# Knowledge Organiser Year 8 Term 5 

| Name: | Form group: | Masters of Recall Big Quiz: |
| :--- | :--- | :--- |


| Spellings |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
| journalism- collecting, writing, and publishing news stories and articles. <br> advocacy- active support of an idea or cause. <br> bias- influence in an unfair way. <br> proximity- the region close around a person or thing. <br> adversarial- involving two people or two sides who oppose each other. | credibility- the quality of being believable or trustworthy. <br> editorial- an article giving opinions or perspectives. <br> brevity- the use of concise expressions. <br> paraphrase- express the same message in different words. <br> obstacle- a thing that blocks one's way or prevents or hinders progress. | consequence- the state of having important effects or influence. <br> slander- words falsely spoken that damage the reputation of another. <br> repercussions- an unintended consequence of an event or action. <br> poignant- evoking a keen sense of sadness or regret. <br> superfluous- exceeding what is necessary. | prominence- the state of being widely known or eminent. <br> relevance- the relation of something to the matter at hand. <br> distorted- giving a misleading or false account or impression. <br> plethora- an abundance or excess. <br> venerable- deserving respect because of age or achievement. | libel- a false and malicious publication. <br> prohibit- make something impossible or to prevent. <br> accurately-in a way that is correct in all details. <br> momentous- of great importance or significance. <br> jubilant- extremely joyful or happy. | pretentious- trying to appear or sound more important or clever than you are, especially in matters of art and literature. <br> necessary- needed in order to achieve a particular result. <br> diligent- showing care in doing one's work. <br> impeccableexemplary or flawless. <br> perusal- a careful examination or review. |

## Look

Look at the information carefully.
Read it three times.
It may help to say it as you read it.
Cover
Cover it with your hand or a piece of paper.

Write it out, from memory.

## Check

Check what you have written matches the information exactly. Have you got it correct? If so, tick your work to show it is correct.

If it doesn't match exactly, use your purple pen to correct it.

## Repeat.

When you get it 100\% correct, move on to the next piece of information.

## English

Week 1: emphatic adjectives

- imperative- vital importance.
- crucial- decisive or critical.
- critical- turning point or especially important juncture.
- essential- absolutely necessary or important.
- urgent- requires immediate attention or action.
- vital- absolutely necessary.
- significant- something notable or noteworthy.


## Week 4: grammar knowledge 2

active voice: a sentence which focuses on the person or object which is performing the action, e.g. The doq ate the bone. This sentence focuses on the 'dog' because it is the one eating.
passive voice: a sentence which focuses on the person or object which experiences the action, rather than the person or object which performs the action, e.g. The doq ate the bone (ACTIVE voice) becomes: The bone was eaten by the dog (PASSIVE voice).

Standard English: the most formal variety of English which uses formal tone, regular spellings, and punctuation, and does not use any features of regional or non-standard dialect.

Week 2: intensifiers

- extremely- to a great degree
- particularly- to a higher degree than is usual.
- significantly- seriously or notably.
- highly-very, mostly, or thoroughly.
- incredibly- to a great degree or extremely.
- remarkably-worthy of attention.
- profoundly- extremely or greatly.
- decidedly-undoubtedly or undeniably.


## Week 5: vocabulary 1

newspaper: a printed publication containing news, articles, and advertisements.
tabloid: a newspaper with pages half the size of a broadsheet, popular in style and dominated by sensational stories.
broadsheet: a newspaper with a large format, regarded as more serious than tabloids.
magazine: a publication containing articles, usually on a particular subject or aimed at a particular audience.
blog: a regularly updated website or webpage with 'posts' written in an informal or conversational style.

Week 3: grammar knowledge 1
modification: changing the quality of nouns or verbs using additional information, usually adjectives and adverbs.
fragmentation: when a sentence is not complete because it does not have a subject or verb or both.
starting a sentence with a subordinating conjunction: a word which joins a subordinate clause to the main clause, e.g., although, after, since, whether, while.
appositive phrase: a noun or noun phrase which is positioned next to another noun to add description or information.

Week 6: vocabulary 2
tentative language: using language which makes it clear that what you are saying is not certain but is possible e.g., using 'perhaps', 'appears to', 'possibly' in a sentence.
social media platform: a form of digital communication, networking, and information sharing.
bias: when a writer favours one side over another or has a reason to be prejudiced against something.
citation: a quotation from or reference to a book, paper, or author.

## Week 1: powers of 10

$$
10^{3}=10 \times 10 \times 10=1000
$$

$$
10^{-1}=\frac{1}{10}=0.1
$$

## Week 4: key angle facts

Angles around a point sum to 360 degrees.

Adjacent angles on a straight line sum to 180 degrees.
perpendicular: lines that meet at 90 degrees (a right angle)

The sum of interior angle in a triangle sum to 180 degrees.

The sum of the interior angles in a quadrilateral sum to 360 degrees.

## Week 2: indices

base: the number or variable that is repeatedly multiplied when using an index.
index (or power): represents how many times to repeatedly multiply the base.

$$
\text { BASE } \longrightarrow 3^{5-\text { INDEX }}
$$

$$
=3 \times 3 \times 3 \times 3 \times 3
$$

$\frac{\text { Laws of Indices }}{a^{m} \times a^{n}=a^{m}}+$
$a^{m} \times a^{n}=a^{m}+n$
$\frac{a^{m}}{a^{n}}=a^{m} \div a^{n}=a^{m-n}$

$$
\left(a^{m}\right)^{n}=a^{m \times n}
$$

Examples

$$
3^{8} \times 3^{2}=3^{10}
$$

$$
\frac{3^{8}}{3^{2}}=3^{8} \div 3^{2}=3^{6}
$$

$$
\left(3^{8}\right)^{2}=3^{16}
$$

## Week 3: standard form

standard form: a way of writing really large or really small numbers.

Standard form is written in the form:

$$
a \times 10^{n}
$$

a is a number greater than 1 but less than 10 n can be any positive or negative integer

## Example

$43800000=4.38 \times 10^{7}$
positive power for a large number
$0.00000832=8.32$
negative power for
$\times 10^{-6}$
a small number

## Week 6:

trapezium: a quadrilateral (4 sided shape), with one pair of parallel lines


Area $=\frac{1}{2}(a+b) h$


## Week 1: Interdependence

| biomass | the total mass of the organic matter of an organism |
| :---: | :---: |
| producers | organisms that produce their glucose (food) via photosynthesis |
| consumers | organisms that consume (eat)other organisms for energy |
| predator | an organism that hunts |
| prey | an organism that is hunted |
| herbivore | an organism that only feeds on producers |
| carnivore | an organism that feeds on consumers |
| omnivore | an organism that feeds on producers and consumers |
| ecosystem | all the living organisms and non-living factors in an environment |
| food chain | shows how plants and animals get their energy |
| food web | a diagram that shows how different food chains are linked |
| pyramid of numbers | a graphical representation of the number of organisms in a food chain |
| biodiversity the range of organisms in a given area |  |
| producer |  |

In a food chain the $\rightarrow$ shows the flow of energy

Week 2: Natural Selection \& Biodiversity

| evolution | the gradual change of a species over <br> time |
| :--- | :--- |
| natural <br> selection | the process by which individuals who <br> are better adapted to their <br> environment can survive longer and <br> increase their chances of reproducing |
| adaptation | a characteristic which increases an <br> organism's chance of survival and <br> reproduction |
| gene | a section of DNA that is responsible for <br> a characteristic like eye colour or <br> blood group |
| extinction | when there are no more individuals <br> left of a particular species |

biodiversity the variety species living in an area.

There is variation within a species
These variations are caused by mutations in DNA
Beneficial (good) mutations lead to adaptations that make an animal better suited to its environment
(S)Those individuals in a species that are better adapted to their environment are more likely to survive.
D Those surviving individuals have increased chance of reproduction.
D When animals reproduce, they pass...
(0)
...on...
(5)
...genes with their beneficial adaptation to their offspring.
Week 3: The Reactivity Series

| reactivity <br> series | a list of metals arranged by their <br> reactivity with the most reactive at the <br> top |
| :--- | :--- |
| reactivity | the tendency for a substance to <br> undergo a chemical change |
| inert | very unreactive |
| displacement <br> reaction | when a more reactive metal displaces a <br> less reactive metal from a compound |
| observation | what can be seen happening (in a <br> chemical reaction) |
| fizzing/ <br> effervescence |  |

## The Reactivity Series

| Potassium | most reactive | K |
| :---: | :---: | :---: |
| Sodium | - | Na |
| Calcium |  | Ca |
| Magnesium |  | Mg |
| Aluminium | 入 | Al |
| Carbon | 2 | C |
| Zinc | - | Zn |
| Iron | $\sim$ | Fe |
| Tin | () | Sn |
| Lead | g | Pb |
| Hydrogen | $\stackrel{9}{\circ}$ | H |
| Copper | 듣 | Cu |
| Silver |  | Ag |
| Gold |  | Au |
| Platinum | least reactive | Pt |

Science

| Week 4: Materials |  |
| :---: | :---: |
| extraction | removing a metal from its ore |
| ore | a rock containing metal compounds |
| metal oxide | a compound containing metal and oxygen, e.g.copper oxide <br> metal + oxygen $\rightarrow$ metal oxide |
| carbon | a non-metal used to extract less reactive metals from ores |
| reduction | a chemical reaction where oxygen is removed from a compound |
| ceramic | a hard, brittle, waterproof material |
| composite | a material that is made from two or more substances with very different properties |
| polymer | materials made from lots of smaller units (monomers) used for plastics |
| recycle | convert waste into reusable material |

## Displacement reactions to extract metal from a metal oxide compound: <br> metal oxide + carbon $\rightarrow$ metal + carbon dioxide

Week 5: Electrical Circuits

| circuit | a complete loop which allows an electric <br> current flow |
| :--- | :--- |
| series <br> circuit | a circuit with one loop through which <br> current can flow |
| parallel <br> circuit | a circuit with more than one loop through <br> which current can flow |
| current | the rate of flow of charge, measured in <br> amps (A) |
| ammeter | a device, connected in series, which <br> measures the current in a circuit |
| potential <br> difference | a measure of the difference in energy <br> between two parts of a circuit measured <br> in volts (V) |
| voltmeter | a device, connected parallel to a <br> component, which measures potential <br> difference | difference

Circuit
Symbols

lamp
$\square$

ammeter

Week 6: Resistance

resistance | how much the wires and other |
| :--- |
| components reduce the flow of |
| charge in a circuit |

ohms ( $\Omega$ ) the unit of measure for resistance

|  | the part of the experiment which the <br> independent <br> variable |
| :--- | :--- |
| scientist changes. <br> remember: I change the Independent <br> variable |  |
| dependent <br> variable | the part of the experiment that the <br> scientist measures |
| control <br> variable | the part of the experiment that the <br> scientist keeps the same so that it <br> does not affect the results of the <br> experiment (Constant Control) |

## Equation to calculate resistance

## resistance $(\Omega)=$ potential difference $(V)$ <br> current (A)

This equation can also be represented as:


| French |  |  | Les vacances |  | Year |  |  | rm 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week 1: Les pays - countries |  |  | Week 2: Le transport - transport |  | Week 3: Adjectives - to describe transport |  |  |  |
| je vais... I go... |  | en vacances on holiday à la campagne to the countryside à la mer to the sea à la montagne to the mountains à la plage at the beach en ville to/in the city au bord de la mer to/at the seaside | je voyage on voyage/nous voyageons je vais on va/nous allons | I travel we travel I go we go <br> by plane <br> by boat <br> by bus <br> by coach <br> by subway <br> by train <br> by car <br> on foot <br> by bike | j'aime je préf parce plus/m | voyager en train re voyager en avio ue c'est.... oins... <br> Les adjectifs <br> cher <br> confortable <br> fatigant <br> pratique <br> lent <br> rapide <br> sûr | I like trav <br> on I prefer to <br> because it <br> more/less <br> expensive comfortab tiring practical slow fast safe | elling by train travel by plane is.... <br> e |
| Week 4: Holiday activities - what you can do |  |  | Week 5: Holiday activities - what you normally do |  | Week 6: The near future tense |  |  |  |
| We use on peut <br> on peut... <br> on ne peut pas... <br> ...envoyer une ca <br> ...faire un tour en <br> ...nager dans la $m$ <br> ...prendre des ph <br> ...regarder un déf <br> ...rencontrer les <br> ...se bronzer à la <br> ...se relaxer à l'h <br> ...visiter les sites <br> ...voir les monum | describe what On peut + in <br> postale barque do a boa tos é ns lage el uristiques nts | we can do on holiday. finitive verb. <br> you can... you can not... <br> send a postcard tour <br> swim in the sea take some photos watch a parade meet people $\tan$ on the beach relax at the hotel visit tourist sites see monuments | régulièrement d'habitude ....en vacances,... je visite les monuments je nage dans la mer je me bronze sur la plage je me relaxe à l'hôtel j'achète des souvenirs je mange dans les restaurants je joue sur la plage | regularly usually ...on holiday,... <br> I visit the monuments <br> I swim in the sea <br> I tan on the beach <br> I relax at the hotel <br> I buy souvenirs <br> s leat in the restaurants <br> I play on the beach | We use to do. R <br> infinitiv <br> je vais tu vas il va elle va <br> Par exem <br> je vais n Useful P ce sera demain | the near future to emember the rule: verb. <br> I am going you are going he is going she is going <br> ple: <br> ger dans la mer I <br> hrases <br> it will be tomorrow | describe wh : present pa <br> = to go <br> nous allons vous allez ils vont elles vont <br> am going to <br> à l'avenir <br> prochain/e | at we are going rt of aller + <br> we are going you are going they are going they are going <br> swim in the sea <br> in the future next |

## Geography

Week 1: features of urban areas
urban: a built-up area with a high population density.
rural: a countryside area with low population density.
population density: The number of people per KM 2 .
city: A status granted by a monarch (king or queen) to large urban areas in the UK which often have features such as high populations, a cathedral and a university.

## Week 4: opportunities of urban change

social opportunities: improved infrastructure such as electricity, internet access and access to clean water.
economic opportunities: improved employment opportunities and access to a greater variation in jobs.
environmental opportunities: greater access to renewable energy and improved public transport.

Week 2: reasons for urban growth
natural increase: growth in the population which occurs due to death rate being lower than birth rate.
rural to urban migration: people moving from the countryside to the city. This is caused by push and pull factors.
push factor: a bad thing about rural areas which makes people want to move away from the area.
pull factor: a good thing about cities which makes people want to move to the area.

## Week 5: regeneration in Barnsley

regeneration: the process of improving an area.
The glassworks project:

- 100,000 square foot of new retail (shopping) space.
- 382 work experiences positions provided
- Leisure space including a 13 screen cinema

Week 3: challenges of urban change
social challenges: challenges which impact people's health, happiness, and wellbeing.

- Urban deprivation: a low standard of living for people in urban areas.
economic challenges: challenges which impact people's wealth including access to jobs.
- Unemployment: not being employed.
environmental challenges: challenges which impact nature, plants, animals and climate change.
- Congestion: a build-up of traffic in an area which results in increased pollution.


## Week 6: gentrification in Sheffield

gentrification: the improvement of an area that results in the displacement of working-class communities.
displacement: the forced movement of groups of people.
working class: people in society who typically work in unskilled, low-paid labour.

History
Rise of Dictators and WW2
Week 2: League of Nations and Wall Street
The purpose of the League was to settle arguments between countries, without going to war.
embargo: when countries punish each other by refusing to trade resources.

The main weakness of the League was that the USA never joined, making League Embargos useless.
economic depression: a period of low economic growth and high unemployment
hyperinflation: where money is printed in massive amounts, reducing the value of the currency.

## Week 5: Midway and D-Day

The Battle of Midway: fought between the Americans and the Japanese. Japan wanted to occupy Midway to convert it to an airbase and to remove the Americans as a threat in the Pacific. The Japanese were forced to call off the Midway Operation and retreat.

D-Day: June 6th 1944
Britain, America, Canada and France attacked the German forces on the coast of Normandy, France.
5 beaches-Omaha, Utah, Juno, Gold, Sword .

Week 1: Treaty of Versailles
Adolf Hitler: the fascist dictator of Germany.

Benito Mussolini: the fascist dictator of Italy.

Francisco Franco: the fascist dictator of Spain.
fascism: a political system with an unelected, allpowerful dictator, who uses violence to control society.

Treaty of Versailles: the peace treaty signed at the end of WW1. Under the treaty, Germany:

- Gave up territory such as Alsace-Lorraine
- Could only have 100,000 men in its army
- Had to pay $\$ 5$ billion to cover the damage of WW1


## Week 4: Operation Barbarossa/Pearl Harbour

Operation Barbarossa: code name given to Hitler's plans to invade the USSR.

Stalingrad: the Germans and Soviets fought over Stalingrad. It was significant because it was named after Stalin and was an industrial centre.

Pearl Harbour: Japanese airplanes made an attack on the US Navy in Pearl Harbour, Hawaii.

- This attack led America to declare war on the Axis powers.


## Week 3: Appeasement and Dunkirk

appeasement: the policy of giving Hitler what he wanted, to prevent a war. Led by Neville Chamberlain. This failed in 1938 when Hitler invaded all of Czechoslovakia.
blitzkrieg: lightening warfare (fast attack with lots of force)

Operation Dynamo: the code name given to the rescue mission of British and French troops from the beaches of Dunkirk. Troops were rescued by pleasure steamers, fishing boats and Royal Navy ships.

## Week 6: Atomic Bomb

In 1945, the USA dropped two atomic bombs on Japan, effectively ending World War Two.

On the 6th August, the first bomb was dropped on the city of Hiroshima. Within five days, 140,000 had died.

On the 9th August, the Japanese city of Nagasaki was bombed. 75,000 people were killed.

On 14th August Japan surrendered.
The damage caused by nuclear radiation continued to make people sick and die for years after the bombing

## Religious Studies

## Week 1: the nature of God

## The Trinity: the belief that God is made up in 3 parts -

 God the father (in heaven), God the son (Jesus) and Holy Spirt (God acting in theuniverse).
Despite this, Christianity is still monotheistic as there is one God in 3 parts.
monotheistic: the belief in one God.
omnibenevolent: the belief that God is all loving.
omnipotent: the belief that God is all powerful.
omniscient: the belief that God is all knowing.

## Week 4: story of job

The Story of Job: the Bible tells the story of a man called Job who is described as a good man who loves God. Satan challenges God, saying that Job is only good because he has a happy life. God allows Satan to put Job's faith to the test by causing him to suffer.

Satan: the devil, sometimes called Lucifer.

## Evil and Suffering

Week 2: the problem of evil
moral evil: actions done by humans which causes suffering.
natural evil: suffering which is not caused by humans.
The Inconsistent Triad: the problem of evil can be regarded as an 'inconsistent triad' - in other words, three ideas but only two of them can be true.


Week 5: natural evil
natural evil: suffering which is not caused by humans.

## Scripture from the Bible:

"And in that day I will become angry with them and forsake them; I will hide my face from them, and they will be destroyed. Many disasters and calamities will come on them, and in that day, they will ask, 'Have not these disasters come on us because our God is not with us?"
"In the six hundredth year of Noah's life, on the seventeenth day of the second month-on that day, all the springs of the great deep burst forth, and the floodgates of the heavens were opened."

Week 3: Adam and Eve
free will: the act of making your own decisions.

God gave humans free will. Therefore, although he exists, he cannot interfere in any suffering humans experience because of their own choices

Original Sin: because of Adam and Eve committing the first $\sin$, Christians believe that all human beings are born sinful. It was passed down throughout humanity.

This is called original sin; This idea means that human beings are born with an in-built tendency to do wrong against God.

## Week 6: moral evil

moral evil: actions done by humans which causes suffering.

The Shoah: many Jewish people prefer to use a different term to Holocaust when describing the events of WW2, such as the Hebrew word 'Shoah', which means 'catastrophe'.

## PSHE Crime and Punishment/ Rights and Respect

Week 1: revision
young offenders: a person aged between 10 and 17 who has committed a criminal offence.

Prison: a building in which people are legally held as a punishment for a crime they have committed or while awaiting trial.
gangs: an ongoing, organized association of three or more persons.

Joint Enterprise: joint Enterprise is where, if one or more people commit an offence and another/ others intended to encourage or assist them to commit the offence, the secondary offender(s) can be prosecuted as if they were a main offender.

## Week 4: racism and hate crime

prejudice: a negative prejudgement of a person that is not based on reason.
racism: prejudice, discrimination, or antagonism by an individual, community, or institution against a person or people on the basis of their membership of a particular racial or ethnic group, typically one that is a minority or marginalized.
hate crime: a crime, typically one involving violence, that is motivated by prejudice on the basis of ethnicity, religion, sexual orientation, or similar grounds.

Week 2: county lines
county lines: term used for crime associated with gangs crossing borders to expand their drug network.
cuckooing: the practice of taking over the home of a vulnerable person in order to establish a base for illegal drug dealing, typically as part of a county lines operation.

Week 3: Equality Act 2010
Equality Act 2010: means that those with protected characteristics cannot be discriminated against at work or in a socio-economic setting.

## Protected characteristics include:

- age
- disability
- race
- religion/belief
- sexual orientation.
- marriage


## Week 6: gender discrimination

sexism: prejudice, stereotyping, or discrimination, typically against women, on the basis of sex.
stereotype: a widely held but fixed and oversimplified image or idea of a particular type of person or thing.

## Computing

Week 2: binary and denary
Humans use the denary number system. This is the base 10 system. The denary system has ten symbols 0 ,
$1,2,3,4,5,6,7,8$ and 9 .

Computers work in the binary number system, which is base 2. Denary numbers must be converted into their binary equivalent before a computer can use them.

The first eight binary place values are:

| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

In binary, each place value can only be represented by 1 or a 0 .

## Week 5: computational thinking

computational thinking: problem-solving method using computer science techniques, where possible solutions are developed and presented in a way that can be understood by humans and computers.
flowchart: a diagram that shows a process, made up of boxes representing steps, decision, inputs and outputs.
pseudocode: a method of writing a set of instructions for a computer program using plain English. This is a good way of planning a program before coding.

Week 1: storage capacity and file size
Storage capacities and file sizes are measured in: (from lowest to highest)

| BIT | BINARY DIGIT |
| :--- | :--- |
| 4 BITS | NIBBLE |
| 8 BITS | BYTE |
| 1024 BYTE | KILOBYTE |
| 1024 KILOBYTE | MEGABYTE |
| 1024 MEGABYTE | GIGABYTE |
| 1024 GIGABYTE | TERABYTE |
| 1024 TERABYE | PETABYTE |
| 1024 PETABYTE | HEXABYTE |
| 1024 HEXABYTE | ZEETABYTE |

## Week 4: four corner stones of computer science

abstraction: is the process of filtering out - ignoring the characteristics of patterns that we don't need in order to concentrate on those that we do.
algorithm: is a plan, a set of step-by-step instructions to solve a problem.
decomposition: the breaking down of a system into smaller parts that are easier to understand, program and maintain.
pattern recognition: involves finding the similarities or patterns among small, decomposed problems that can help us solve more complex problems more efficiently.

Week 3: conversions
Convert denary number 8 into binary

| 128 | 64 | 32 | 16 | 8 | 4 | $\mathbf{2}$ | $\mathbf{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

Convert denary number 255 into binary

| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Convert binary number 01000010

| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |

## $64+2=66$

## Week 6: flow chart symbols



## Design and Technology

## Week 1: designing

Initial design ideas: the first creative concepts or sketches that a designer develops to explore potential solutions to a problem or design brief.

Key elements of good initial design ideas:

- draw with speed - they don't need to be neat, they just need to communicate your thoughts effectively;
- include labels and annotation to explain what things are;
- include hatching and cross hatching to show tone.


## Week 4: casting

casting: the process of shaping melted material into a desired form by pouring it into a mould, which then solidifies into the desired shape as it cools
mould: a hollow container used to shape molten material into a specific form as it cools and solidifies.
personal protective equipment (PPE): special tools or clothing worn to keep people safe from hazards or injuries while they work or do activities.

Week 2: measuring and marking out
steel rule: a type of ruler made from metal that provides greater precision due to its durability. It is also more useful for marking out as the zero point is at the very end of the rule.
template: a pre-designed pattern or guide used to help create or replicate shapes accurately in making projects.
try square: a woodworking tool used to ensure that edges and corners are perfectly perpendicular or "square".

## Week 5: tools and machinery 1

bandfacer: a machine used to remove small amounts of waste material, and smooth and flatten the edges of a workpiece with a rotating belt
pillar drill: a machine used to drill precise and accurate holes in various materials by lowering a rotating drill bit onto the workpiece.

Week 3: CAD and CAM
computer-aided design (CAD): technology that lets you create detailed digital drawings and models of objects or products on a computer to help design and visualize them before they are made.
computer-aided manufacture (CAM): technology that uses computers to control machines and tools in the production process, helping to make products more efficiently and accurately.

## Week 6: tools and machinery 2

coping saw: a hand saw with a thin blade used for cutting intricate curves and shapes in timber or plastic
gents saw: a hand saw with a narrow blade, used for making precise and straight cuts in timber.
cordless drill: a portable power tool that can be used for drilling holes and driving screws.

Week 1: notation

treble clef: represents notes played above a middle C. Played with right hand.

bass clef: represents notes played below a middle C . Played with left hand.
bar: how we split music up.
sharp: raises the pitch of a note by a semitone. Played as the black note to the right.

flat: lowers the pitch of a note by a semitone. Played as the black note to the left.
natural: cancels out a flat or sharp. Played as the normal white note.

## Week 4: Instruments of the orchestra - strings

Violin: a stringed musical instrument of treble pitch, played with a horsehair bow. The highest of the string family.

Viola: an instrument of the violin family, larger than the violin and lower in pitch.

Cello: a bass instrument of the violin family, held upright on the floor between the legs of the seated player.

Double bass: the largest and lowest-pitched instrument of the violin family, providing the bassline of the orchestral string section.

Week 2: note values
semibreve: a note lasting 4 beats
minim: a note lasting 2 beats
crotchet: a note lasting 1 beat
quaver: a note lasting half a beat

semiquaver: a note lasting a quarter of a beat

## Week 5: Instruments of the orchestra - brass

Trumpet: a brass musical instrument with a flared bell and a bright, penetrating tone.

French Horn: a brass instrument with a coiled tube, valves, and a wide bell, developed from the simple hunting horn in the 17th century. It is played with the right hand in the bell to soften the tone and increase the range of available notes.

Trombone: a large brass wind instrument with straight tubing in three sections, ending in a bell over the player's left shoulder, different fundamental notes being made using a forward-pointing extendable slide.

Tuba: the largest and lowest-pitched musical instrument in the brass family.

Week 3: elements of music
dynamics: the volume of a piece of music. $p p, p, m p$, mf, f,ff, crescendo.
tempo: the speed of a piece of music. lento, adagio, andante, moderato, allegro, presto.
structure: the sections within a piece of music
pitch: the high and low notes
texture: the musical layers
rhythm: the arrangement of notes and rests
harmony: complimentary notes played simultaneously

## Week 6: Instruments of the orchestra - wind

Piccolo: a small flute sounding an octave higher than the ordinary one.

Flute: a tube-shaped musical instrument with a row of holes along its side that are covered by the fingers to vary the notes.

Clarinet: a woodwind instrument with a single-reed mouthpiece, a cylindrical tube with a flared end, and holes stopped by keys.

Oboe: a woodwind instrument with a double-reed mouthpiece, a slender tubular body, and holes stopped by keys.
Bassoon: a bass woodwind instrument of the oboe family, with a doubled-back tube over four feet long, played with a double reed.

| Art Art and | Art and Design Key Concepts | Year 8 Term 5 |
| :---: | :---: | :---: |
| Week 1: sculpture $\quad$ week 2: 3D art |  | week 3: relief sculpture |
| sculpture: a form of visual art that involves creating three-dimensional objects or forms, typically by carving, modelling, casting, or constructing materials such as stone, wood, metal, clay, plaster, or plastics. <br> Sculptures can be created in various sizes, from small handheld pieces to large installations that occupy entire spaces. <br> Week 4: Barbara Gilhooly | 3D art: known as three-dimensional art, refers to artwork that has physical depth as well as height and width. 3D art occupies space and can be viewed from multiple angles. <br> 3D art offers artists a dynamic way to explore space, form, texture, and materiality, inviting viewers to engage with art in a tactile and immersive manner. | relief sculpture: sculpture in which forms project from a flat background, but they remain attached to it. <br> Unlike freestanding sculpture, which can be viewed from all sides, relief sculpture is typically meant to be seen primarily from one direction. It's like a picture or scene that is partially raised from a flat surface. |
|  | Week 5: craft | Week 6: Architecture |
| Barbara Gilhooly is a contemporary artist working in the USA. <br> Barbara Gilhooly was born in North Dakota in 1963. She attended the University of North Dakota and received her BFA in 1986. Concentrating on printmaking and sculpture, Gilhooly earned her MFA from Colorado | craft: the skilled creation or production of objects, often by hand or with the use of simple tools. <br> Craftsmanship typically involves applying specialised knowledge, techniques, and skills to create items that serve functional, decorative, or artistic purposes. <br> Craft is a diverse and dynamic field that celebrates the intersection of creativity, skill, and material culture, serving as a rich and vibrant expression of human ingenuity and cultural heritage. | Architects are professionals who design and plan the construction of buildings and other structures. <br> The role of an architect involves several key tasks: <br> - Design <br> - Planning <br> - Coordination <br> - Construction oversight <br> - Problem-solving |

## Knowledge Recall Questions

Step 1 - learn the knowledge using your recall book and look, cover, write, check, correct.

Step 2 - from memory, complete the weekly recall questions. These are mandatory. Use family and friends to test you ):

Step 3 - any question you cannot confidently answer, go back and learn the knowledge again.

## Science

Week 1: Interdependence
Week 2: Natural Selection \& Biodiversity
Week 3: The Reactivity Series

1. What are producers?
2. What is the definition of an ecosystem?
3. Which type of organism only feeds on producers?
4. Which type of organism is hunted?

## Week 4: Materials

1. Which word describes a rock containing metal oxides or other metal compounds?
2. What is a metal oxide?
3. Which word means to remove a metal from its ore?
4. Which non-metal is used to extract less reactive metals from ores?
5. What is described as a gradual change over time?
6. What is biodiversity?
7. What is a gene?
8. Which word means no more individuals of a species are left?

Week 5: Electrical Circuits

1. Which type of circuit has more than one loop for current to flow through?
2. What does potential difference mean?
3. Which device is connected in series to measure current?
4. Draw the circuit symbol for a lamp.
5. What is the meaning of the term reactivity?
6. Define inert.
7. Which word means to convert waste into reusable material?
8. Which is most reactive? Potassium or zinc?

Week 6: Resistance

1. What is resistance?
2. What are the units for resistance?
3. Recall the equation to calculate resistance.
4. Which variable is kept the same so that it does not affect the results of the experiment?


| French | Les vacances | Year 8 Term 5 |
| :---: | :---: | :---: |
| Week 4: Holiday Activities - what you can do | Week 5: Holiday Activities - What you normally do | Week 6: The near future tense |
| What must follow on peut? <br> On peut + $\qquad$ ? <br> Fill in the blanks: $\qquad$ une carte postale = send a postcard $\qquad$ dans la mer = swim in the sea $\qquad$ des photos $=$ take photos $\qquad$ un défilé = watch a parade $\qquad$ les sites touristiques $=$ visit tourist sites <br> Translate into French: <br> You can not see monuments. | Unjumble the sentences: <br> Usually on holiday I visit the monuments. les / en / je / vacances / monuments / visite / d'habitude | We use the $\qquad$ to describe what we are going to do. The rule to form the near future is $\qquad$ + an $\qquad$ verb. <br> Aller = $\qquad$ <br> Complete the table of 'aller' below: |
|  |  | Je vais |
|  | Regularly on holiday I tan on the beach. me / en / sur / régulièrement / je / la / plage vacances /bronze | Tu vas |
|  |  | He/She is going |
|  |  | We are going |
|  |  | Vous allez |
|  | Regularly on holiday I buy souvenirs. <br> vacances / des / regulièrement / j'achète / souvenirs / en | They are going |
|  |  | Translate the sentences into French: I am going to send a postcard. |
|  |  |  |
| You can not do a boat tour. |  | He is going to take some photos. |
|  |  |  |
| You can meet people. | Usually on holiday I relax at the hotel. l’hôtel / je / en / relaxe / vacances / d’habitude / me / à | We are going to meet people. |
|  |  |  |
| You can tan on the beach. |  | They are going (f) to visit tourist sites. |




## Geography

| Week 1: features of urban areas | Week 2: reasons for urban growth | Week 3: challenges of urban change |
| :---: | :---: | :---: |
| Urban is <br> Rural is | Why does natural increase happen? | A social challenge is a challenge that impacts... |
| The difference is $\quad$ live |  |  |
| What are some common features of cities? | Give an example of a pull factor | An environmental challenge is a challenge that impacts.... |
| Week 4: opportunities of urban change | Week 5: regeneration in Barnsley | Week 6: gentrification in Sheffield |
| An example of a social opportunity is | Regeneration is | What is gentrification? |
| An example of an economic opportunity is | An example in Barnsley was | What is displacement? |
| An example of an environmental opportunity is | work experience places were provided. | What do we mean by working class? |
|  | A leisure space was built with a $\qquad$ screen cinema |  |

## Music

1. What clef tells you to play with your right hand?
2. What clef tells you to play with your left hand?
3. What does a bar do?
4. How do you play a sharp?
5. How do you play a flat?
6. How do you play a natural?
7. Draw a semibreve, how many beats does it last for?
8. Draw a minim, how many beats does it last for?
9. Draw a crotchet, how many beats does it last for?
10. Draw a quaver, how many beats does it last for?
11. Draw a semiquaver, how many beats does it last for?
12. Order the dynamic markings from quietest to loudest.
13. What is structure?
14. What is pitch?
15. What is tempo?
16. What is texture?
17. What is rhythm?
18. What is harmony?

## Music

## Music Theory

Week 4: instruments of the orchestra - strings

1. Which instrument is the highest pitched of the string family?
2. Which instrument is the lowest pitched of the string family?

Week 5: instruments of the orchestra - brass

1. Which brass instrument has an extendable slide used to play notes?
2. Which brass instrument has a coiled tube?
3. Which instrument is described as having a bright, penetrating tone?

Week 6: instruments of the orchestra - wind

1. Which is the smallest of the wind family?
2. Which is the bass instrument of the wind family?
3. Which wind instrument has a double reed?
$\square$

Design and Technology

| Week 1: designing | Week 2: measuring and marking out | Week 3: CAD and CAM |
| :--- | :--- | :--- |
| What are the 3 key elements of good initial design <br> ideas? | Why is a steel rule better for marking out materials <br> than an ordinary plastic ruler? | Why might it be better to design products using CAD, <br> rather than with a pencil and paper? |


| Art | Art and Design Key Concepts | Year 8 |
| :--- | :--- | :--- |
| Week 1: sculpture | week 2: 3D art | week 3: relief sculpture |
| Describe sculpture | Describe 3D art | Describe relief sculpture |
|  |  |  |
| Week 4: Barbara Gilhooly |  |  |
| Describe Barbara Gilhooly | Week 5: craft |  |

