100 000 000	10 000 000	1 000 000	100 000	10 000	1000	100	10	1																					
3	What is an integer?	Any positive or negative whole number, or zero, e.g. 36, -27, 0																											
4	How many centimetres (cm) in one metre (m)?	100 cm = 1 m																											
5	What is a square number?	The result of multiplying a number by itself, e.g. $5^2 = 5 \times 5 = 25$ (25 is the square number)																											

6	List the first 15 square numbers	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225
7	What is a square root?	Finding a square root is the inverse (opposite) of squaring. Since $3^2 = 9$ , we say the square root of $\sqrt{9} = 3$ 
8	What is a cube number?	The result of multiplying three copies of a number (a number multiplied by itself and then by itself again), e.g. 2 cubed is $2^3 = 2 \times 2 \times 2 = 8$ (8 is the cube number)
9	List the first 5 cube numbers	1, 8, 27, 64, 125
10	What is a prime number?	An integer greater than 1 that has exactly two factors: 1 and itself. Prime numbers are the building blocks (DNA) of all numbers.
11	List the first 10 prime numbers	2, 3, 5, 7, 11, 13, 17, 19, 23, 31
12	What is a factor?	A factor of a number divides that number exactly (without a remainder), e.g. factors of 10 are 1, 2, 5 and 10.
13	What is a product?	The result given by a multiplication. The product of 5 and 3 means $5 \times 3 = 15$ . 12 as a product of its prime factors $12 = 2 \times 2 \times 3$
14	What is a multiple?	A multiple of a number is the product of that number and an integer, e.g. the first 5 multiples of 7 are 7, 14, 21, 28, 35
15	What is a zero pair?	One positive and one negative make a zero 

## MUSIC

1	What are the elements of music?	The elements of music are used to help describe music. These can be are pitch, duration, dynamics, tempo, timbre, texture, and structure.
2	What is pitch?	Pitch is how we identify and categorise a sound as 'high' or 'low' in terms of musical notes.
3	What is duration?	Duration is the length of time a note is sounded in a piece of music.
4	What are dynamics in music?	Dynamics refer to the volume of the music. It's about the variation in loudness between notes or phrases, which can add expressiveness to the music.
5	What is tempo?	Tempo is the speed at which a piece of music is played. It's usually measured in beats per minute (BPM)

6	What is timbre?	Timbre, also known as tone colour, refers to the quality of sound that distinguishes one voice or instrument from another. It's what makes a piano sound different from a violin, even when they play the same note.
7	What is texture in music?	Texture in music refers to the way multiple voices or instruments interact in a composition. Texture can be Thick (many sounds) or Thin (few sounds)
8	What is a Graphic Score?	A visual representation of Music using pictures or symbols.
9	What is a pulse?	Pulse is a steady beat, like a ticking clock.
10	What is rhythm?	Rhythm is a pattern of long and short sounds.
11	What are note values?	Note values are how long each note lasts for.
12	What is a crotchet?	A crotchet is a 1 beat note.
13	What is a minim?	A minim is a 2 beat note.
14	What is a quaver?	A quaver is a half beat note.
15	What is a semibreve?	A semibreve is a 4 beat note.
16	What is a semiquaver?	A semiquaver is a quarter beat note.
17	What is a melody?	Melody is the main tune, consisting of different pitches.
18	What is timing?	To all play together in time, as an ensemble.
19	What are ensemble skills in Music?	The ability to work together in a group to create a musical performance.
20	Singing in Tune	The ability to perform with the voice accurately and in tune.

## PE

1	Why do we warm up?	To gradually prepare the body for exercise and to avoid injury.
2	What are the 3 components of a warm-up?	Pulse raiser (running, skipping, etc) Mobility Stretches Sport Specific Drill

3	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 increases blood flow prepares the body for exercise.
4	What is the difference between a static and mobility stretches?	Static means to stretch and not move. Mobility means movement stretches
5	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
6	How do we assess in PE?	Through a combination of 5 physical assessments and 5 holistic assessments (social, thinking, leadership, health and fitness and creative)
7	How do we do retrieval practice in PE?	At the beginning of the lessons, we recap the previous lesson and retrieve key knowledge and skills.
8	Name the 6 areas that make up physical fitness?	BASSFM (Acyromn) Balance, Aerobic Endurance, Strength, Speed, Flexibility and Muscular Endurance.
9	How do we test Aerobic Endurance?	Multi stage fitness test (bleep test)
10	How do we test stability?	Standing Stork Test
11	Name the four fundamental skills that you have learnt this term.	Movement, Games and rules, Stability, Object control
12	Why is fair play important?	To maintain the integrity of the game. It promotes mutual respect, sportsmanship, and positive values, and teaches important life skills that can benefit athletes both on and off the field.
13	Provide an example of a sport or athlete who would need high levels of object control. Explain why.	Student response based on knowledge of sports/ athletes that will need object control and can provide example in competitive situation.
14	From any activity of your choice, what skills (name 3) do you believe you have done well and think you are a strength.	Student reflective response.
15	For your current activity, what level/grade do you believe that you are and why?	Self-reflection response. Explain your thoughts and reasons.

## RELIGIOUS STUDIES


1	What does the word 'value' mean?	Core beliefs somebody holds
2	What does multicultural mean?	Many different cultures all living together in one place
3	What does multifaith mean?	Many different religious believers all living together in one place.



4	What is nationality?	Nationality is where a person is born.
5	What is ethnicity?	A person's cultural background.
6	What is democracy?	A country where the people have the right to vote.
7	What is tolerance?	Accepting that people have different views without being hateful.
8	What is respect?	Treating somebody in the right way; politeness and kindness
9	Name the 3 Abrahamic Religions.	Judaism, Christianity, Islam
10	Why is the name 'Abrahamic' given to three religions?	Because each faith begins with Abraham
11	Who was Abraham?	The father of Judaism/the first man to believe in God.
12	What was the covenant between Abraham and God?	God promised Abraham a son and to protect him. Abraham promised to have faith and move to the Promised Land.
13	What is a sacrifice?	To give something up for God.
14	What sacrifice was Abraham willing to make for God?	Abraham was willing to sacrifice his son, Isaac.
15	What is a Pharaoh?	A ruler of Egypt.
16	What does exodus mean?	Many people moving from one place to another/when the Hebrews/Israelites left Egypt.
17	Who was Moses?	Moses is the founder of Judaism/Moses is the person who freed the Hebrews from slavery
18	What did Moses do at the Red Sea to save the Hebrews?	Moses used the power of God to part the Red Sea

19	Why did the Hebrews need to be saved?	The Hebrews needed to be saved from being enslaved by the Egyptians.
20	What is a decalogue?	Decalogue is another name for the Ten Commandments
21	What is meant by relevant?	It still matters today.
22	What is the promised land in Judaism?	The promised land is the land given to Jews by God.
23	Where is the promised land in Judaism?	Israel or Canaan
24	What is adultery?	When a person is unfaithful in a marriage.
25	What is the 'Sabbath' day?	The holy day for Jews.
26	What does 'covet others' mean?	To be jealous of others.
27	What is a Synagogue?	The Jewish holy place/the Jewish place of worship
28	What is a Bar Mitzvah?	A coming of age ceremony for boys.
29	What is a Bat Mitzvah?	A coming of age ceremony for girls.
30	What does kosher mean?	Food rules; foods that are okay and not okay to eat.

### SCIENCE – Safety and Equipment

1	What is the symbol to show that a substance is an irritant	
2	Describe three rules that must be followed in the Science lab.	<ul style="list-style-type: none"> <li>• Line up sensibly.</li> <li>• Walk, don't run.</li> </ul>

		<ul style="list-style-type: none"> <li>• Don't touch equipment without permission.</li> <li>• Never start an experiment if you don't understand what to do.</li> <li>• Tie hair back when using Bunsen burners.</li> <li>• Always light a Bunsen burner with a wooden spill.</li> <li>• When not using the Bunsen burner for heating, make sure it is on a yellow flame (safety flame)</li> <li>• Always stand during practicals.</li> <li>• Point test tubes away from other people when heating them</li> </ul>
3	Explain why safety rules are needed in the Science lab.	To minimise the risk of injury to everybody involved.
4	State which piece of lab equipment is used to measure accurate volumes of liquids.	Measuring cylinder.
5	Describe how to record an accurate mass for an object.	Turn on the top-pan balance. Make sure it reads zero. Tare to set to zero if there is a reading. Place your object onto the balance carefully.
6	State the standard unit for temperature.	Degrees Celcius ( °C)
7	Describe how the collar of a Bunsen burner needs to be arranged to get a roaring flame?	The collar needs to be fully open.
8	Which kind of flame should be used when first lighting the Bunsen burner?	A safety flame.
9	How should a Bunsen burner be safely put away?	Hold the Bunsen burner near the base. Avoid touching the top as it will be hot.
10	What is meant by a hypothesis?	A hypothesis is an idea about how something works that can be tested using experiments.  A prediction says what will happen in an experiment if the hypothesis is correct.
11	State the meaning of the terms independent, dependent and control variable.	Independent Variable – The variable you are changing.  Dependent Variable – The variable you are measuring.  Control Variable – The variables that remain the same.
12	Explain why an experiment should always be repeated?	To check for anomalies, you can then calculate a mean to give a more accurate value.
13	Describe what should be done before an experiment to make sure it is safe.	A risk assessment

14	Describe how to calculate a mean.	Add up all results (excluding anomalies) and divide by the number of results.
15	Describe the two types of data collecting during Scientific investigation.	Categoric data Continuous data
16	When evaluating a method, what needs to be included?	Strengths Weaknesses
17	What do we call a result that does not fit the pattern of the rest of the data?	Anomalies

### SCIENCE– Movement and Cells

1	Describe the four main roles of the skeleton.	Supports the body, protects the organs, allows movement, produces blood cells
2	Describe three parts of the skeleton where joints are important.	Arm – elbow joint, bending your arms Leg – knee joint, bending your knees Hip – movement of legs
3	Explain why the name “vertebrates” is suitable for describing animals that have a backbone.	Vertebrae are described as small and irregular bones covering the spinal cord, so all organisms with a backbone containing vertebrae are called vertebrates.
4	Describe the roles of tendons and ligaments.	Ligaments hold the bones of the skeleton together. Bones are connected to muscle by tendons. Both ligaments and tendons are made of fibre called collagen.
5	State three types of muscle and where each is found.	Cardiac muscle – found in the heart Smooth muscle – found in the organs Skeletal muscle – attached to the skeleton
6	List four types of joint in order, starting with the type allowing least movement.	Fixed joints (skull), Hinge joint (elbow), Pivot joint (top of neck), Ball and Socket joint (hip)
7	List some examples of antagonistic muscles.	Arm – bicep / triceps Thigh – quadricep / hamstring Ankle – shin / calf muscle
8	Describe the changes in the bicep and tricep muscles as the forearm moves up and down.	When the bicep contracts the triceps relaxes and the forearm moves up. When the triceps contract the biceps relaxes and the forearm moves down.
9	Explain why some muscles need to work in pairs.	Muscle can only pull, they cannot push, so for movement to happen muscles have to work in pairs.
10	Suggest how a fracture may happen.	Bones can bend a little but with too much impact bones can splinter, break or shatter.
11	Describe how a fracture may be treated.	Fractures can be treated by covering the limb with a cast of fibreglass or plaster – this is to hold the bones in place while new bone knits the broken ends together. More severe fractures might need metal pins.

12	Explain why sufferers of osteoporosis are prone to fractures.	The density of bones has dropped to an unhealthy level making the bones fragile and prone to fractures.
13	Explain why arthritis can be so painful.	The cartilage at the end of bones wears away and bones rub together, this can be very painful.
14	Name three organs and describe their functions.	Heart – pumping blood around the body to the cells Kidneys – cleanse blood and balance water in the body Brain – allows us to control all parts of the body quickly.
15	The skin is described as an organ, not a tissue. Suggest why.	Every organ has a specific job and the job of the skin is to protect our body, muscles, bones and organs. The skin is a group of skin cells and tissue working together to fulfil this function.
16	Which organ system do all drugs affect?	Nervous System
17	How can we see cells?	Using Microscopes.
18	Is a cell living? Which parts of the cell are found inside the cytoplasm?	Every cell has chemical reactions occurring all the time, without these reactions the organism would die. All chemical reactions take place in the cytoplasm and all organelles are found in the cytoplasm keeping the cell and the organism alive.
19	What main substances can move through the cell membrane?	Water, oxygen, glucose and nutrients are moving through the cell membrane into the cell, waste products like carbon dioxide and urea are let out of the cell through the cell membrane.
20	Which two structures give a plant cell its shape?	Cell wall and vacuole
21	Explain why it is important that cells become specialised?	Cells become specialised to carry out a specific job – these include movement, detecting information, sending impulses, carrying and making chemicals around the body, reproducing and absorbing food.
22	Which type of cell: a. Transmit electrical messages b. Contracts and expands to create movement? c. Carries genetic material for fertilisation?	a. Nerve cells b. Muscle cells c. Sperm cells
23	Explain why it is important that plant cells are specialised.	Plants make their own food by photosynthesis and need to collect light, water and carbon dioxide for this process.
24	State why we need a microscope to observe cells. What is meant by “magnified”	Cells are too small to be seen with the unaided eye so we need microscopes to study them. The word magnified means that something has been made bigger to see better.
25	Explain why stain is often used on microscope specimens.	Stain is used to enhance the image of the cell under a microscope. Organelles like the nucleus or cell walls are showing up better when a stain is used.

26	Describe two differences between light microscope and electron microscope.	Light microscopes use a light source whilst electron microscopes use a beam of electrons to form an image. Electron microscopes are very large and expensive whilst light microscopes are portable and fairly cheap.
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### SCIENCE – The Particle Model and Separating Mixtures

1	What are the three states of matter and their characteristics?	Solids (fixed shape and volume), liquids (fixed volume, takes shape of container), gases (no fixed shape or volume)
2	How does the particle model describe the arrangement and movement of particles in solids, liquids, and gases?	Solids: tightly packed, vibrate in place. Liquids: closely packed, flow past each other. Gases: far apart, move freely.
3	What are the main differences between the properties of solids, liquids, and gases?	Solids: rigid, incompressible. Liquids: flow, incompressible. Gases: compressible, flow freely.
4	What are the defining properties of solids?	Fixed shape, fixed volume, rigid.
5	How does the particle arrangement in solids explain their properties?	Particles are tightly packed and vibrate in place, giving solids their rigid structure.
6	What are some examples of solids with different properties?	Diamond (hard), rubber (elastic), glass (brittle).
7	What are the properties of liquids and gases?	Liquids: fixed volume, take shape of container, flow. Gases: no fixed shape or volume, compressible, flow freely.
8	How does the particle model explain the properties of liquids and gases?	Liquids: particles close but can slide past each other. Gases: particles far apart and move freely.
9	What factors affect the behavior of liquids and gases?	Temperature, pressure, and the nature of the particles.
10	State the definition of diffusion.	The movement of particles from an area of high concentration to an area of low concentration.
11	How does the particle model explain diffusion?	Particles move randomly and spread out to evenly distribute in available space.
12	List two examples of diffusion.	Perfume spreading in air, sugar dissolving in water.
13	What are the different changes of state?	Melting, freezing, boiling, condensation, sublimation, deposition.
14	How does the particle model explain changes of state?	Particles gain or lose energy, changing their movement and arrangement.
15	What is the role of energy transfer in changes of state?	Energy is absorbed or released, causing particles to move more or less and change state.

16	What are the key concepts of the particle model?	Particles are always moving, the amount of movement depends on energy, and particles interact with each other.
17	How can the particle model explain various phenomena?	It explains states of matter, diffusion, changes of state, and properties of substances.
18	What are the applications of the particle model in everyday life?	Understanding boiling, freezing, dissolving, and the behavior of gases.
19	List 3 methods of separating mixtures.	Filtration, distillation, chromatography.
20	How do the properties of substances determine the separation method?	Differences in size, boiling point, solubility, and magnetic properties influence the choice.
21	What are some practical applications of separation techniques?	Purifying water, extracting essential oils, forensic analysis.
22	What factors influence the choice of separation method?	Type of mixture, properties of components, desired purity.
23	How can we apply different separation techniques effectively?	By understanding the properties of the substances in the mixture and choosing the appropriate method.
24	What is filtration used for?	Separating insoluble solids from liquids.
25	What is a solution and what are its components?	A homogeneous mixture of a solute dissolved in a solvent.
26	How does the particle model explain the formation of solutions?	Solute particles spread out and mix uniformly with solvent particles.
27	What factors affect solubility?	Temperature, pressure, and the nature of solute and solvent.
28	State what is meant by distillation.	A process of separating components based on different boiling points.
29	Describe what type of substances distillation is used to separate.	Liquids with different boiling points, such as alcohol and water.
30	How can distillation be used to purify substances?	By heating the mixture to boil off and condense the pure component.
31	What are some practical applications of distillation?	Purifying water, making spirits, refining oil.
32	What is chromatography and how does it work?	A technique for separating mixtures based on different rates of movement across a medium.

### SCIENCE – Speed and Gravity

1	What is the equation that links speed, distance and time?	Speed = distance / time
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2	What are the units for speed, distance and time?	Speed= m/s Time= Seconds Distance= Meter
3	How would you calculate the average speed of an object?	Total distance / Total time
4	What is meant by motion?	When an objects position has changed over a period of time.
5	What axis do distance and time go on the distance time graph?	X axis= Time Y axis= Distance
6	What does the gradient on a distance time graph represent?	The gradient resembles the motion (speed) of the object. The steeper the gradient the faster it is.
7	What does a horizontal line on a distance time graph represent?	Stationary (Not moving)
8	What do distance time graphs show?	An object motion over time.
9	What is meant by relative motion?	The motion of an object compared to different object.
10	What is meant by relative speed?	The difference in speed between two cars traveling the same direction.
11	Name 4 forces?	Gravity, Friction, air resistance, weight, up thrust, Normal contact force, Tension.
12	What is meant by a non contact force?	Forces that do not need to be physically touching the object to interact with it.
13	What does resultant force mean?	The total sum of all forces acting on an object.
14	What does a balanced force mean?	All forces acting on the object are the same magnitude.
15	How can direction and size of a force be represented?	Using an arrow, the size of the arrow resembles the size of the force, the direction resembles the direction of the force.
16	What is meant by a field in physics?	An area in which a object feels a force.
17	What is the formula linking weight, mass and gravitational field strength?	Weight = mass x gravity
18	What is the link between gravity and acceleration?	The stronger the gravitational field the faster it causes acceleration of an object.
19	What is the difference between mass and weight?	Mass= the amount of matter in an object. Weight= the force of gravity pulling down on the object due to its mass.
20	What is the unit for mass and weight?	Mass (kg) , weight (N)
21	How does gravity change on different planets?	Larger planets have stronger gravity.



