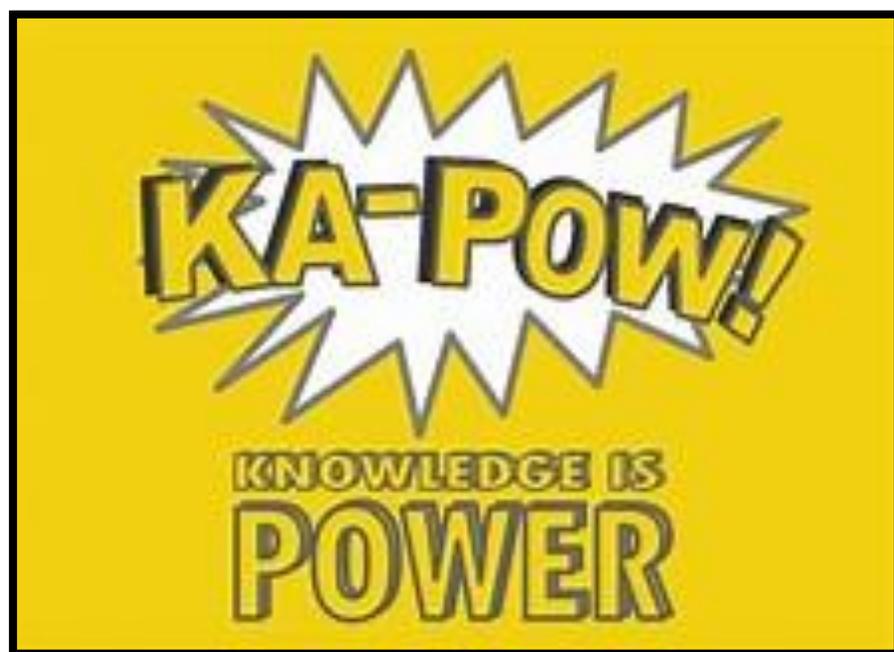




Year 8
Knowledge Organiser
Booklet
Half Term 3



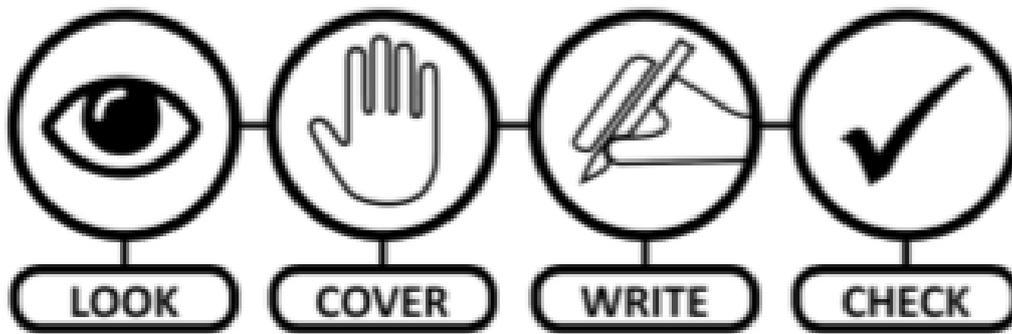
Name

Self-Quizzing Book

Knowledge organisers contain **critical** knowledge you must know. They will help you **remember more** and learn complex information and concepts. Using knowledge organisers will make you more successful in your subjects.

You need to bring your knowledge organiser booklet and self-quizzing book with you **every day**.

For homework you will be asked to self-quiz using your knowledge organisers. You will do this in this book using look, cover, write, check.



Look: Spend a small amount of time reading a section of the knowledge organiser and trying to memorise the content.

Cover: Cover up that section of your knowledge organiser.

Write: In your self-quizzing book, write out the information you have tried to memorise from the knowledge organiser.

Check: Uncover the section of your knowledge organiser and check every word, including spellings. Make any corrections using a **green pen**. If it is all correct, tick what has been written.

Repeat this process until **one whole page** of your self-quizzing book is full, with **no whole lines left empty**.

Respect

Resilience

Responsibility

Expectations

You should be proud of the work you produce and how hard you have worked.

There should be no wasted space on each page.

No whole lines should be left empty.

Corrections should be made in a **green pen**.

Example

The image shows three attempts at writing a paragraph about William's problems after the Battle of Hastings. Each attempt is written on lined paper. The first attempt has several corrections in green ink and checkmarks on each line. The second attempt is a solid black line. The third attempt is also a solid black line. Callout boxes point to various features of the handwriting and corrections.

Subject, underlined

Date in full, underlined

Corrections made in green pen.

Each line checked and ticked if correct.

Solid black line after each attempt

No whole lines left empty except between repeats.

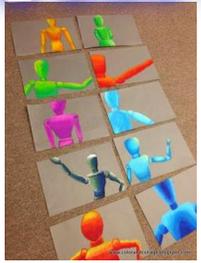
Repeat until the whole page is full

Respect

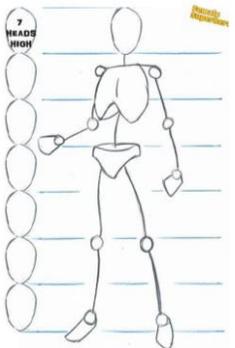
Resilience

Responsibility

HUMAN FIGURE



When the human figure is drawn to the right size, it is in proportion. During our project we will focus on drawing the frame the right size and applying muscles to the skeleton.



We will record (draw) in different materials and different poses. When we look at superheroes we will also discuss body image, identity and stereotypes.



BANKSY



Banksy is a street artist who uses stencils to spray his images on walls and in public spaces. Often his work is political or has a moral message where he challenges ideas and assumptions in society.

Here, Banksy responds to the pandemic by championing nurses and elevating them to the status of superheroes.



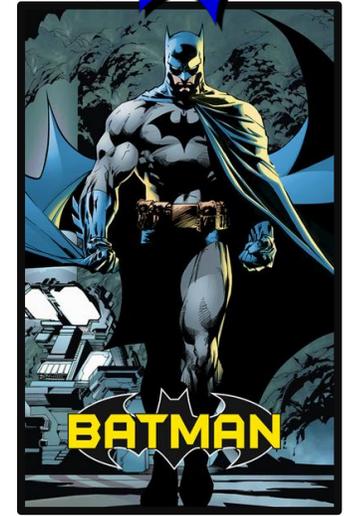
SUPERHEROES



We love comic books and superheroes and it's hard to explain why, however we could say that it's one of our first contacts with art, even though they are commercial.

A superhero or superheroine is a character that possesses superpowers, abilities beyond those of ordinary people, and fits the role of the hero. Popular superheroes include Batman, Spiderman, Superman, Wonder Woman, Black Widow and Supergirl (DC and Marvel).

Typical drawing styles include black outlines and block colouring. There are strong contrasts and dynamic poses. Often they use lines to show movement and impact. The use of composition, angles and exciting storytelling add to the style of drawing.



PICASSO

Cubism was a revolutionary new approach to representing reality invented in around 1907–08 by artists **Pablo Picasso** and **Georges Braque**. They brought different views of subjects (usually objects or figures) together in the same picture, resulting in paintings that appear fragmented and abstracted.



Jean Metzinger



MIKE ESPARZA

Now imagine if a famous artist like Pablo Picasso were alive and decided to paint about superheroes? That is what Mike Esparza decided to play with, he created a superhero series with the Picasso's Cubist style.



Eric Dufresne



Key Material Properties and Definitions

Strength- is the ability of a material to withstand a force without breaking or bending

Toughness- is the ability of a material to withstand blows or sudden shocks without breaking

Tensile strength- the resistance of a material to breaking under tension.

Brittle- hard but liable to break easily.

Ductile- is the ability of a material to deform, usually by stretching along its length.

Conductivity- is the ability of a material to conduct heat or electrical energy

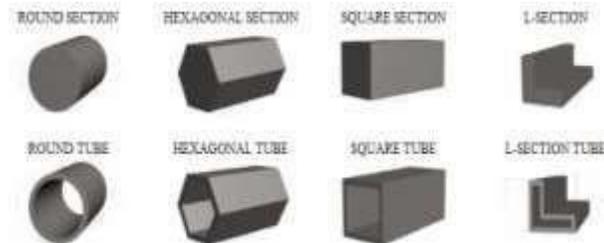
Malleable- is the ability of a material to permanently deform in all directions without cracking

Corrosion- Corrosion is the deterioration of a metal as a result of chemical reactions between it and the surrounding environment.

Hardness- is the ability of a material to resist wear, scratching and indentation

Metal Stock Forms:

If you use metals as part of a practical project a knowledge of the shape or 'section' of lengths of metals is important. The diagrams below show examples of solid lengths and also tubes. When you order metals you need to describe the section you want.



Types of Metal and Properties:

Metal is made from metal ores, which must be mined and processed to transform them into usable materials. It is rare for metals to be used in pure form. Normally they are mixed with other metals to improve their properties: the mixture is called an **alloy**. Most metals are good conductors. There are two main types of metal alloys: **ferrous and non-ferrous**.

Non- Ferrous Metals

- **Non-Ferrous Metals** do not contain Iron, are not magnetic and are usually more resistant to corrosion than ferrous metals.
- **Aluminium-** Ductile, soft, malleable, machines well. Very light. Window frames, aircraft, kitchen ware.
- **Copper-** Ductile, can be beaten into shape. Conducts electricity and heat. Electrical wiring, tubing, kettles, bowls, pipes.
- **Brass-** Hard. Casts and machines well. Surface tarnishes. Conducts electricity. Parts for electrical fittings, ornaments.
- **Silver-** Ductile, Malleable, solders, resists corrosion. Jewellery, solder, ornaments.
- **Lead-** Soft, heavy, ductile, loses its shape under pressure. Solders, pipes, batteries, roofing.

Alloys

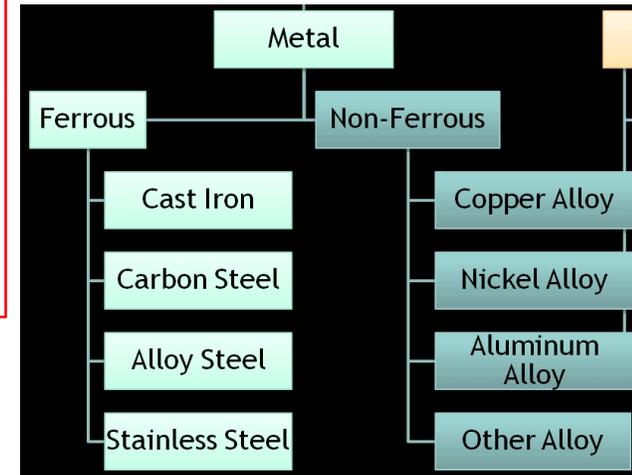
Alloys are sometimes described as a mixture of two or more metals. However, this is misleading, as often alloys are composed of just one metal, as well as other non-metal elements. Cast iron is an example, as it is a combination of iron (metal) and carbon (non-metal).



Ferrous Metals

Ferrous Metals mostly contain Iron. They have small amounts of other metals or elements added, to give the required properties. Ferrous Metals are magnetic and give little resistance to corrosion.

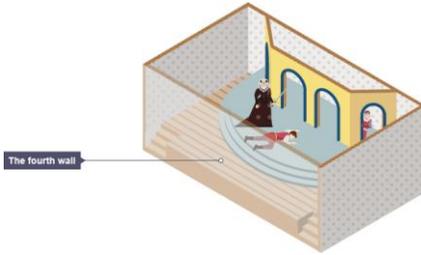
- **Mild steel-** Tough. High tensile strength. Can be case hardened. Rusts very easily. Most common metal used in school workshops. Used in general metal products and engineering.
- **Carbon steel-** Tough. Can be hardened and tempered. Cutting tools such as drills.
- **Stainless steel-** Tough, resistant to rust and stains. Cutlery, medical instruments.
- **Cast iron-** Strong but brittle. Compressive strength very high. Castings, manhole covers, engines.
- **Wrought iron-** us, tough, ductile, resistant to rusting. Ornamental gates and railings. Not in much use today.



Drama

Soap Operas

Half Term 2



The Fourth Wall

The fourth Wall is the imaginary line between the actors and the audience. Breaking the fourth wall would mean the actors talking directly to the audience.

Soap Operas

Characters

Stereotypical characters are used such as the rebellious teenager, the grumpy old people, the lads, the villain and the working class family.

Locations

The Local Pub – owned by a nosey landlord. Great for local parties and weddings. Usually a hot spot for arguments and fights too.

The Local Café – Perfect for a brew after a big night out. A good place to catch up on the latest gossip.

The family home – Up to four generations that live there. Lots of secrets floating around. People are often kicked out or moving back in.

The local garage (or other business) – Dodgy business deals happen here. It is the perfect place for hiding things you don't want anyone else to find.

Cliff Hangers

Each soap episode would end in a cliff hanger. A cliff hanger is a dramatic end to the episode, often leaving the audience with an unanswered question or an unfinished dilemma/disaster. This will make the audience want to watch the next episode so they can find out what will happen next.

Konstantin Stanislavski

- A Russian actor, director and theatre practitioner. Born in 1863 and died age 75.
- His ideas are still today very influential. He believed in naturalistic performances that were as realistic as possible.
- He developed a theory called 'The System' which is still used by many actors all around the world today. The term refers to the methods used to create a good performance in his actors.
- Emotion memory – this is when an actor finds a real past experience where they felt a similar emotion to the one their character is feeling. They then borrow those feelings to bring the character to life.
- Magic if – The actor puts themselves into the character's situation. What if I was in this situation. What would I do?
- Quotation "There are no small parts, only small actors"

Hot seating

A character is questioned by the group about their background, behaviour or motivation. This method may be used for developing a role in drama lessons or rehearsals. It is an excellent way of showing a clear understanding of the character you are playing. Characters can be hot seated individually, in pairs or in small groups. One person is in the hot seat while the group ask questions in a semi-circle.

Soap Opera Facts

- A Soap Opera is a series of television or radio programmes about the lives and problems of a particular group of characters.
- The series continues over a long period of time and is usually broadcast several times a week.
- A single story can be told for weeks, months or sometimes even years. There are usually multiple storylines.
- It is called a 'Soap' because soap manufacturers used to sponsor the radio dramas in the 1930's.
- A key aim is to make the drama happening on screen as realistic, natural and relatable as possible. However, the storylines are often dramatic to entertain.
- Examples include EastEnders, Emmerdale, Hollyoaks, Holby City, Coronation Street, Home and Away and Neighbours.
- Coronation street is the longest running Soap Opera in the world. It started in 1960 so it has been running for 61 years.

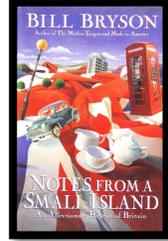


Year 8 – Knowledge Organiser – Travel Writing



Definitions

Headline	Title of an article that outlines topic of the article.
Subheading	A secondary title that provides further information.
Caption	A short explanation of what a picture or photograph is depicting.
First person	Using pronouns such as me, we, our, us, I to show a first hand experience.
Anecdote	Short story that is used as an illustrative example.
Morality	The extent to which an action is right or wrong.
Environment	The surroundings or conditions in which we live and operate.
Tourism	The organisation and operation of holidays and visits to places of interest.
Culture	Pattern or behaviour shared by a society or group or people.
Ceremonies	An act or series of acts performed according to fixed rules as part of a social or religious event.
Tradition	The handing down of a culture's beliefs or customs through generations.



- Covers out-of-the-ordinary subject matter.
- Uses humour to engage the reader.
- Uses the first person.
- Has a sense of the writer's personality.
- Uses personal experiences and anecdotes.
- Uses descriptive techniques throughout (noun phrases, metaphors, similes) to create a picture in the reader's mind.
- Can be informal in tone.
- Includes facts about the place being described.
- Uses lists of three adjectives (describing words) for impact.
- Has a bright and lively tone.

Key Terms

Annotation	Brief, concise notes on a text to show understanding	Noun	Identifies a person, place or a thing.
Pronoun	A word that is used instead of a noun or a noun phrase:	Noun phrase	Expanded noun phrases for description and specification [for example, the blue butterfly, plain flour, the man in the moon]
Adjective	Used before a noun, to make the noun's meaning more specific	Tense	The form of a verb that shows the time it happened.
Metaphor	Describe something as if it was something else.	Sentence Punctuation	Use of capital letters, full stops, question marks and exclamation marks to demarcate sentences.
Simile	a figure of speech involving the comparison of one thing with another thing of a different kind, often using 'like' or 'as'	Personification	A figure of speech in which an object or animal is given human qualities.
Verb	Describes an action	Adverb	Describes a verb
Clause	A clause is a group of words that contain a subject and a verb.	Simple sentence	Has subject and only one verb:
Main clause	An independent clause that makes sense on its own.	Subordinating connective	A word that links a main clause with a subordinating clause.

Spanish Knowledge Organiser

Year 8 - Spring 1

Week 1&2

- **Me gusta** la leche **pero prefiero** el agua - **I like** milk but I prefer water.
- **No me gusta** el queso ¡Qué asco! - **I don't like** cheese, how disgusting!
- **No** desayuno **nada pero** como un bocadillo - **I don't** have **anything** for breakfast **but** I eat a sandwich for lunch.
- **Nunca** como carne, **prefiero** cenar las verduras y el pescado - **I never** eat meat, **I prefer** to eat vegetables and fish for dinner.

Week 3&4

- **Ayer desayuné** un yogur con un zumo de naranja - **Yesterday for breakfast I ate** a yoghurt with an orange juice.
- **Me gusta** el pescado, es mi plato favorito, **pero** como de todo - **I like** fish, it's my favourite dish, **but** I eat everything.
- **Anoche cené** a las ocho con mi familia, **cenamos** pizza - **Last night I ate dinner** at 8 with my family, **we ate** pizza for dinner.
- **Ayer fui** a un restaurante donde **celebramos** el cumpleaños de mi padre - **Yesterday I went** to a restaurant where **we celebrated** my dad's birthday.

Week 5&6

- **Vamos a bailar** y **va a ser** guay - **We are going to dance** and **it is going to be** cool.
- **Este fin de semana voy a hacer** una fiesta, **vamos a comer** fajitas - **this weekend I am going to have** a party, **we are going to eat** fajitas.
- Durante la fiesta **bailé** mucho, **fue** fenomenal, **me encantó** - During the party **I danced** a lot, **it was** great, **I loved it**.
- **Fui** a una fiesta de fútbol con mis amigos, **comimos** pizza y **bebimos** coca-cola, fue divertido. - **I went** to a football party with my friends, **we ate** pizza and **we drank** coke, **it was** fun.

French Knowledge Organiser

Year 8 - Spring 1

Week 1&2

- **J'aime beaucoup** les jeux télévisés comme The Chase **parce qu'ils** sont divertissants. - **I really like** gameshows like The Chase **because** they are entertaining.
- Emma Watson est **vraiment** mon actrice préférée **parce qu'elle** est **assez** talentueuse et modeste. - Emma Watson is truly my favourite actress because she is quite talented and modest.
- **D'habitude j'aime** écouter en streaming **parce que** c'est gratuit - **Usually I like** to listen on streaming **because** it is free.
- **De temps en temps j'aime** jouer contre mes copains - **From time to time I like** to play against my friends.

Week 3&4

- **J'adore** les comedies **parce qu'ils** sont marrants - **I love** comedies **because** they are funny.
- **Je vais aller** au cinema **ce soir, je vais voir** un film de super-héros - **I am going to go** to the cinema **this evening, I am going to watch** a super hero film.
- **Après les cours** je fais mes devoirs, **mais le samedi** je **ne** fais **rien** - **After lessons** I do my homework, **but** on **Saturdays I don't do anything**.
- Je **ne** regarde **jamais** les films d'action, je **préfère** les films romantiques - I **never** watch action films, I **prefer** romantic films.

Week 5&6

- **Je suis allé** au centre comercial **mais je n'ai rien** acheté - **I went** to the shopping centre **but I didn't** buy **anything**.
- **J'ai vu** un film d'horreur **mais c'était** ridicule - **I saw** a horror film **but it was** ridiculous.
- **Souvent** je joue au foot **cependant hier je n'ai pas joué** au foot, **j'ai fait** mes devoirs. - **often** play football **however yesterday I didn't** play football, **I did** my homework.
- **Tous les week-ends** je fais du shopping avec ma mère **mais demain je ne vais pas aller** aux magasins, **je vais visiter** mes grand-parents - **Every weekend** I do the shopping with my Mum, **but tomorrow I am not going to go** to the shops, **I am going to visit** my grandparents.

Watch the video to learn more
<https://www.bbc.com/bitesize/clips/zxqjg82>

Year 8 Food Knowledge Organiser: Principals of Nutrition



Source: Public Health England in association with the Welsh government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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The 5 main groups

The Eatwell Guide divides the foods and drinks we consume into 5 main groups:

1. **fruit and vegetables**
2. **potatoes, bread, rice, pasta and other starchy carbohydrates**
3. **beans, pulses, fish, eggs, meat and other proteins**
4. **dairy and alternatives**
5. **oils and spreads**

You should try to choose a variety of foods from each group to help you get the nutrients you need to stay healthy.

Using the Eatwell Guide

You can use this guide to help you make healthier choices when:

- planning what to eat
- cooking or preparing a meal at home
- food shopping
- eating out or on the go

Most of the meals we eat are a combination of food groups. When planning meals, work out the main ingredients and think about how these fit within the 5 main food groups.

Fat

Function:
Energy
Warmth
Protection of organs

Sources
Saturated Fat
 (Bad Fats)
 Meat
 Processed Foods
 Lard
 Saturated Fats - solid at room temperature and are from animal sources. Unsaturated fats are liquid at room temperature and are vegetable sources..

Unsaturated Fat
 (Good Fats)
 Avocado
 Nuts
 Olive oil

Too much	Too little
<ul style="list-style-type: none"> • Obesity • Type 2 diabetes • Heart Disease 	<ul style="list-style-type: none"> • Fat soluble vitamin deficiencies

Macronutrients

Needed in large amounts to help the body to function properly

Protein

Function:
Growth and Repair
Energy

Sources:
Plant
 Nuts
 Quorn
 Beans
 Lentils

Animal
 Eggs
 Fish
 Meat

Too much	Too little
<ul style="list-style-type: none"> • Turns to fat if not turned into energy 	<ul style="list-style-type: none"> • Anaemia • Slow growth in children

Carbohydrates

Function:
Energy

Starches:
 Bread
 Pasta
 Rice
 drinks
 Wheat
 Potatoes
 Cereals

Sugars:
 Cakes
 Sweets
 Fizzy

We should consume no more than 30g of sugar per day

Too much	Too Much
<ul style="list-style-type: none"> • Obesity • Type 2 diabetes • Heart Disease 	<ul style="list-style-type: none"> • Tooth decay • Type two diabetes • Obesity

Micronutrients

Needed in small amounts to help the body to function properly

Watch the video to learn more
<https://www.youtube.com/watch?v=ISZLTJH5IYg>

Vitamin	Sources	Functions	Deficiency diseases
Vitamin A (fat soluble)	Fish, eggs, oranges	Helps with Eye sight and skin. It is also an antioxidant which protect the cells from harmful substance.	Night Blindness
Vitamin D (fat soluble)	Eggs, the sun	Helps our bones to grow. Aids the absorption of Calcium and prevents RICKETS	Rickets in children Osteoporosis in women
Vitamin C (Water soluble)	Oranges, tomatoes, vegetables	Helps to heal cuts, helps the immune system which prevents scurvy . Aids the absorption of Iron and prevents ANAEMIA	Scurvy and Anaemia
B Vitamins (Water soluble)	Cereals, meat, fish	Creates enzymes that break down food allowing absorption of Carbohydrate, Fats and Protein into our blood.	Beri Beri – lack of B1 - Thiamin Pellagra - lack of B3 - Niacin

Year 8 Food Knowledge Organiser: Function of ingredients

Gelatinisation

Definition

A sauce is a thickened, flavoured liquid which can be added to a range of savoury and sweet dishes.

There are several types of sauces based on different ways of thickening mixtures.

The main functions of sauces are:

- To add liquid to moisten a food or dish.
- To add flavour.
- **To add colour.**
- **To bind ingredients together.**
- To add nutrients.

To make dishes more interesting and appealing.

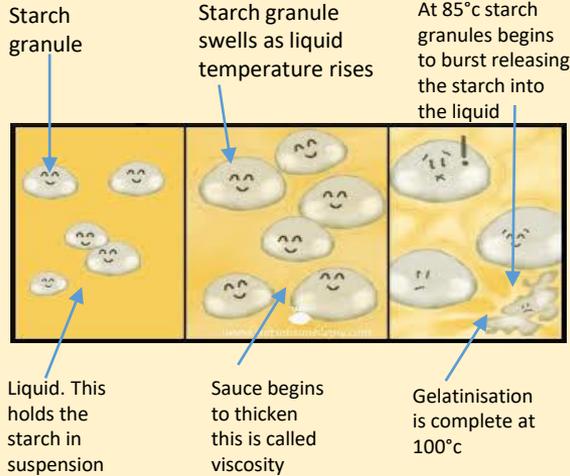
A wide variety of different sauces can be used to produce dishes using a vast range of skills, to develop differing flavours and textures. These can include a **coating, accompaniment** or **part of a meal**.

Starch grains are mixed into a liquid. The starch grains do not dissolve they are suspended in the liquid. This is called a **suspension**. When the starch grains are put in a liquid and then heated, the starch grains will start to absorb the liquid. They will swell and get bigger this will start at **60C**. This makes the sauce start to thicken, because there is less room for the swollen grains to move around. Stirring helps to keep the starch grains suspended

Watch Video on Gelatinisation :

<https://www.youtube.com/watch?v=zjyhMzjDaVI>

If the liquid is not stirred, the starch grains will join together and form lumps.
At **85C** the starch grains are so swollen that they start to burst and release starch molecules into the surrounding liquid. At boiling point **100C** the sauce completely thickens.
The whole process is known as **gelatinisation**.



Factors that affect gelatinisation

1. Type of Starch (Wheat Flour/Cornflour)
2. Quantity of starch
3. Amount of liquid
4. Temperature
5. Stirring

Cakes

Cake making methods

- **Rubbing in – Scones**
- **Creaming – Traditional and all in one – Muffins**
- **Melting – Ginger Bread**
- **Whisking – Swiss roll.**

The main ingredients in cake making are fat, sugar, flour and eggs. All methods use a raising agent and often a liquid such as milk.

Function of ingredients:

Ingredient	Function
Flour	<ol style="list-style-type: none"> 1. Forms structure of the cake. 2. As the cake is heated, protein (gluten) in the flour sets the framework and shape. 3. DEXTRINISATION occurs, starch converts into sugar when exposed to dry heat. This sugar then CARAMELISES on the surface.
Sugar	<ol style="list-style-type: none"> 1. Sweetens and adds flavour. 2. When creamed with fat, helps to hold air in the mixture. 3. CARAMELISATION gives colour.
Fat	<ol style="list-style-type: none"> 1. Adds colour and flavour 2. Holds air bubbles (foam) which creates texture and volume. 3. Produces a short crumb or rich even texture dependent on the ratio of fat and method used. 4. Increases shelf life.
Eggs	<ol style="list-style-type: none"> 1. Traps air when whisked into a foam. 2. Coagulates (set) on heating. 3. Emulsify – holds the fat in emulsion and keeps it stable 4. Add colour, flavour and nutritional value.
Raising agents	<ol style="list-style-type: none"> 1. Aerates the mixture increasing volume and resulting in a light texture.

Bread

Ingredient	Role
Strong Flour	Strong flour is high in GLUTEN (protein) that makes the dough stretchy and elastic.
Liquid	Hydrates the Yeast allowing the it to produce Carbon Dioxide (CO ₂). Bind dry ingredients.
Yeast	Biological raising agent produces Carbon Dioxide. Yeast requires 4 Factors for Growth; Food, Time, Temperature, Moisture.
Salt	Adds Flavour.

The Design Process

Brief



A brief is a set of **instructions** given to a designer by a company (**client**) about a job or task they wish to be completed.

A **company** (client) will ask a **graphic designer** to create a **product**. A product means an item that can be sold to people (**consumers**).

A brief will set out clearly what it is that should be made (**constructed**) and what requirements (**specifics**) will need to be included in the **design process**.

Isometric



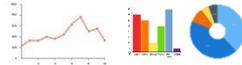
When the concept drawing is finished, the design will be turned into an isometric drawing where the size (**dimensions**) of the parts are finalised. Specific measurements (**metric – CM, MM**) are used so that it can be copied many times (**mass produced**).

The design will be computerised (**digitally formatted**) so that it can be **saved, shared** and **inputted** into the machines that produce it.

Market Research



Companies will employ people to conduct **surveys**. A survey is a set of **questions** that are asked to many people. Often companies would decide which people they will ask (**target audience**). They wish know peoples **preferences** and **spending habits**.



The answers are important to the **design process** and can influence the way the product is **designed**. To make it easy to see large amounts of **data**, companies use **graphs**.

Testing Models



When isometric drawings are complete, it will go through a process of being made **3D**. A number of **machines** will be used to create practice models (**prototypes**) to see how the product works. It must be easy for a human to use (**ergonomics**). **3D printers** are often used.

If the product is made out of different **materials** such as glass, metal or wood, these would require different methods of construction (**manufacturing**).

Design Process



Designers will explore lots of ideas before selecting the right one. Often this involves creating **mind maps**, **sketches** and **mood boards**.

A mind map starts with a single word and then **explores ideas** around it, these are sorted into **categories**.

When drawing sketches, designers will work out how it works (**functions**). Ideas at this stage can be really **creative** and **imaginative**.

A mood board is a collections of pictures, drawings, text (**typography**) and **materials** to do with the **theme**.

Packaging



When a final product has been made and passed safety standards, it will be labelled and have its own (**custom**) **packaging**.

Packing must –

- Be eye catching (**visually pleasing**) to attract customers to buy it.
- Protect the item inside it to **avoid damage** or **contamination**.
- Provide **accurate information** about the product inside.
- Stack easily for **transportation** from factory to shops.

Concept Art



Artists/**illustrators** will draw a number of different sketches of the product from different angles.

When designing, **colour** and **style** is important. It is important to think about how it looks (**aesthetics**). Designs will consider the mood board and specifics.

Drawings can be in **traditional** materials (pen, pencil, paint) or using **CAD** (Computer Aided Design) and electric drawing pads (**graphics tablets**).

Advertising



For companies to make money (**financial income**), they must tell as many people as possible about their product.

This often happens through **social media**, **adverts**, **radio stations**, **magazines** and **displays** in shops.

Its important that the product is well received by its target audience so that people buy it and share reviews of it. Companies make a **profit** when they sell items for more than the price of making it. .

Geography

Year 8: China

- Physical Features
- One Child Policy
- Population Pyramids
- Economy
- Rural to Urban migration

Population Pyramids

These tell us the gender and age structure of Chinas population. As we move further in time Chinas 'pyramid' becomes top heavy as the population gets older and fewer babies are born.

Rural to Urban Migration

More people are moving from rural to urban areas. This causes urbanisation (the increase in proportion of people living in urban areas)

Urbanisation occurred because of industrialisation (more factories), which creates jobs for people. A growing population in urban areas has meant better infrastructure including efficient public transport.

Physical Features of China

In the north of China, you will find the Gobi Desert. The Himalayan Mountain Range is towards the south west, bordering India. The east and south of China is mainly low lying grassland

One Child Policy

China experienced rapid population growth, to try and improve their economy. However, this put too much pressure on the country, particularly with the amount of food. This resulted in a famine, where many people died or migrated. To stop this population growth, they introduced the One Child Policy

Features of the policy

- Families could only have 1 child
- It was OK if you had twins

Implementing the policy

- Families would be fined if they had more children
- Parents might loose their jobs

Consequences of the policy

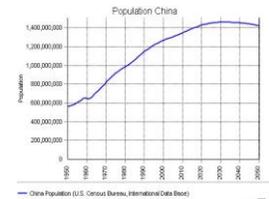
- There is an ageing population
- Gender imbalance. Families wanted sons not daughters
- Workforce has lowered by 3 million

Changes to the policy

- Families in rural areas were allowed to have more than 1 child
- If your first child was a daughter, you could have another child

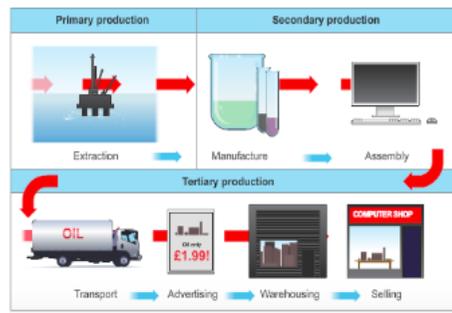
Effectiveness of the policy

Chinas population slowed but has created more problems. As a result of this the policy was not very effective and as of 2015 the policy ended



Chinas Economy

In 1981 88% of people in China lived in poverty. Today it is less than 7%. 500 million people have been lifted out of extreme poverty. Today China is the second wealthiest country in the world after the USA. More of Chinas population now work in the secondary sector. People can earn more money working in industries.



Rural to Urban Migration: Challenges

- More factories mean that there is more air pollution
- Urban sprawl occurs (growth of the cities into rural areas)
- Farmland is lost
- Farmers are forced off their land
- Income gap created between villages and cities
- Urban residents earn 3 times more than rural residents

Sustainable cities

Sustainable cities are cities designed to have minimum impact on the environment as possible. Tianjin in China is an example of a sustainable city

What makes a city sustainable?

- Public transport
- Walking and cycling is safe
- Areas of open space are safe, accessible and enjoyable
- Lots of renewable resources
- Waste is recycled wherever possible.
- New homes are energy efficient
- Green spaces are created and people are encouraged to grow their own food

Year 8 History Knowledge Organiser Half-term 4: World War I

Causes of World War I

Use the acronym **MAIN** to remember the causes:

Militarism- building up armed forces/getting ready for war

Alliances- agreements to defend and help another country

Imperialism- trying to build up an Empire.

Nationalism- having pride in your country and being willing to defend it or protect it.

- Militarism- In the decades leading up to World War I, many European countries began to place more focus on their military might.
- The growth of these armies did not happen in secrecy. Each nation was aware of the growing military power of their neighbours and so grew their armies in turn.
- For example there was a naval race between Britain and Germany to build the most ships.
- Germany started building an empire- but did so after other countries had done so. This threatened British and French power.
- European countries began to train more men for war.
- Countries sought protection by formal alliances. This included the **Triple Alliance** of Germany, Austria-Hungary and Italy and the **Triple Entente** of Britain, France and Russia.
- Nationalism led countries become more warlike.
- The Turkish Empire was in decline. Countries in the Balkans wanted independence.
- People at the time genuinely thought it was OK to go to war to get more power or land.

All it needed as a spark to set thing off...

The assassination of Archduke Franz Ferdinand

- 1908 Bosnia had been taken over by Austria-Hungary.
- Some people in Bosnia wanted it to be part of neighbouring Serbia.
- 28 June 1914, Franz Ferdinand Archduke heir to the Austro-Hungarian Empire visited Sarajevo, Bosnia's capital.
- He was assassinated by the 'Black Hand Gang'.
- Serbia was blamed for the attack. Russia had an agreement with Serbia. Austria-Hungary declared war backed up by Germany.

Stalemate

Both sides thought war would be over quickly and that soldiers would be home for Christmas. Instead, the war became a stalemate. There were several reasons for this:

1. **The Schlieffen Plan** (the German war plan) failed. The Germans planned to attack France through neutral Belgium and defeat her quickly before fighting Russia. BUT Britain had an agreement with Belgium and held up the Germans who then did not reach France before Russia was ready to fight. Germany then had to send soldiers to fight against Russia too.
2. **Machine Guns**- a new weapon that could shoot hundreds of rounds a minute and wipe out waves of men. This meant neither side could advance.
3. **Canned food**- again a new thing and it meant soldiers could stay supplied without the worry of supply lines being cut off.
4. **Telephones**- meant generals could command soldiers without being on the battlefield BUT meant were not there to take advantage of strategic opportunities.
5. **Artillery**- big guns that fired from a long way behind the front line BUT left huge craters making it even more difficult to attack.
6. **Trenches**- provided shelter and a place to hide. BUT both sides became stuck. 'No-mans land' between both sets of trenches that was almost impossible to cross and survive.

Recruitment

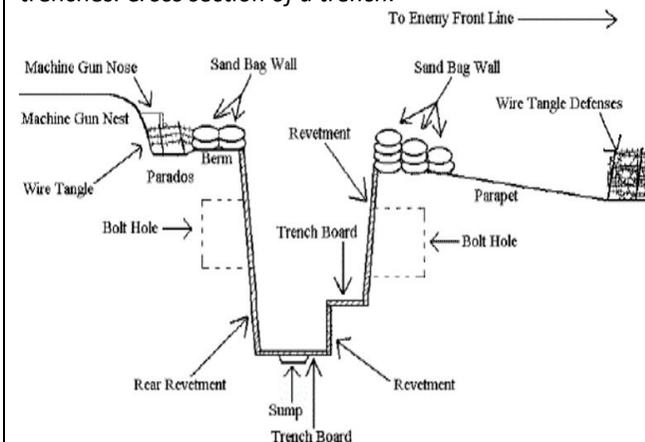
At first the British army was made up of regular soldiers and volunteers. When this wasn't enough conscription was introduced in 1916. (This made it was compulsory for men of a certain age- initially 18-41- to join up).

Censorship

Censorship is when written material is read and checked by another person. Sensitive or secret parts are deleted. In World War I censorship was heavy. The government did not allow anyone to talk about or support ideas that could undermine the war effort or could give information to spies. Censorship kept morale up because only good news was reported.

Trench warfare

When the war became a stalemate both sides dug trenches. *Cross section of a trench:*



Soldiers lived and slept in dug-out sections of trenches. Many soldiers got **trench foot** (a bad foot infection) from having wet feet. **Fleas** were common on and soldiers had to be deloused. **Rats** lived in the trenches. Soldiers lived in fear of death, some got **shell-shock** and others suffered the effects of **gas attacks**.

The Battle of the Somme- 1916

On the first day of the battle the British suffered 60,000 casualties. With 20,000 dead. The worst day in its entire history. General Haig- who led the British army at the Somme is often blamed for the high casualty rate and using out of date tactics. BUT this is only part of the story. The battle stopped the Germans sending troops to fight and crush the French as Verdun. In the end it was Germany who were worn down.

Weapons:

Gas, machine guns, aircraft and tanks were among new weapons used for the first time in warfare. The war was unlike any that military commanders had fought in before.

The end of the war- a ceasefire (**armistice**) was signed at 11am on 11th November 1918.

KS3 Knowledge Organiser

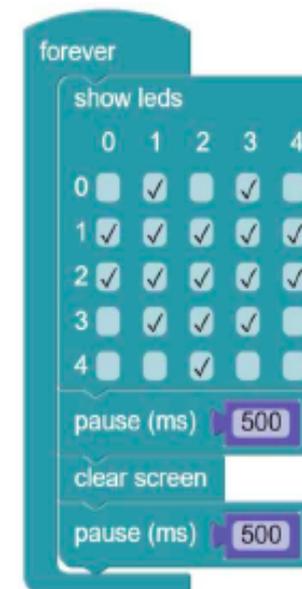
Microbits

Micro:bit sections		
Category	Description	Common blocks
Basic (blue/green)	Commonly used blocks that are used in most programs in some form.	<ul style="list-style-type: none"> Show string Show leds Forever Pause (ms)
Input (purple)	Blocks that allow users to input data into a program, normally through button presses or shaking the device.	<ul style="list-style-type: none"> On button pressed On shake
Loops (green)	Allows sections of code to be repeated (however we will do this through the basic forever block).	none
Logic (blue)	Used to make decisions within a program. Operators are used to decide whether a condition is true or not (eg. is temperature greater than 20 degrees?).	<ul style="list-style-type: none"> If...do... < > =
Variables (pink)	Allows you to have data items in a program which can be changed.	<ul style="list-style-type: none"> item set item to... change item by...
Maths (dark blue)	Allows you to perform calculations in a program, using common mathematical operators.	<ul style="list-style-type: none"> + - x ÷
LED (red/brown)	Used to change the brightness of the LEDs on the micro:bit.	<ul style="list-style-type: none"> Set brightness
Music (gold/green)	Used to play and control music.	None
Game (Turquoise)	Used to control factors of games, such as position, score, etc.	None
Images (gold)	Used to create images that can be changed and altered.	None
Pins (crimson)	Used to control physical pins which connect to other devices.	None
Devices (aqua/green)	Used to connect to devices such as cameras and radios.	None

Comparative Operators	
=	Equal to
≠	Not equal to
>	Greater than
<	Less than
≥	Greater than or equal to
≤	Less than or equal to

Example program

This program makes a flashing heart appear forever!



The forever block will make all of this code loop continuously.

Show leds will turn on the lights of the micro:bit in this pattern.

The pause block will stop the program for 500 milliseconds (ms).

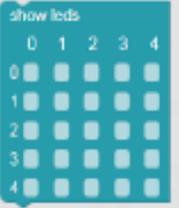
All LEDs will be turned off with the clear screen block, again for 500 ms.

KS3 Knowledge Organiser

Microbits

Key vocab	
Micro:bit	A small computer designed by the BBC for use in computer education in the UK.
Processor	Receives inputs from the computer and produces outputs.
USB	The form of power supply used by the Micro:bit – power is transmitted from the computer via a micro-USB cable.
Buttons	Input devices used within the Micro:bit to control or alter programs whilst running.
LED	Light emitting diodes (LEDs) – used on the Micro:bit as a screen in a 5x5 grid to display information.
Accelerometer	An input device within the Micro:bit to control or alter programs by tilting or moving the device.
Microsoft Block Editor	The visual programming language used to create programs that can be run on the Micro:bit.

Recapping algorithms	
Algorithm	A set of instructions to be followed to complete a given task or solve a problem.
Program	A sequence of instructions used by a computer.
Sequence	The order which the computer will run code in, one line at a time.
Selection	A decision made by a computer, choosing what code should be run only when certain conditions are met.
Condition	Checking to see whether a statement or sum is true or false.
Iteration	When a section of code is repeated several times – also known as looping.
Variable	Something which can be changed in a computer. Made up of a name and some data to be saved.

Key blocks	
	Used to display a string (a combination of letters, numbers or symbols) onto the screen.
	Used to display information onto the screen, controlling the LEDs that are shown based on the tick-boxes that have been selected.
	Used to loop through any code contained within the block.
	Used to run certain code contained within the block when the A button is pressed.
	Used to create a variable which can be altered to control parts of the program.

The Golden Age of Musicals

Film musicals really started in the late 1920s with "The Jazz Singer" (1927). This was so important as it was **THE FIRST FILM WITH SOUND**. The musicals kick started **TAP DANCING** and the songs became favourites with Jazz musicians. 1930 to 1960 is known as **THE GOLDEN AGE OF MUSICALS**

The main maker of these films was MGM (Metro Goldwyn Mayer). MGM was also the first studio to use the cutting-edge filmmaking process Technicolor as way to make the costumes and settings in each musical number pop.

By the end of the 1950s audiences were getting bored, studios were spending too much and only made a guaranteed box-office hit, and so the genre began to die out. There were to be some real bangers. See the list below. You will be playing a range of these in class.



The Wizard of Oz (1939)

After being swept away by a tornado, Dorothy (Judy Garland) awakens in Oz and must find her way back to Kansas. The musical wasn't deemed a classic until its re-release in 1949. With its use of Technicolor when Dorothy awakens from her black-and-white life to the rich colors of Oz, the film mirrors the industry's very real shift away from black-and-white film. Somewhere Over the Rainbow was going to be cut - as they didn't think it was very good!

A Star Is Born (1954)

This 1954 remake of the 1937 David O. Selznick-produced original may be the most popular — despite having lost money at the box office — of the four, with later productions in 1976 starring Barbara Streisand and 2018 with Lady Gaga. A story about an aspiring actor on the path to stardom, A Star Is Born separates itself from other musicals of its time by revealing the darker side of Hollywood, spotlighting how the studio system works and the alcoholism that plagues the industry.



Singin' in the Rain (1952)

In the 1950s, public interest in the decline of Old Hollywood inspired studios to make cinema's biggest classics like All About Eve (1950), The Barefoot Contessa (1954), A Star Is Born (1954), Sunset Boulevard (1950), and Singin' in the Rain. The story of the industry's move from silent to sound boasts lavish and exciting song-and-dance numbers by musical stars like Gene Kelly, Debbie Reynolds, Cyd Charisse, and Donald O'Connor.



MAKE SURE YOU ARE FAMILIAR WITH DATES AND KEY SONGS FROM THESE MUSICALS. IT CAN BE A DIFFERENT VERSION. EG. 7 RINGS BY ARIANA GRANDE!

Show Boat (1936)

Speaking of Jerome Kern, Show Boat was based on his most notable score for the 1927 Broadway production by the same name. Spanning more than four decades, the film centers on a Mississippi riverboat and the lives of the people who perform on it. A remake of the 1929 film from Universal Production (known today as Universal Pictures).

The Sound of Music is a musical with music by Richard Rodgers, lyrics by Oscar Hammerstein II, and a book by Howard Lindsay and Russel Crouse. It is based on the 1949 memoir of Maria von Trapp, The Story of the Trapp Family Singers. Set in Austria on the eve of the Anschluss in 1938, the musical tells the story of Maria, who takes a job as governess to a large family while she decides whether to become a nun. She falls in love with the children, and eventually their widowed father, Captain von Trapp. He is ordered to accept a commission in the German navy, but he opposes the Nazis. He and Maria decide on a plan to flee Austria with the children. Many songs from the musical have become standards, such as "Edelweiss", "My Favorite Things", "Climb Ev'ry Mountain", "Do-Re-Mi", and the title song "The Sound of Music".

The original Broadway production, starring Mary Martin and Theodore Bikel, opened in 1959[1] and won five Tony Awards, including Best Musical, out of nine nominations. The first London production opened at the Palace Theatre in 1961. The show has enjoyed numerous productions and revivals since then. It was adapted as a 1965 film musical starring Julie Andrews and Christopher Plummer, which won five Academy Awards, including Best Picture. The Sound of Music was the last musical written by Rodgers and Hammerstein; Oscar Hammerstein died of stomach cancer nine months after the Broadway premiere.

KS3 PE THEORY

KNOWLEDGE ORGANISER

Components of Fitness

Agility – the ability to change direction at speed whilst maintaining control.

Balance – maintenance of centre of mass over base of support.

Cardiovascular Endurance – the ability of heart and lungs to supply oxygen to working muscles.

Coordination – the ability to use 2 or more body parts smoothly and efficiently together.

Flexibility – the range of movement possible at a joint.

Muscular Endurance – ability of a muscle or group of muscles to undergo repeated contractions avoiding fatigue.

Power – product of strength x speed.

Reaction Time – the time taken to initiate a response to a stimulus.

Speed – the maximum rate at which an individual is able to perform a movement or cover a distance in a period of time.

Strength – the ability to overcome a resistance (4 types: maximal, dynamic, static, explosive).



Agility



Flexibility/Balance/Strength



Reaction Time

Health and Fitness

Health – A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.

Fitness – The ability to meet or cope with the demands of the environment.

Movement Analysis

Flexion and Extension

Decreasing the angle at a joint

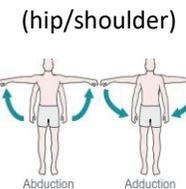
(hip/knee/elbow/shoulder)

Increasing the angle at a joint



Abduction and Adduction

Movement away from the midline of the body



Movement towards the midline of the body

Dorsiflexion and Plantarflexion

Pulling toes up towards the sky

(ankle)

Pointing toes down towards the floor



Rotation

Circular movement around a fixed joint

(hip/shoulder)



Muscle Contractions

Isometric

(no movement)

Muscle remains the same length as it contracts



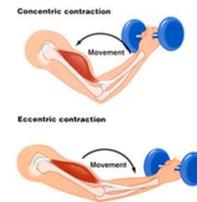
Isotonic

(movement):

When the contraction of a muscle causes it to change length:

Concentric – muscle shortens as it contracts

Eccentric – Muscle lengthens as it contracts



8E Combustion

1. Burning Fuels

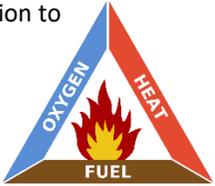
Fuel	A chemical substance from which stored energy can be transferred usefully to make things happen.
Fuel Cell	Used in hydrogen-powered vehicles, releasing energy from hydrogen.
Fuel Cell Word Equation Hydrogen + oxygen → water	
Reactants	The starting substances- on left of word equation.
Products	The new substances made- on right of word equation.
Combustion	Burning, usually in air. The reaction gives out energy which is transferred to the surroundings by heating or light.
Fossil Fuels	Fuels formed from living organisms that died millions of years ago- <i>petrol, diesel</i>
Hydrocarbons	Only contain carbon and hydrogen atoms- <i>petrol, diesel</i>
Combustion of Hydrocarbons	The carbon and hydrogen atoms react with oxygen. The carbon reacts to form carbon dioxide.
Carbon Dioxide	Carbon dioxide will turn limewater cloudy.

2. Oxidation

Oxidation	Reacting with oxygen.
Oxide	Compound formed by oxidation.

Metal Oxides	Formed when metals react with oxygen. <i>metal + oxygen → metal oxide</i>
Conservation of Mass	Mass is never gained or lost in a chemical reaction. The atoms in reactants just rearrange to form the products, no new atoms are made and none disappear.
Heating Zinc in Air	Forms a white powder zinc oxide. The mass will appear to increase because the zinc has combined with the oxygen in air.
Gas Products	If the product is a gas it may escape and make it seem like the mass has decreased.
Phlogiston	A substance scientists used to think explained why things burned that was then proven not to exist.

3. Fire Safety

Exothermic	A reaction that releases energy that we can feel as heat- <i>combustion</i>
Thermometer	Used to measure a change in the temperature.
Fire Triangle	Three factors allow combustion to occur. 
Putting Out a Fire	You must remove at least one of the three factors.
	Explosive Heating may cause an explosion.
	Flammable These substances catch fire easily.

	Oxidising These substances release oxygen.
Fire Extinguishers	Work by cooling a fire or stopping oxygen getting to the fuel.
Oil Fire	Water will sink through the oil and turn to steam making the fire spread out. Use foam or a fire blanket to keep oxygen away.
Electrical Fire	Water conducts electricity so you may get a serious shock. Turn off the electricity and use a powder or carbon dioxide extinguisher.

4. Air Pollution

Complete Combustion	Carbon burns in plenty of air only forming carbon dioxide.
Incomplete Combustion	Not enough oxygen for all the carbon to react with.
Products of Incomplete Combustion	<ul style="list-style-type: none"> carbon dioxide- linked to global warming carbon monoxide- poisonous gas soot- damage lungs and trigger asthma
Impurities	Small amounts of other substances in fuels.
Sulfur Dioxide	Formed when hydrocarbons have a sulfur impurity.
Nitrogen Oxide	Formed by high engine temperatures causing nitrogen and oxygen in air to react.
Pollutants	Something that can harm living things and damage the environment.
Catalytic Converter	Found in cars to react carbon monoxide with more oxygen forming carbon dioxide. Also breaks down nitrogen oxides.

Acid Rain	Sulfur dioxide and nitrogen oxides rise into the air and dissolve in water vapour. The rain is now more acidic.
Controlling Acid Rain	Neutralisation reactions used to remove acidic gases from chimney smoke. Acidic soil /water can be neutralised by adding calcium carbonate.

5. Global Warming

Greenhouse Gases	Trap energy from the Sun in the atmosphere <i>e.g. carbon dioxide</i>
Greenhouse Effect	Energy trapped by greenhouse gases is transferred back to the Earth's surface causing it to warm up.
Earth's Temperature Over Time	The temperature of the Earth has fluctuated over time it is rising rapidly now though.
Global Warming	Increase in global temperature due to more greenhouse gases in the air and the greenhouse effect.
Climate Change	Resulting from global warming- changes to weather patterns, more storms, flood, droughts, etc.
Evidence	There is now lots of evidence for global warming. average temperatures are increasing and ice caps are melting.

Lesson	Memorised?
1. Burning Fuels	
2. Oxidation	
3. Fire Safety	
4. Air Pollution	
5. Global Warming	

8J Light

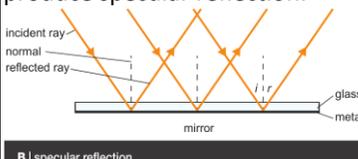
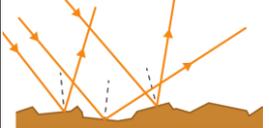
1. Light on the move

Vacuum	A completely empty space, containing no particles.
Matter	All things are made of matter. There are three states of matter: solid, liquid, gas.
Longitudinal wave	A wave where the particles vibrate in the same direction as the wave is travelling. longitudinal 
Transverse wave	A wave where the vibrations are at right angles to the direction the wave is travelling. transverse 
Ray	A narrow beam of light, or an arrow on a diagram representing the path of light and the direction in which it is travelling.
Transparent	A material that light can travel through without scattering. (Note: transparent substances may be coloured or colourless.)
Transmit	To pass through a substance.
Reflect	To bounce off a surface instead of passing through it or being absorbed.
Absorb	'To soak up' or 'to take in'.

Translucent	Material that lets light through but scatters it. You cannot see things clearly through translucent materials.
Opaque	Material that does not let light through. It is not possible to see through an opaque substance.
Scattered	Scattering occurs when light or other energy waves pass through an imperfect medium (such as air filled with particles of some sort) and are deflected from a straight path.
Reflected ray	A ray of light bouncing off a mirror.
Source	Where a sound wave or other wave begins.
Image	A picture that forms in a mirror or on a screen, or is made by a lens. You see an image when looking down a microscope.
Pinhole camera	A piece of apparatus that forms an image of an object on a screen when light rays travel through a tiny hole in the front
Shadow	A place where light cannot get to, because an opaque object is blocking the light.

2. Reflection

Plane mirror	A smooth, flat mirror.
Ray box	A piece of equipment that produces a narrow beam of light.
Ray tracing	A method of investigating what happens to light by marking the path of a light ray.
Ray diagram	A diagram that represents the path of light using arrows.

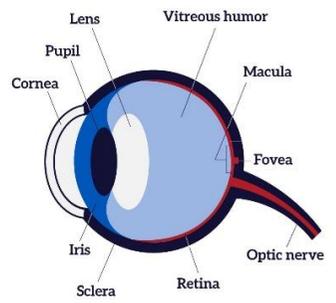
Normal	An imaginary line at right angles to the surface of a mirror or other object where a ray of light hits it.
Incident ray	A ray of light going towards the mirror or other object.
Reflected ray	A ray of light bouncing off a mirror.
Angle of incidence	The angle between an incoming light ray and the normal.
Angle of reflection	The angle between the normal and the ray of light leaving a mirror.
Specular reflection	When light is reflected evenly, so that all reflected light goes off in the same direction. Mirrors produce specular reflection. 
Diffuse reflection	Reflection from a rough surface, where the reflected light is scattered in all directions. 
Law of reflection	The angle of incidence is equal to the angle of reflection.

3. Refraction

Refraction	The change in direction when light goes from one transparent material to another.
Interface	The boundary between two materials.
Lens	A curved piece of glass or other transparent material that can change the direction of rays of light.

Converging lens	A lens that makes rays of light come together.
Angle of refraction	The angle between the normal and a ray of light that has been refracted.
Focal point	The place where parallel rays of light are brought together by a converging lens.
Focal length	The distance between the centre of the lens and the focal point.

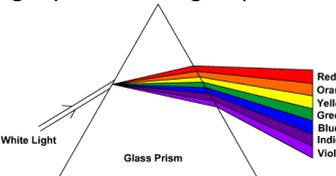
4. Cameras and eyes

Digital camera	A camera that uses electronics to record an image.
Sensor	An instrument that detects something. In a digital camera, the sensors detect light and change it to electrical signals.
Memory card	Part of a digital camera that stores the images.
Aperture	A hole in a camera that controls how much light goes to the sensor.
Shutter	A device that shields and protects the sensor in a digital camera. It opens when the picture is taken.
Human eye	
Retina	The part at the back of the eye that changes energy transferred by light into nerve impulses.

Pupil	The hole in the front of the eye that light can pass through.
Rod cell	A cell in the retina that detects low levels of light. It cannot detect different colours.
Cone cell	A cell in the retina that detects different colours of light.
Cornea	The transparent front part of the eye, which covers the iris and pupil.
Iris	The coloured part of the eye.
Optic nerve	The nerve that takes impulses from the retina to the brain.
Primary colour	One of three colours that are detected by the cone cells in our eyes. The primary colours are red, green and blue.
Secondary colour	A colour made when two primary colours mix. The secondary colours are magenta, cyan and yellow.

Filter (physics)	Something that only lets certain colours through and absorbs the rest.
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Lesson	Memorised?
1. Light on the move	
2. Reflection	
3. Refraction	
4. Cameras and eyes	
5. Colour	

5. Colour	
White light	Normal daylight, or the light from light bulbs, is white light.
Frequency	The number of vibrations (or the number of waves) per second. Different frequencies of light have different colours.
Spectrum	The seven colours that make up white light.
Dispersion	<p>The separating of the colours in light, for example when white light passes through a prism.</p> 
Prism	A block of clear, colourless glass or plastic. Usually triangular.