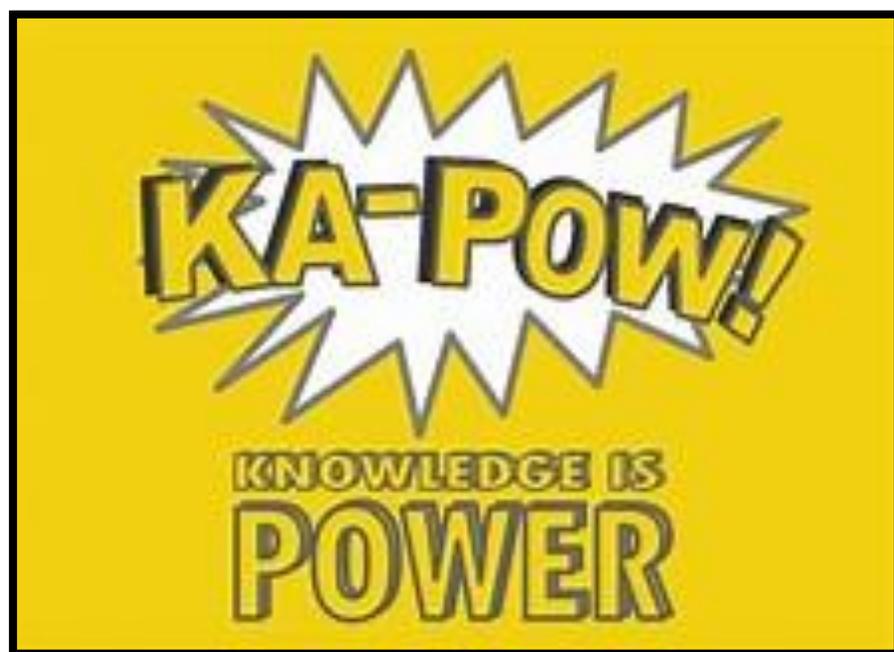




Year 7  
Knowledge Organiser  
Booklet  
Half Term 3



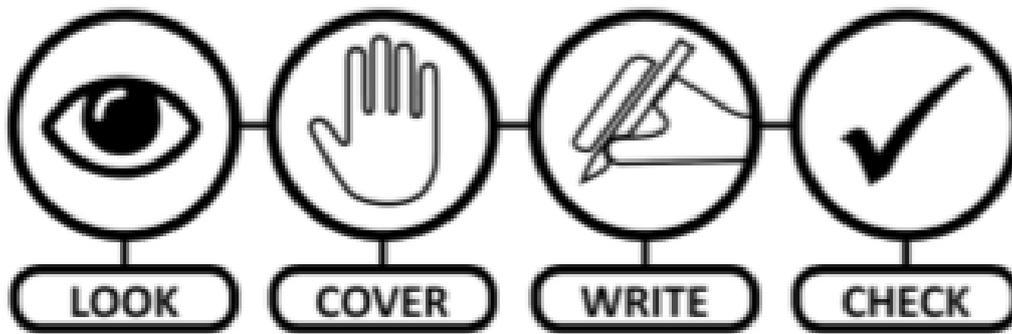
Name

# 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 a page of handwritten notes on lined paper. The notes are written in black ink, with corrections and additions in green ink. The text is organized into three main sections, each separated by a solid black horizontal line. The first section is titled 'History' and dated 'Tuesday 20th October'. It lists five main problems William faced after the Battle of Hastings. The second section is a repeat of the first section, and the third section is another repeat. Annotations in boxes point to specific features: 'Subject, underlined' points to 'History'; 'Date in full, underlined' points to 'Tuesday 20th October'; 'Corrections made in green pen.' points to green ink changes; 'Each line checked and ticked if correct.' points to checkmarks at the end of lines; 'Solid black line after each attempt' points to the lines separating the repeats; 'No whole lines left empty except between repeats.' points to the filled lines between repeats; and 'Repeat until the whole page is full' points to the overall structure of the repeats.

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

# YR7 Masks (African Art)

Watch this video to see how African masks are made  
<https://www.youtube.com/watch?v=vAx6etYBuHE>

Masks have been an important part of many cultures from early civilisation. Each mask tells a different story and these are traditionally unique and individual to the wearer.

They feature **geometric shapes** such as triangles, circles, squares etc... They have bright **colours**, and come in different sizes and styles.

African masks have **special meanings** for different cultures. Masks that represent **animals** are popular. For example, the Bwa and Nuna peoples in Burkina Faso make crocodile, eagle, and buffalo masks. Masks are also worn for special ceremonies such as **weddings, funerals** and for praying to specific Gods, such as the God of **harvest** (good crop growth).

African masks are shown in **museums and galleries** all over the world. African masks also may be sold at local markets and overseas. The masks for sale are usually copies of original masks.

Traditional African masks are one part of great African art that have influenced Europe and Western art in general; in the 20th century, artistic movements such as cubism, fauvism and expressionism have often taken inspiration from the diverse heritage of African masks.

## AFRIKAN TEXTILES

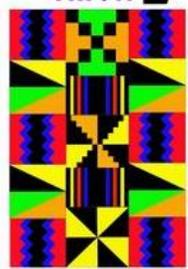


**MUDCLOTH**



**ADIRE**

## TINGA



**KENTE**



Tinga Tinga paintings are part of the Ndonde mural art tradition. Tinga Tinga art tells a story.



## KIMMY CANTRELL

Kimmy Cantrell's work uses vibrant colours. His work tells a story. Kimmy Cantrell uses asymmetry to challenge traditional definitions of beauty. He wants to show beauty in imperfection. He changes the shape and position of the eyes to show different emotions.



## NDEBELE HUT

Ndebele people of South Africa created their own tradition and style of house painting. Following hard times expressive symbols were generated by the suffering people expressing their grief.

Symmetry  
 Geometric  
 Shape  
 Pattern  
 Meaning  
 Symbolism  
 Ceremony

## Pattern

A design that is created by repeating lines, shapes, tones or colours



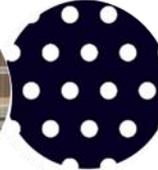
Artists use patterns as **decoration**, as a technique of **composition**, or as an **entire piece** of artwork. Patterns are diverse and useful as a tool that grabs a **viewer's attention**, whether it be subtle or very apparent.

Patterns come in various forms, they can be

- Rotating
- Symmetrical
- Tessellating
- Repeating
- Alternating



Plaid



Polka Dot



Stripes



Chequered



Chevron

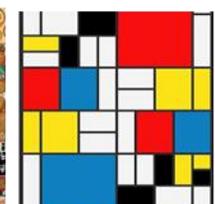
Patterns communicate a sense of **balance, harmony, contrast, rhythm or movement**.



William Morris was an English designer, craftsman, poet, and early socialist, whose designs for **furniture, fabrics, stained glass, wallpaper, and other decorative arts** generated the **Arts and Crafts movement** in England and revolutionized Victorian taste. His designs focused on organic forms in patterns. These were symbolic of the society he lived in.



*"Have nothing in your houses that you do not know to be useful, or believe to be beautiful."*  
 W Morris



Check out Jasper Johns, Gustav Klimt and Piet Mondrian



Research the following artworks and see if you can match the mask that influenced the artwork. Pablo Picasso – Head of a Woman, Henri Matisse – Marguerite 1906, Amedeo Modigliani – Portrait of Jean Hebutern.





**Key words**

**Sustainability-** able to be maintained at a certain rate or level.

**Recycled-** convert (waste) into reusable material.

**Upcycling-** reuse (discarded objects or material) in such a way as to create a product of higher quality or value than the original.

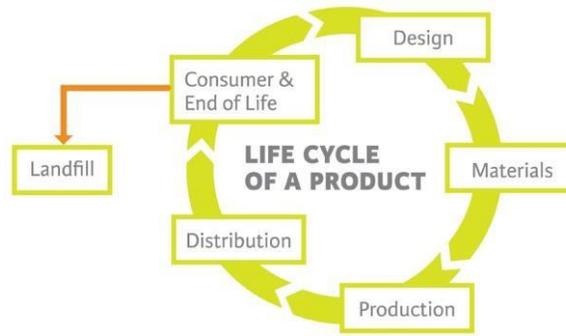
**Research-** investigation into and study of materials and sources in order to establish facts and reach new conclusions

**Prototype-** a first or preliminary version of a device or vehicle from which other forms are developed

**Client-** a person or organization using the services of a professional person or company

**Justify-** show or prove to be right or reasonable.

**Design brief:** Design and make a product that is influenced by sustainable design.



**SUSTAINABLE DESIGN PRINCIPLE**



- Low-impact materials
- Energy efficiency
- Emotionally durable design
- Sustainable design standards
- Design for reuse and recycling
- Bio mimicry
- Service substitution
- Renewability

**Design Process:**

- Task analysis and research plan
- Research and evaluation
- Specification
- Research evaluation
- Initial design ideas
- Design development and prototypes
- Trials of techniques and samples
- Final design concept

**Topical images:**



Plastic is a key pollution problem in the oceans.



plastic does not biodegrade and will not disintegrate ,as with a natural material ,it is made from oil.



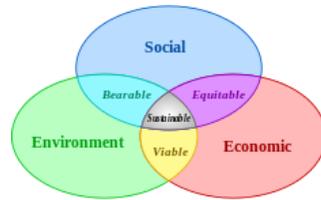
Coral is being destroyed through plastic and pollution, coral is a key provider of oxygen and is a main stage of the marine food chain.



The Sea produces 90% of the worlds oxygen, through organisms and plant life.



Only 10% of plastic bottles are recycled



Drama

Term 2

**Superheros**

### Flashback

This is a scene within a scene where the action jumps back in time and we get to see what happened earlier in the story. Flashback can be a useful way of building tension in a storyline and can let the audience know more about the characters.

### Facial expressions

<u>Emotion</u>	<u>Description of facial expression</u>
Happiness:	Corner of the mouth raised upwards
Sadness:	Corner of the mouth turned down
Anger:	Lowered eyebrows and tightly pressed lips or bared teeth
Surprise:	Wide eyes and dropped jaw
Confusion:	A raised eyebrow and diverted eye contact

Five different facial expressions - happy, sad, angry, surprised and confused.



### Eye contact

Eye contact is the state in which two people look directly into one another's eyes. It can be used to reveal the status and relationship between characters. For example, two characters in love may look adoringly into each other's eyes, whereas a character withdrawing or avoiding eye contact could indicate a strained relationship.

### What is a superhero?

- A superhero is a fictional character who possess extraordinary abilities beyond normal human capabilities such as extra strength, invisibility and flying.
- Usually, superheroes gain the title 'hero' because they use their skills and abilities to help or save the lives of others.
- Superheroes were founded in comic books such as Superman or Captain Marvel, and have turned into big Hollywood movies. They show how extraordinary can be achieved and how a little bravery can go a long way to make the world a better place.
- Superheroes exist in all cultures. For example, in Japan, anime films often depict the tale of a superhero. Often, superheroes exist as a traditional tale or myth. For example, the story of Hercules has been around since Ancient Egyptian times.

### Physical skills

A performer's use of physical skills can help to convey lots of important information to the audience and helps to show a character's emotions. Performers use a range of physical skills to help transform themselves into the character they are playing.

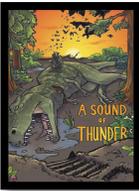
### Body language

Body language includes posture and stance and can convey a character's feelings or personality. For example, a confident character may dominate the space, standing up straight with their head looking up, using open body language such as hands on the hip and a wide stance. A more nervous character might have more closed body language, with their arms crossed and head down.



Hot seating – asking specific questions to a person who is in role and sustains their character whilst answering.

Role on the wall – Creating a detail role on the wall for your character allows you to create a background story for your character giving you a greater understanding.



- | Science Fiction Stories |                           |
|-------------------------|---------------------------|
| •                       | The War of the Worlds     |
| •                       | The Time Machine          |
| •                       | The Hunger Games (Series) |
| •                       | Divergent (Series)        |
| •                       | The Maze Runner (Series)  |



# Year 7 – Knowledge Organiser – Science Fiction



### Overview – What is Science Fiction?

- Science Fiction narratives are stories that are written about advances in science and technology.
- They are often futuristic (set in the future), sometimes on faraway worlds and focus on topics such as inventions, space and robots.
- Distant space travel and time travel are often possible in these types of stories.
- Science fiction stories often use imagination to predict what life may be like in the future. They are designed to entertain the reader, but also to give warnings about e.g. how we handle time travel/artificial intelligence, etc.
- Science fiction differs from fantasy because science fiction contains things that are possible - it is just that the inventions and discoveries have not happened yet.



<b>Personification</b>	Describing non-human objects like humans; can be used to build up an atmosphere or tone – very useful for establishing setting.
<b>Adjectives</b>	Used to build up description and can also be used to build up atmosphere and tone.
<b>Foreboding</b>	Building a sense that something awful is going to happen shortly. Perfect for science fiction horror stories!
<b>Show don't tell</b>	Slowly revealing information to the reader, not revealing everything straight away. It keeps the reader engaged throughout the text.
<b>Allusion</b>	Referring to something indirectly – hinting at something. It helps to suggest to the reader what might happen without saying it directly.
<b>Foreshadowing</b>	Hinting at what is going to happen later on in the plot. Really useful for intriguing the reader into a science fiction narrative.
<b>Short Sentences</b>	Can be used to build tension or to focus on particular ideas within a paragraph.
<b>Pathetic Fallacy</b>	Using the weather or landscape to establish atmosphere and tone. Pivotal in Science Fiction writing.
<b>Simile</b>	Saying something is like or as something else. They help to make comparisons and assist the reader in visualising particular objects or ideas.

Adverb	Synonyms	Verb	Synonyms	Word	Synonyms
<b>Quickly</b>	Rapidly/ Hurriedly/ Speedily/ Hastily/ Briskly	<b>Go up</b>	Ascend/ Climb	Dark	Sombre/ Shadowy/Murky/ Shady/Dingy/Dusky/Unlit/Pitch-black/Poorly lit Sunless/Unilluminated
<b>Suddenly</b>	Abruptly/ All of a sudden/ Without warning/Unexpectedly/ Like a shot	<b>Go down</b>	Descend	Large	Huge/ Vast/Enormous/ Immense/Gigantic/ Monumental/Colossal/ Considerable
<b>Slowly</b>	Unhurriedly/ Gradually/ Steadily/ Cautiously/ Furtively/ Surreptitiously /Tentatively	<b>Dodge</b>	Evade/ Elude/ Sidestep/ Circumvent/Escape	Small	Miniature/ Minuscule/Diminutive/ Minute/ Slight
<b>Strangely</b>	Bizarrely/ Weirdly/ Oddly/ Chillingly/ Creepily/ Eerily	<b>Hide</b>	Conceal/Take cover/ Keep out of sight	Quiet	Muted/ Hushed/Faint/ Stifled
<b>Sinisterly</b>	Ominously/ Grimly/ Threateningly/ Forbiddingly/ Darkly/ Menacingly Suspiciously	<b>Jump</b>	Leap/ Spring/ Bound/ Vault	Alone	Solitary/ Isolated/Abandoned/Detached/Lonely/ Desolate/ Forsaken/ Forlorn
<b>Respectfully</b>	Reverently/ Deferentially/ Ceremoniously/ Attentively/ Courteously/ Politely/ Considerately	<b>Lunge</b>	Pounce/ Charge/ Dive/Thrust/ Jab/ Swipe/ Swing	Scary	Frightening/ Alarming/ Terrifying/ Shocking/ Chilling/ Horrifying/Intimidating/ Horrendous/Unnerving/ Hair-raising/ Spine-chilling/ Bloodcurdling/ Macabre
		<b>Peek</b>	Glance/Peer/ Spy/ Peep	Suspicious	Distrustful/ Suspecting/ Skeptical/ Doubtful/Unbelieving
		<b>Chase</b>	Follow/ Pursue/Track/ Hunt	Curious	Inquisitive/ Inquiring/Prying
		<b>Creep</b>	Sneak/Steal/Tiptoe/Slink/ Skulk	Ominous ( <i>Warning of evil</i> )	Threatening/ Menacing/ Forbidding/ Fateful/Foreshadowing/Portentous
		<b>Reveal</b>	Disclose/ Announce/Proclaim/ Impart/ Divulge/ Unveil/ Unmask	New	Modern/ Advanced/ Hi-tech/ State-of-the-art/ Contemporary/ Innovative/ Unique

Important Vocabulary								
Science Fiction	Direct Speech	Characterisation	Utopia/ Dystopia	Tension	Climax	Foreshadowing	Flashback	Moral

# Spanish Knowledge Organiser

## Year 7 - Spring 1

### Week 1&2

- **No me gusta nada** el dibujo **porque** es aburrido - **I really don't like** art because it is boring.
- **Me gustan mucho** las ciencias **sin embargo** son difíciles - **I really like** science **however** it is difficult.
- **Nunca** estudio informática **porque no** es útil - **I never** study ICT **because** it is **not** useful.
- Los miércoles estudiamos teatro, **también** estudiamos música - On Wednesdays we study drama, **also** we study music.

### Week 3&4

- En mi instituto **no** hay piscina - In my school there **isn't** a swimming pool.
- **Me encanta** mi instituto **porque** es muy moderno - **I love** my school **because** it is **very** modern.
- **A veces** como unos caramelos en el recreo - **Sometimes** I eat some sweets at break.
- **Normalmente** juego al fútbol con mis amigos **o a veces** juego al baloncesto - **Normally** I play football with my friends **or sometimes** I play basketball.

### Week 5&6

- Mi profesor de español es **bastante** divertido - My Spanish teacher is **quite** fun.
- **Me gusta** la educación física **porque** el profesor es simpático - **I like** PE **because** the teacher is kind.
- **Me gustan** las ciencias **sin embargo** el profesor es **un poco** severo - **I like** science **however** the teacher is a **bit** strict.
- En el recreo **nunca** comimos chicle - At break we never chew gum.

# French Knowledge Organiser

## Year 7 - Spring 1

### Week 1&2

- **Quand** il pleut je joue aux échecs **mais** c'est **un peu** ennuyeux - **When** it rains I play chess **but** it's **a bit** boring.
- **Quand** il fait beau nous jouons au tennis, **j'aime** le tennis **parce que** c'est amusant - **When** it is good weather we play tennis, **I like** tennis **because** it is fun.
- Je fais de la cuisine **tous les week-ends** avec ma soeur - I do cooking **every weekend** with my sister.
- Je **ne** fais **pas** de la natation - I **don't** do swimming.

### Week 3&4

- Je **ne** joue **pas** au foot **mais** je fais de la danse, c'est ludique - I **don't** play football **but** I do dance, it's fun.
- **Quand** il fait chaud **on fait** du rafting **mais quand** il fait froid **on fait** du snowboard - **When** it is hot **we do** rafting **but when** it is cold **we do** snowboarding.
- Je fais **tous les jours** de la gymnastique **mais** je **ne** fais **pas** de la danse - I do gymnastics **every day but** I **don't** do dance.
- **Parfois** je fais **aussi** du trampoline - **Sometimes** I **also** do trampolining.

### Week 5&6

- **J'adore** prendre des selfies avec mes copains **parce que** c'est marrant - **I love** to take selfies with my friends **because** it is funny.
- **Je déteste** regarder des films sur youtube **parce que** c'est ennuyeux - **I hate** to watch films on youtube **because** it's boring.
- **J'aime aussi** partager des photos sur Snapchat **parce que** c'est amusant - **I also like** to share photos on Snapchat **because** it's fun.
- **Je n'aime pas** envoyer des SMS **parce que ce n'est pas** intéressant - **I don't like** to send SMS messages **because it isn't** interesting.



The Eatwell Guide

**What is the Eatwell Guide?**

The Eatwell Guide is a guide that shows you the different types of food and nutrients we need in our diets to stay healthy.

**Why is the Eatwell Guide important?**

The Eatwell Guide shows you how much (proportions) of food you need for a healthy balanced diet.

**What are the consequences of a poor diet?**

A poor diet can lead to diseases and can't stop us from fighting off infections.

**What are the sections on the Eatwell Guide?**

1. Fruit and vegetables
2. Potatoes, bread, rice, pasta and other starchy food
3. Dairy and alternatives
4. Beans, pulses, fish, egg, meat and other proteins
5. Oils and spreads

Eat 5 portions of Fruit and Vegetables a day. One portion is 80g .

**Year 7 Food Knowledge Organiser: Principals of Nutrition**

**Macronutrients**

Needed in large amounts to help the body to function properly



**Fat**

**Function:**  
Energy  
Warmth

Protection of organs

**Sources**

**Saturated Fat (Bad Fats)**      **Unsaturated Fat (Good Fats)**  
Meat                              Avocado  
Processed Foods      Nuts  
Lard                              Olive oil

Saturated Fats - solid at room temperature and are from animal sources. Unsaturated fats are liquid at room temperature and are vegetable sources..

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

**Protein**



**Function:**

Growth and Repair  
Energy



**Sources:**

**Plant**                              **Animal**  
Nuts                              Eggs  
Quorn                              Fish  
Beans                              Meat  
Lentils

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

**Carbohydrates**



**Function:**  
Energy



**Sugars:**  
Cakes  
Sweets  
Fizzy drinks

**Sources:**

Bread  
Pasta  
Rice  
Wheat  
Potatoes  
Cereals

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

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

**Water**

Keeps us hydrated.

**Source**

Drinks, fruit and vegetables, soup.

**Function**

- Controls body temperature.
- Gets rid of waste in the body.

**Too little**

- Dehydration leads to headaches, irritability and loss of concentration.

**Fibre**

**Function:**

It helps with digestion  
It helps to get rid of waste

**Source:**

Wholegrain,  
Whole wheat,  
Wholemeal cereals,  
Peas and beans

**Too Little**

- Constipation
- Bowel Cancer

**Heat Transfer and Cooking methods**

**Heat Transfer**

The way in which heat energy is passed into food

**Conduction** - Transferring heat through a solid object into food

e.g. Frying bacon in a pan, using a pan on the hob, a metal spoon in water

**Convection** - Transferring heat through a liquid or air into food

e.g. Baking a cake, boiling water, cooking in an oven

**Radiation** - Transferring heat by infra-red waves that heat up what they come into contact with

e.g. grilling sausages or bacon, making toast

**Cooking methods**

Dry Heat	Moist Heat	Frying
Baking	Steaming	Deep fat frying
Grilling	Boiling	Shallow frying
Roasting	Poaching	Stir frying
Barbequing	Stewing	Saut�eing
Basting	Simmering	

Useful web links:

<http://www.foodafactoflife.org.uk>



**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>

Mineral	Sources	Function
Iron	Red meat, spinach, beans and lentils	Helps our red blood cells carry oxygen so that we are not anaemic.
Calcium	Milk, cheese and some cereals	Help us to have strong bones and teeth.
Sodium	Processed foods	Controls the body's water content and helps our nerves

Vitamin	Sources	Function
Vitamin A (fat soluble)	Fish, eggs, oranges	Helps us to see well
Vitamin D (fat soluble)	Eggs, the sun	Helps our bones to grow
Vitamin C (Water soluble)	Oranges, tomatoes, vegetables	Helps to heal cuts, helps the immune system.
B Vitamins (Water soluble)	Cereals, meat, fish	Helps to keep us healthy

**Why Food is cooked**

Different cooking methods change our food in different ways  
Appearance, Texture, Flavour, Smell and Nutritional value

To improve shelf life

To make safe to eat

To develop flavour

To improve texture

To improve appearance

To give variety in diet

## Bacteria

A micro organism that multiply in certain conditions.

### Where can bacteria be found?

Everywhere!

### Are all bacteria bad?

No- some are good and essential for normal bodily function.

### How can you reduce the risk of bacteria?

- Storing food separately
- Storing and cooking foods at the correct temperatures

### The 4 C's

**Cleaning** – wash your hands properly

**Cooking** – make sure you cook food properly or you could make someone very ill

**Chilling** – keep it chilly silly

**Cross contamination** – keep raw meat and cooked food apart

## Year 7 Food Knowledge Organiser: Food and kitchen hygiene

### Key Terms

<b>Hygiene</b>	Keeping the workplace and food workers clean which ensures food is safe to eat
<b>Hygiene procedure</b>	The steps you would go through to ensure that a product is produced in a safe and hygienic way
<b>Contamination</b>	Presence in food of harmful substances or bacteria. To spoil or dirty something
<b>Physical contamination</b>	The presence of a foreign body in a food product for example a plaster that has fallen off the food workers hand
<b>Chemical contamination</b>	The presence of unwanted or unsafe chemicals in food
<b>Biological contamination</b>	The presence of harmful microorganisms in food
<b>Danger zone</b>	A temperature of between 5°C and 63°C when bacteria will grow most rapidly
<b>Cross contamination</b>	Safe food being contaminated by unsafe food.
<b>Food poisoning</b>	Chilled foods should be stored at between 1°C and 5°C to slow the growth of bacteria Illness caused by food being contaminated by microorganisms. Food poisoning occurs if harmful microorganisms contaminate food and are then allowed to grow.
<b>Symptoms</b>	The physical signs that are shown when someone is unwell

## Storing Food

Temperature is really important to keep food safe. The following temperatures should be used:

<b>Refrigeration</b>	Fridges should run at <b>4°C</b> or below.
<b>Freezing</b>	Freezing of food at <b>-18°C</b> or below will stop bacteria multiplying.
<b>Cooking</b>	Temperatures of <b>75 °C</b> or above kills almost all types of bacteria.
<b>Danger Zone</b>	The temperature range where bacteria is most likely to reproduce: <b>5°C-63°C.</b>

**High risk foods** - ready-to-eat food that will support the growth of pathogenic bacteria easily and does not require any further heat treatment or cooking". Such foods are usually high in protein and moisture require strict temperature control and protection from contamination and include: cooked meats , cooked shellfish.

## What do bacteria need to multiply?



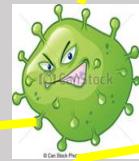
**Temperature:** bacteria grows when warm



**Time:** if food is exposed to these things for a long time they will quickly multiply



**Moisture:** bacteria need moisture to grow



**Ph:** Bacteria prefer conditions that are neutral.



### Aerobic vs Anaerobic Bacteria

Aerobic	Anaerobic
Must have oxygen to survive	Cannot live in the presence of oxygen



**Food:** provides the energy for bacteria to grow, multiply and produce toxins

## Common Food poisoning Pathogens

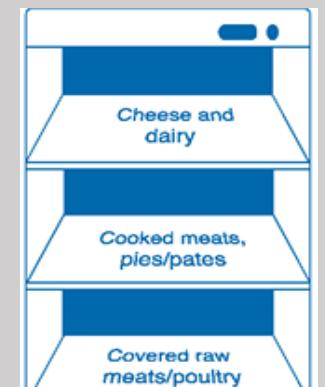
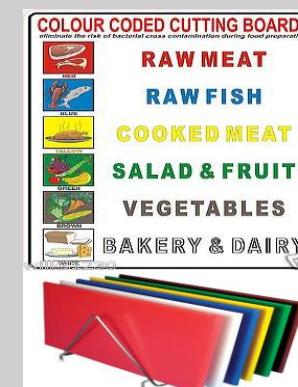
Pathogen	Sources	Symptoms
<b>E coli</b>	Raw meat, untreated milk and water.	Vomiting, blood in diarrhoea, kidney damage or failure
<b>Listeria</b>	Soft cheese, pate, unpasteurised milk, under cooked meat	Mild flu, meningitis and pneumonia
<b>Campylobacter</b>	Meat (chicken) shellfish, untreated water.	Diarrhoea, headache, fever, abdominal pain.
<b>Salmonella</b>	Raw meat , eggs, seafood, dairy products	Diarrhoea, vomiting and fever.
<b>Bacillus cereus</b>	Cooked rice, pasta, and cereal foods	Nausea, vomiting, diarrhoea
<b>Staphylococcus Aureus</b>	Anything touched by hand, Dairy product	Nausea, vomiting, diarrhoea

Watch video to confirm knowledge

<https://www.youtube.com/watch?v=flxB8NKMzE>

## Storage

To prevent cross contamination (the spreading of bacteria), foods must be stored separately. Follow the rules of food storage within a fridge:



Most bacteria grow rapidly at body temperature (37°C), but can grow between 5°C and 63°C. This is known as the danger zone. The more time food spends in the danger zone the greater the risks of harmful bacteria growing. Therefore it is vitally important that we try to keep food out of the danger zone during the production processes.

# 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



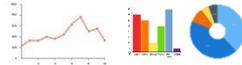
When the concept drawing is finished, the design will be turned into an isometric drawing where the size (**dimensions**) of the parts are finalised. Specific measurements (**metric – CM, MM**) are used so that it can be copied many times (**mass produced**).

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 7: UK

- Physical Landscape
- Ecosystems
- Food Webs
- Climate
- Coasts

## Physical Landscape of the UK

Countries that make the British Isles, UK and Great Britain

- The British Isles includes England, Scotland, Wales, Northern Ireland and the Republic of Ireland.
- The UK includes England, Scotland, Wales and Northern Ireland.
- Great Britain includes England, Scotland and Wales.

Physical Features = natural parts of the land e.g. rivers, mountains and forests

## Ecosystems and Food Webs

An ecosystem is the interrelationship between living and non-living components of an environment.

### Parts of the food web

Producers = plants/start of a food chain/web

Consumers = animals that eat other animals and plants

Decomposers = bacteria and fungi that break down dead plants and animals

### Epping Forest

An example of a large ecosystem in the UK

## What is the coast?

This is where the land meets the sea.

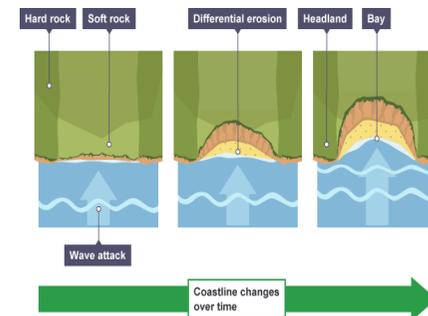
## How does the coast change in shape and size?

- **Erosion**- is the wearing away and breaking up of the rock along the coast
- **Transportation**- The way in which sediment is moved along in the water
- **Deposition**- Where sediment and rock is added to a landform along a coastline.

## Landforms of erosion

### Headlands and Bays

1. Coastlines are made of alternating bands of soft rock and hard rock (more resistant and less resistant)
2. Less resistant rock such as clay is eroded more quickly, this retreats back forming a bay
3. More resistant rock such as granite is eroded more slowly. This protrudes (sticks out) forming a headland.



## Climate in the UK

Weather is the day to day conditions of a local area e.g. it is raining in Canvey today

Climate is the long term weather over a large area e.g. the south-east of England has dry and warm summers

### Reasons for different climates:

C = Currents of the ocean

L = Latitude

A = Altitude

W = Wind

S = Sea (distance from)

## Landforms of Erosion: Caves, Arches, Stacks and Stumps:

1. A weakness in a headland will be eroded until it becomes wider forming a cave
2. Hydraulic action and abrasion erode the cave further until it breaks through to the other side of the headland forming an arch.
3. The roof of the arch is weakened at the base by erosion and on the top by weathering. Eventually this collapses leaving a stack.
4. The stack will be undercut by hydraulic action and abrasion. Eventually this will collapse resulting in a stump.

## Erosion – the wearing away of the land by the sea

- **Hydraulic action.** Is when the sheer force of the sea dislodges particles from coastline such as cliffs.
- **Abrasion.** Occurs when smaller material carried in the water rubs against the rock as the sea throws them against the coasts. They are worn away like sandpaper.
- **Attrition.** When boulders and other material, which are being transported in the sea collide and break into smaller pieces.
- **Solution.** Acids in the sea dissolve the rocks such as limestone

## Year 7 History Knowledge organiser: Medieval England

### Henry II and Thomas Becket

1. 1154- Henry II made Becket his Chancellor.
2. Henry decided to use him to take control of the church, which had powers Henry wanted to limit.
3. When the Archbishop of Canterbury died in 1161, Henry asked Thomas to take on the role.
4. Becket became very religious and did not do as the king expected
5. October 1164- Becket was found guilty of treason. Becket fled to France.
6. May 1166, the Pope threatened to excommunicate Henry, so Henry let Becket return to England.
7. March 1170: Henry has his son crowned without Thomas Becket conducting the ceremony.
8. Becket excommunicated three bishops who supported Henry. In rage, Henry is said to have shouted: Will no one rid me of this turbulent priest
9. Four knights heard this, rode to Canterbury, and murdered Becket in the Cathedral on 29 December.

### The Crusades

- A series of **wars** where Christians and Muslims fought to control the Holy Land.
- The Crusades dragged on and off for about **200** years.
- English knights and soldiers mainly fought in the Third Crusade between 1189 and 1192 under **Richard I**.
- The Third Crusade was planned after Saladin captured Jerusalem in 1187.
- Several mighty kings, including Richard I of England, Phillip II of France and Guy of Jerusalem, joined forces to defeat Saladin. The city of Acre surrendered to King Richard after an 18-month siege.

### King John

- John ruled England from 1199 to 1216.
- By 1215, the barons were fed up with John.
- The barons wanted a charter (a written agreement), which would guarantee certain rights and freedoms.
- 19 June 1215 King John met the barons at Runnymede. He signed their charter (Magna Carta). In return, the barons agreed to be loyal.

### Black Death

The Black Death appeared in Europe in the 14<sup>th</sup> Century. It was a deadly disease carried by fleas on rats. Almost everyone who caught the Black Death died quickly. The Black Death stayed in England until the 17<sup>th</sup> Century.

#### *Stages of the Black Death*

1. Buboec (big spots) in the armpit and groin
2. Feeling cold and tired
3. Blisters all over the Body/ bleeding under the skin
4. High Fever
5. Unconsciousness/Coma
6. DEATH

Sometimes the buboes burst and a foul smelling liquid oozed out. If this happened the victim normally lived.

#### *Effects of the Black Death*

Positive Effects	Negative Effects
The feudal system collapsed. Peasants could leave their village to find work, land and freedom elsewhere.	About 33% of Wales and England's population died. It took 250 years for the population to recover.
Peasants' attitude towards authority changed. They believed they could stand up to authority because God had spared them.	Many Churches closed down. It was hard to find enough people to take over the jobs of priests.
Poor people's diets and clothing improved.	Lords saw the value of their land decrease. They lost a lot of money.
Wages increased by up to 400%. Workers could demand more.	Harsh laws tried to stop the freedom and improvements of peasants' lives.
Medical knowledge improved. People began to understand how the human body worked.	Some villages never recovered from the disease, and were left abandoned.

### Peasants' Revolt- 1381

#### *Why did the Peasants revolt?*

- The Poll tax (everyone- rich or poor- paid the same).
- Low wages
- They were worried that the king was too young (14) and was being advised by evil men.
- Having to do unpaid labour for their lord
- They listened to John Ball preaching that the lords should give their money to the poor.
- Foreign wars

#### *What happened?*

- 30 May Thomas Bampton was collecting taxes in Essex. He treated the villagers badly. He was attacked by Thomas Baker and 100 villagers.
- 20,000 peasants rebelled. They asked Wat Tyler to be their leader on 7 June.
- 13 June- John Ball preached to the rebels.
- The rebels went to London, burnt the houses of the rich and killed the Archbishop of Canterbury (the king's advisor).
- King Richard II met Wat Tyler at Smithfield. Wat Tyler insulted the king and was killed.
- The king spoke to the rebels and promised to listen and be their king and leader.
- The rebels went home: many were later hung.

### Crime and Punishment in Medieval England

- If you saw someone committing a crime you had to raise the hue and cry (shout as loudly as you could and everyone within earshot would have to help to hunt for the criminal.)
- Everyone believed in God in medieval times. They believed that God helped good people and punished bad people. Trial by ordeal was a way of allowing God to decide on someone's guilt. This included ordeal by fire, ordeal by boiling water, ordeal by cold water and ordeal by hot iron.
- There was also ordeal by combat where the accused and the accuser would fight.

# KS3 Knowledge Organiser

## Spreadsheets

Spreadsheet formatting tools		
	Fill cell	Fills a <b>cell</b> with a selected colour.
	Font colour	Changes <b>font</b> colour to a selected colour.
	Alignment	Moves the <b>text</b> within a cell to the top, centre or bottom – or left, middle or right of a cell.
	Orientation	<b>Rotates</b> text either diagonally or vertically. Can be used for heading of columns.
	Wrap text	Wraps long lines of text into a cell, <b>making the cell taller</b> so that all text can be seen.
	Merge & Centre	<b>Combines</b> the contents of multiple selected cells and <b>centres</b> the content in the new cell.
	Accounting	Used to convert numbers into currency so that the data can be calculated as <b>money</b> .
	Percentage	Formats a number as a <b>percentage</b> .
	Change decimal	Changes the <b>decimal places</b> of a number so that the number is more/less accurate.
	Change data type	Changes the <b>type of data</b> contained in a cell.
	Format painter	<b>Copies</b> all of the <b>formatting</b> of a cell so it can be used in another.

Operators	
+	Adds two numbers / cells
-	Subtracts one cell or number from another
*	Multiplies two numbers/cells
/	Divides one number / cell from another one
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to

**Golden rule: every formula always starts with an =**

*Name of the formula*

See below for common formulae. Normally written in capitals.

**=SUM(B10:B23)**

*= sign*

An equal sign tells Excel that the cell contains a formula.

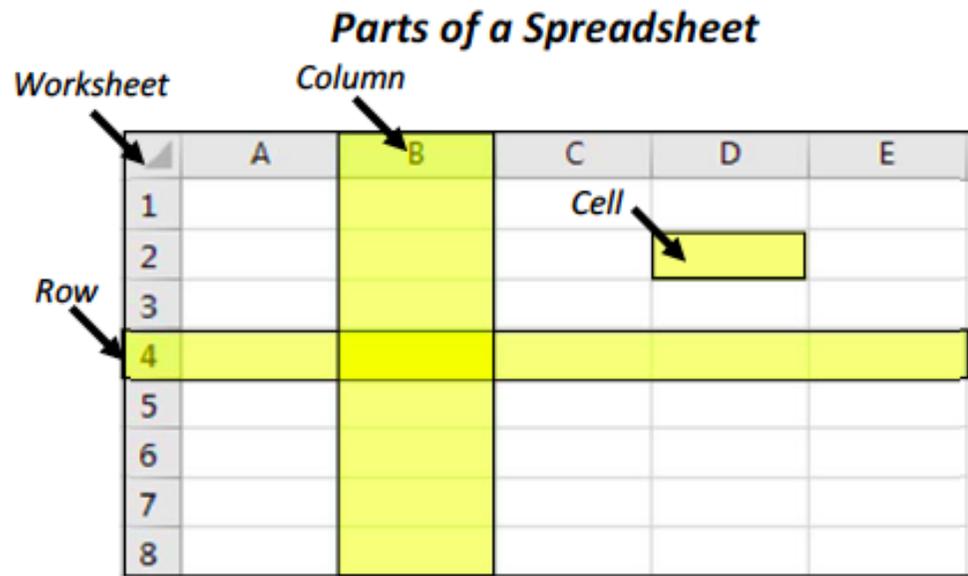
*The selected range*

The range used in the formula. This can be selected by clicking and dragging.

Common formulae		
Formula name	Example (with range)	What it does
Sum	=SUM(A1:A10)	Adds together all numbers within the given range.
Count	=COUNT(B2:B14)	Counts up all of the cells within a range that have numbers in.
Average	=AVERAGE(A1:A10)	Finds the average number within a range.
Maximum	=MAX(A1:A10)	Finds the largest number within a range.
Minimum	=MIN(A1:A10)	Finds the smallest number within a range.

# KS3 Knowledge Organiser

## Spreadsheets



Cell references begin with a letter, and finish with a number. EG: **A1**

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							

A range is a selection of cells. EG: **A2:F4**

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							

Spreadsheet vocab	
<b>Spreadsheet</b>	An electronic document in which data is arranged in the rows and columns of a grid and can be manipulated.
<b>Excel</b>	Software within the Microsoft Office package used to create spreadsheets.
<b>Cell</b>	A cell is a single unit of storage within a spreadsheet program.
<b>Active Cell</b>	The currently selected cell.
<b>Row</b>	A <b>horizontal</b> line of cells in a spreadsheet (numbers in Excel).
<b>Column</b>	A <b>vertical</b> line of cells in a spreadsheet (letters in Excel).
<b>Cell reference</b>	The specific location of a cell within a spreadsheet (e.g. D2)
<b>Range</b>	A cell reference which links to a group of connected cells (e.g., D2:F6)
<b>Formula</b>	An expression used in a spreadsheet to perform a calculation.
<b>Data</b>	Facts or information collected which has no meaning on its own (e.g., numbers or symbols)
<b>Information</b>	Data which has been put into context to provide meaning (e.g., a list of people's ages)
<b>Sort</b>	Organise data or information into order.
<b>Ascending</b>	Sorting data to get larger each time (A-Z and 1,2,3...)
<b>Descending</b>	Sorting data to get smaller each time (Z-A and 3,2,1...)
<b>Search</b>	Look through data or information to find results that meet a certain criteria.
<b>Filter</b>	Setting conditions so that only certain data is displayed.
<b>Conditional Formatting</b>	Changing the formatting of cells based on whether a formula is true or not.
<b>Worksheet</b>	An individual page within a spreadsheet document.
<b>Workbook</b>	A collection of worksheets that make up an spreadsheet document.



# 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.

## Function of the Skeleton

- **Support:** the bones are solid and rigid. They keep us upright and hold the rest of the body – the muscles and organs – in place.
- **Movement:** the skeleton helps the body move by providing anchor points for the muscles to pull against.
- **Structural shape and points for attachment:** the skeleton gives us our general shape such as height and build.
- **Protection:** certain parts of the skeleton enclose and protect the body's organs from external forces e.g. the brain is inside the cranium.
- **Production of Blood Cells:** the bone marrow in long bones and ribs produce red and white blood cells.
- **Mineral Storage:** bones store several minerals e.g. calcium, which can be released into the blood when needed.

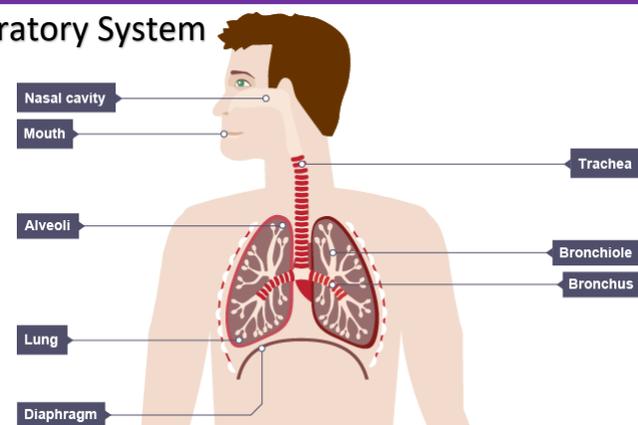
# KS3 PE THEORY

## Components of Fitness

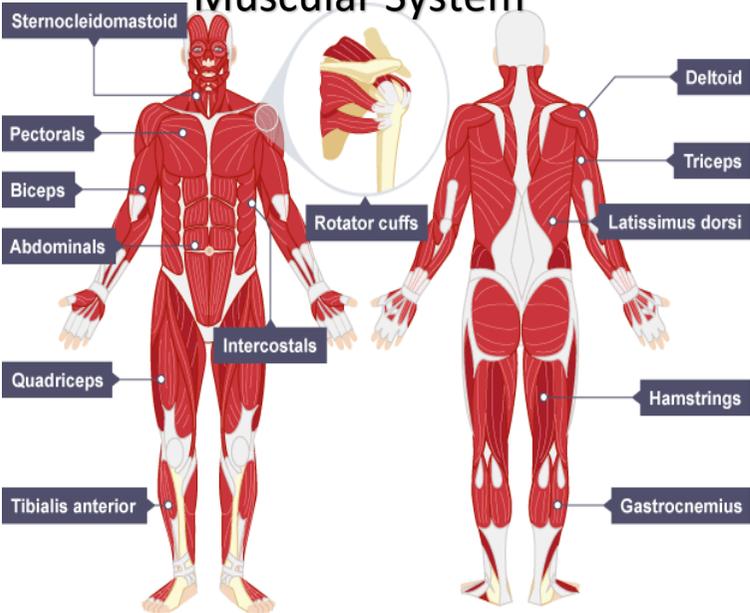
- |                           |                      |
|---------------------------|----------------------|
| <b>Cardio-Vascular</b>    | <b>Agility</b>       |
| <b>Endurance</b>          | <b>Balance</b>       |
| <b>Flexibility</b>        | <b>Co-ordination</b> |
| <b>Muscular Endurance</b> | <b>Power</b>         |
| <b>Strength</b>           | <b>Reaction Time</b> |
| <b>Body Composition</b>   | <b>Speed</b>         |



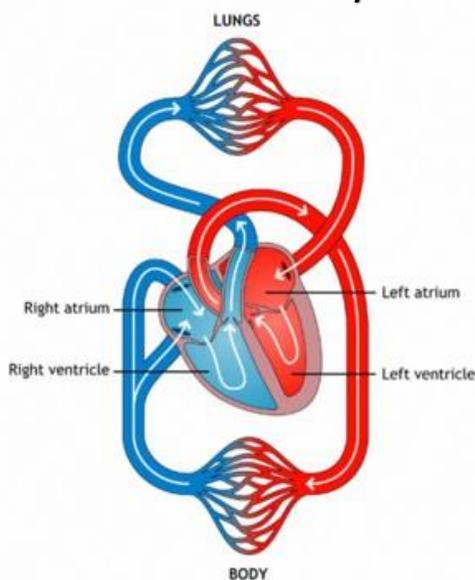
## Respiratory System



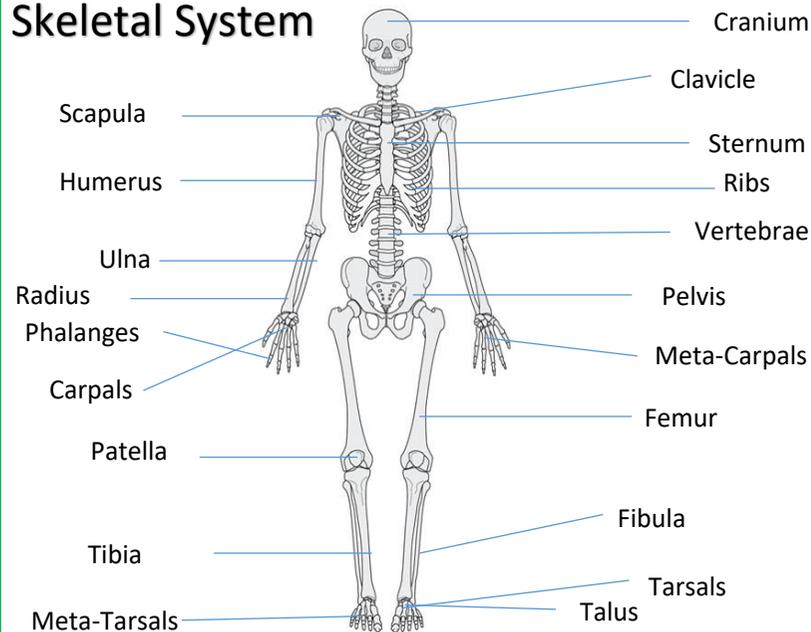
## Muscular System



## Cardiovascular System

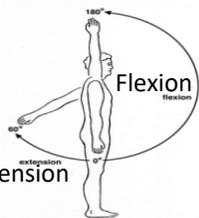


## Skeletal System



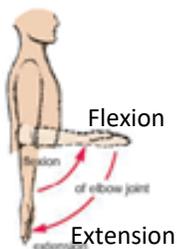
### Flexion and extension at the shoulder

- The **Deltoid** causes flexion at the shoulder
- The **Latissimus dorsi** causes extension at the shoulder



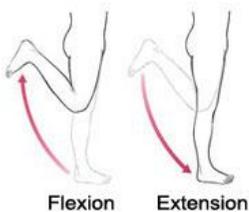
### Flexion and extension at the elbow

- The **Biceps** cause flexion at the elbow
- The **Triceps** cause extension at the elbow



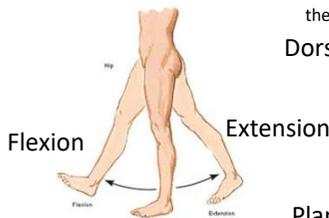
### Flexion and extension at the knee

- The **Hamstrings** cause flexion at the knee
- The **Quadriceps** cause extension at the knee



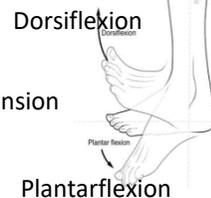
### Flexion and extension at the hip

- The **Hip Flexors** cause flexion at the hip
- The **Gluteals** cause extension at the hip



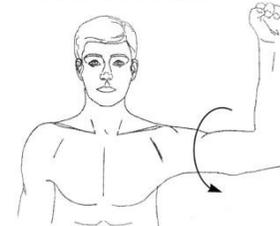
### Flexion and extension at the ankle

- The **Tibialis Anterior** causes dorsiflexion at the ankle
- The **Gastrocnemius** cause plantar flexion at the ankle



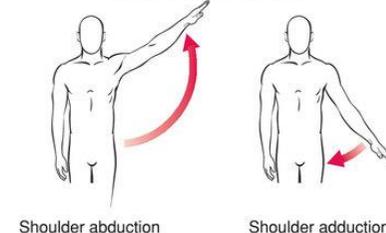
## Movement at a Joint

- **Rotation of the Shoulder**
- The **Rotator Cuff** causes rotation at the shoulder



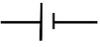
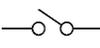
### Abduction and Adduction at the shoulder

- The **deltoid** causes abduction at the shoulder
- The **Pectorals / Latissimus Dorsi** cause adduction at the shoulder



# 7J Current Electricity

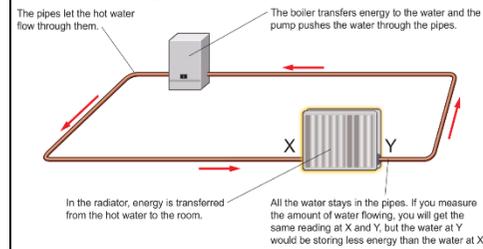
## 1. Switches and Current

<b>Component</b>	Something in a circuit.
<b>Switch</b>	Closing a switch completes the circuit allowing the current to flow.
<b>Bulbs</b>	Electricity flowing through makes the filament glow.
<b>Current</b>	The amount of electricity flowing around a circuit. Measured in amperes (A).
<b>Current in a Series Circuit</b>	Current is not used up as it goes around the circuit, it is the same everywhere.
<b>Ammeter</b>	Used to measure current.
	Cell circuit symbol
	Bulb circuit symbol
	Switch circuit symbol
	Ammeter circuit symbol

## 2. Models for Circuits

<b>Models</b>	A way of showing or representing something.
<b>Advantages of Using Models</b>	Allow us to help think about complicated ideas in science.
<b>Charges</b>	An electric current is a flow of charges carrying energy from the cells to the components.
<b>Conductors</b>	Charges can move through them easily (e.g. metals).
<b>Insulators</b>	Charges cannot move through them easily.

## Model Example



## Model Example Explanation

- Boiler represents the cell
- Pipes represent the wires
- The radiator represents a component
- Water represents the current

## 3. Series and Parallel Circuits

<b>Series Circuit</b>	A circuit with all the components in one loop.
<b>Series Circuit Diagram</b>	
<b>Parallel Circuit</b>	A circuit with branches that split apart and join again.
<b>Parallel Circuit Diagram</b>	
<b>Parallel Circuit Advantages</b>	Each bulb/component can be turned on individually. If one bulb/component breaks the components in other branches stay on (unlike a series circuit).
<b>Current in a Parallel Circuit</b>	The current splits when it reaches a branch. The current in all the branches add up to the current in the main part of the circuit.

## Adding Bulbs

If you add bulbs into a series circuit the current gets smaller and the bulbs dimmer. In a parallel circuit if you add bulbs on different branches they stay bright.

## 4. Changing the Current

<b>Voltage</b>	A way of saying how much energy is transferred by electricity. The voltage of the cell helps push the charges around the circuit. Measured in volts (V).
<b>Voltmeter</b>	Used to measure voltage. Voltmeters are connected across a component.
<b>Connecting a Voltmeter</b>	
<b>Voltage in a Series Circuit</b>	The voltage across all the components adds up the voltage across the cell.
<b>Resistance</b>	How difficult it is for electricity to flow through something.
<b>Resistor</b>	A component that makes it difficult for electricity to flow-reduces size of current.
	Voltmeter circuit symbol
	Resistor circuit symbol
	Variable resistor circuit symbol

## 5. Using Electricity

<b>Hazard</b>	Something that could cause harm.
<b>Risk</b>	The chance that a hazard will cause harm.

## Electricity Risks

Can cause fires, burns to the body and stop the heart from working.

## Reducing Risks

Don't touch bare metal parts of plugs, don't poke things into sockets, keep water away from electricity, don't plug too many things into a socket and never use a damaged wire.

## Fuse

A wire that melts if the current is too high, breaking the circuit.

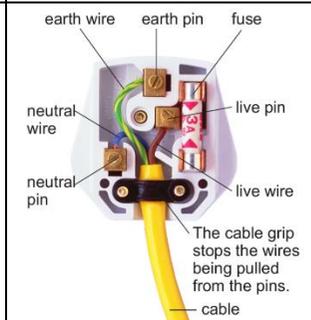
## Circuit Breaker

Cuts off the current if it is too high.

## Plug Wires

**Live** and **neutral** wires make an appliance work; **earth** wire is for safety.

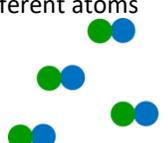
## Plug Diagram



Lesson	Memorised?
1. Switches and Current	
2. Models for Circuits	
3. Series and Parallel Circuits	
4. Changing the Current	
5. Using Electricity	

# 7H Atoms, Elements and Molecules

## 1. The Air We Breathe

<b>Particles</b>	Tiny pieces of matter that make up everything.
<b>Atoms</b>	The simplest particles of matter that make up everything.
<b>Elements</b>	A substance made up of one type of atom. 
<b>Molecules</b>	Two or more atoms joined together in a group. 
<b>Compound</b>	Two or more different atoms joined together. 
<b>Mixture</b>	Two or more substances jumbled together but not chemically joined together. 
<b>Periodic Table</b>	A table that lists all of the known elements.
<b>Air</b>	A mixture of different gases- nitrogen, oxygen, argon, carbon dioxide
<b>Pure</b>	A substance made up of a single element/compound and nothing else.

## 2. Earth's Elements

<b>Chemical Symbols</b>	The 1 or 2 letters given to each element
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<b>Earth's Crust</b>	Made up of oxygen, iron, silicon, aluminium, calcium and other elements.
<b>Naturally Occurring Elements</b>	Usually found as compounds, some found pure. Can be extracted from compounds by simple chemical reactions.
<b>Properties</b>	What an element is like, its appearance and how it behaves.
<b>Recycling</b>	Using a material again to save resources and make sure we don't run out.
<b>Carbon</b>	Can be found as diamond and graphite. The different properties of each form are due to the ways the atoms are joined together.

## 3. Metals and Non-Metals

<b>Common Metal Properties</b>	Solid, high melting point, strong, flexible, malleable, shiny and good conductors of heat and electricity.
<b>Metals</b>	Three-quarters of all elements are metals- found on the left side of the periodic table.
<b>Common Non-Metal Properties</b>	Low melting points, brittle, not shiny and poor conductors of heat and electricity.
<b>Malleable</b>	Able to be beaten and bent into shape.
<b>Flexible</b>	Able to bend without breaking.
<b>Conductor</b>	A substance that allows something to pass through it (e.g. heat, electricity).
<b>Brittle</b>	Not easily bent- breaks under pressure.
<b>Magnetic</b>	Iron, nickel and cobalt are the only magnetic elements.

<b>Mercury</b>	The only metal that is liquid at room temperature.
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## 4. Making Compounds

<b>Silicon Dioxide</b>	The most common compound in the Earth's crust- found in sand, quartz and granite.
<b>Forming Compounds</b>	The first stage often involves heating a mixture of elements. Energy is often given out when elements react to form compounds.
<b>Iron Sulfide</b>	Compound formed by heating a mixture of iron and sulfur.
<b>Bonds</b>	Formed between atoms when compounds are formed.
<b>Iron Sulfide Properties</b>	Iron can be separated from sulfur using a magnet but iron sulfide is not magnetic.
<b>Metal Ores</b>	A rock containing a compound of a metal.
<b>Naming Compounds</b>	If one of the elements in the compound is a metal its name goes first. the non-metal at the end of the compound's name has its name changed so it ends in -ide.

## 5. Chemical Reactions

<b>Chemical Reaction</b>	A change in which one or more new substance is formed.
<b>Word Equation</b>	Used to model chemical reactions.
<b>Reactants</b>	The starting substances- written on left of word equation.
<b>Products</b>	The new substances made- written on right of word equation.

<b>Thermal Decomposition</b>	Using heat to break down a compound- used to extract metals from their compounds.
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**Thermal Decomposition of Mercury Oxide**  
Mercury oxide → mercury + oxygen

<b>Carbonates</b>	Compounds containing a metal, carbon and oxygen.
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<b>Calcium Carbonate</b>	Found in limestone, chalk and marble.
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**Thermal Decomposition of Calcium Carbonate**  
Copper carbonate → copper oxide + carbon dioxide

<b>Test for Carbon Dioxide</b>	Carbon dioxide turns limewater cloudy.
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<b>-ate</b>	A compound that contains two elements plus oxygen will end in -ate. (e.g. zinc sulfate contains zinc, sulfur and oxygen)
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Lesson	Memorised?
1. The Air We Breathe	
2. Earth's Elements	
3. Metals and Non-Metals	
4. Making Compounds	
5. Chemical Reactions	