



# Westhoughton High School

## Year 8 – Autumn Term – 2025

### Knowledge Organisers



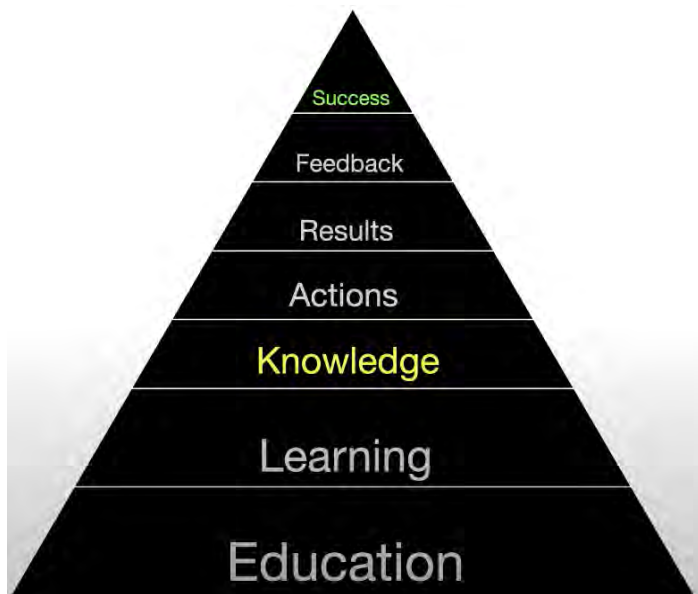
**“EDUCATION**  
IS THE MOST POWERFUL  
WEAPON WHICH YOU CAN USE TO  
CHANGE THE WORLD.”

**NELSON  
MANDELA**

Name: .....

Form Group & Room: .....

Form Tutor: .....

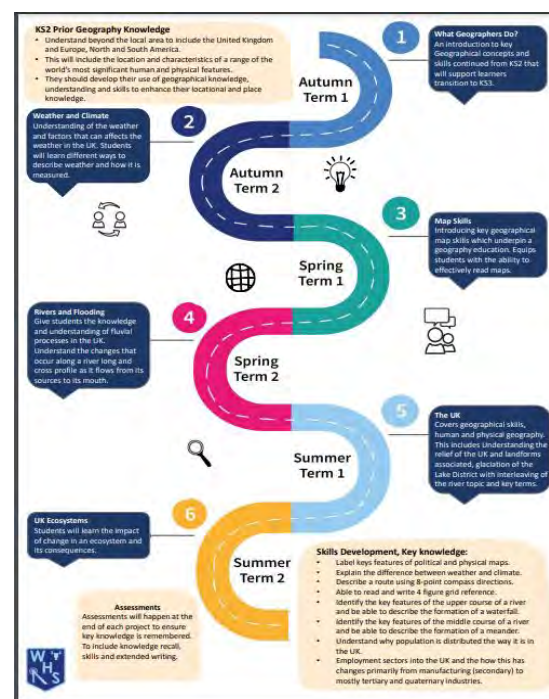


the **“Knowledge”** pyramid

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## Introduction

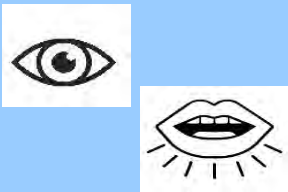
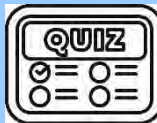
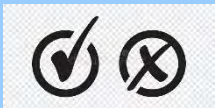
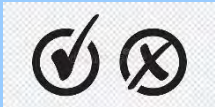
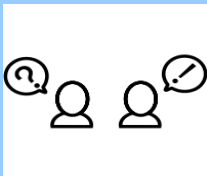
The curriculum in each of your subjects at WHS has been carefully planned to help you learn new things, building upon what you know and preparing you for learning in the future. This is mapped out as a learning journey which each teacher will share with you, so you understand how your learning fits together as a whole. Each subject's roadmap is here <https://www.westhoughton-high.org/subjects/>.



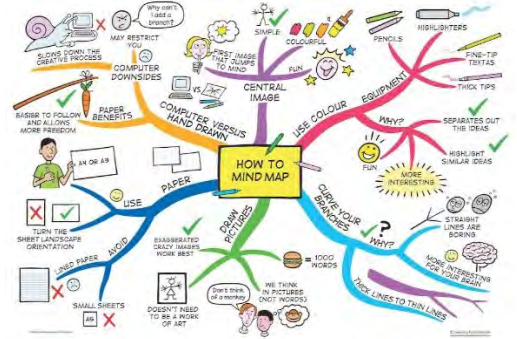
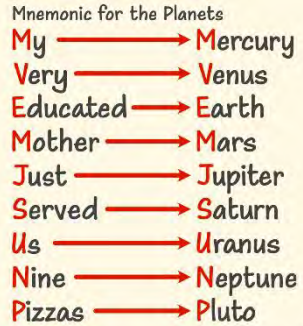
This booklet contains knowledge organisers for all the topics you will study in each subject this term. These give an overview of the essential knowledge that you MUST remember to be as successful as possible in Year 8 and as you move through each year of school. Your teachers will expect you to use them during lessons to find out about what you are going to be learning in a new topic, to retrieve information during a connect activity – connecting your brain to what you are going to learn that lesson and to test yourself or others to recall knowledge. You will also use them to complete home learning activities, to regularly revise from so that you begin to remember more knowledge over time, to discuss what you have been learning with family and friends and to catch up on any learning you might have missed due to absence. You must bring your booklet to school every day and keep it safe at the end of each term as you will continue to use it to support ongoing revision.

**Learning Techniques to use with KOs** – using them regularly is vital to make knowledge stick in your long-term memory (remember you need to revisit information at least 10 times before it is embedded in your memory).

Try using these ideas, choose different techniques to learn small sections of knowledge each day.

|        | Look, Say, Cover, Write, Check                                                                                                                                                               | Key Word Definitions                                                                                                                              | Flash Cards                                                                                                                                                                 | Self Quizzing                                                                                                                                                                        | Mind Maps                                                                                                                                                               | Paired Retrieval                                                                                                                                                                 |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STEP 1 | <p>Look at and read aloud a specific area of your KO.</p>                                                   | <p>Write down the key words and definitions in two columns.</p>  | <p>Use your KO to condense and write down key facts or information onto flash cards.</p>  | <p>Use your KO to create a mini quiz. Write down your questions relating to the information.</p>  | <p>Create a mind map with the information on your KO.</p>                            | <p>Ask a partner, friend or family to use the KO or your flash cards.</p>                     |
| STEP 2 | <p>Cover or flip the KO over and write down everything you remember.</p>                                    | <p>Repeat the above but don't look at your KO</p>               | <p>Add pictures that might help you remember. Then self-quiz using the flash-cards.</p>  | <p>Answer the questions, remember to use full sentences.</p>                                     | <p>Check your KO to make sure there are no mistakes on your mind map.</p>            | <p>Make sure they test you on different sections of the KO and also on previous topics.</p>  |
| STEP 3 | <p>Check what you have written down. Correct any mistakes and add anything you missed in purple pen.</p>  | <p>Use a purple pen to check and correct your work</p>         | <p>Ask a friend or family member to quiz you on your knowledge.</p>                     | <p>Ask a friend or family member to quiz you using the questions.</p>                           | <p>Try to make more connections, link the information together where you can.</p>  | <p>Repeat this regularly so that you are frequently looking at KOs past and present.</p>    |



| Mind Mapping                                                                                                                                                                                                                                                                                                                                                                                                                                    | Flash Cards                                                                                                                                                                                                                                                                                                                                                           | Look, Say, Cover, Write, Check                                                                                                                                                                                                                                                                                                                                                                                                | Key Word Mnemonics                                                                                                                                                                                                                                                                                                                                                                      | Revision Clocks                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Mind mapping is a great way of representing key information from a topic in a visual way. Use colour and images to represent the knowledge you need to learn. Keep writing to a minimum; use only keywords/phrases.</p> <p>Watch the clip for more tips and advice.</p>  |  <p>Make flash cards using your KO. Write a question on one side and the answer on the other or record key- words and definitions. Test yourself frequently. For more advice, scan the code.</p>  |  <p>This technique is one that has been well used from primary school upwards. It is useful for rehearsing keywords, definitions and spellings. Look at the information, read it aloud, cover it up, write it down and then check it is correct.</p>  |  <p>A mnemonic is a sentence you make up where each word begins with the same letter as the word you want to remember. It is a useful technique for remembering a group of facts/words in a certain order.</p>  |  <p>Draw a basic clock and break your KO down into 12 chunks. Make notes on each chunk in the 12 clock sections, use colour and images to make it memorable. Revise each section for 5 minutes, turn over and test how much you can recall.</p> <p>Watch the clip for more tips and advice.</p>  |



# Year 8 Art Knowledge Organiser Term 1

Jim Medway - illustrator



Anthropomorphism



Mind mapping...



Complementary Colours



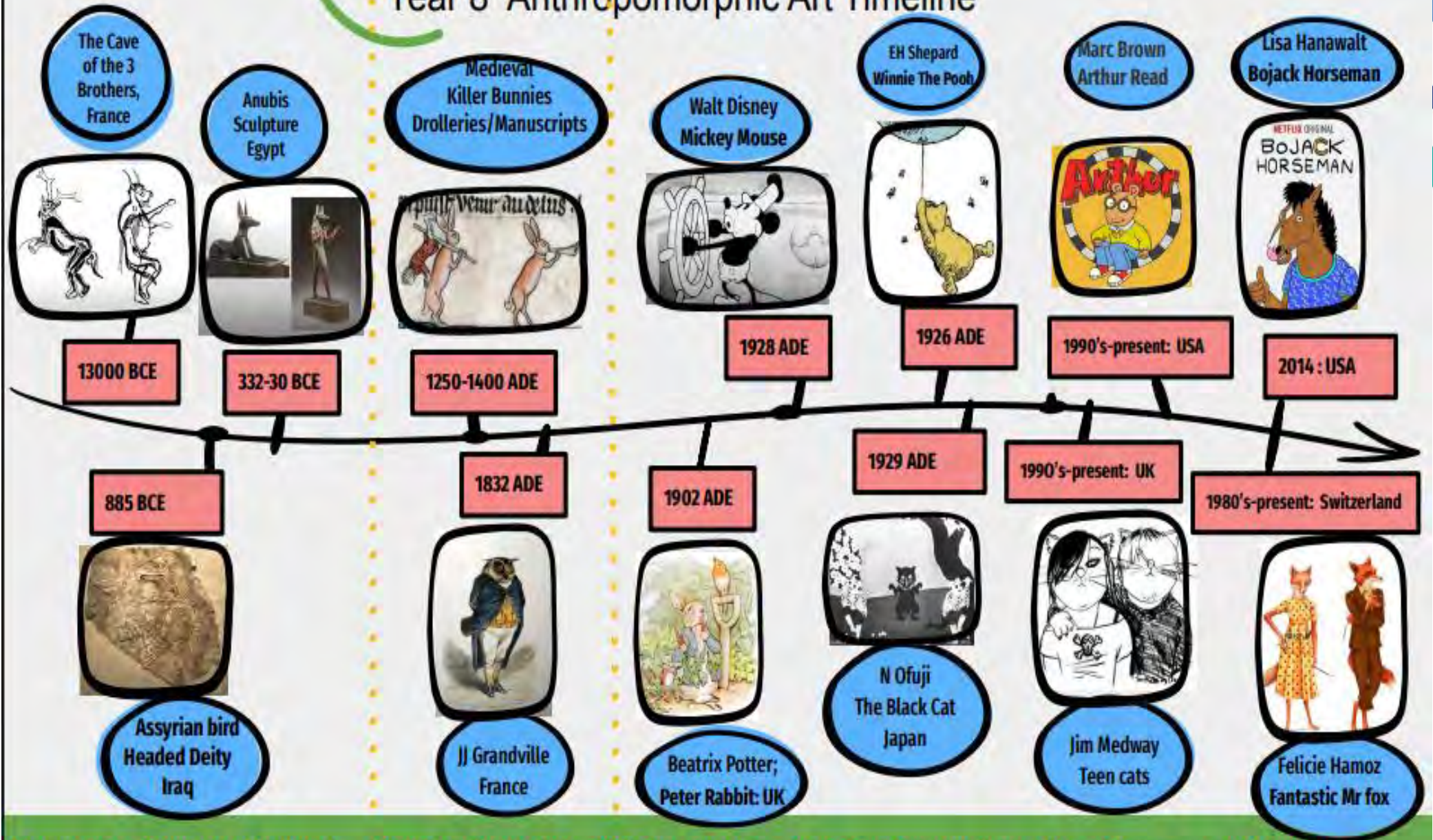
Key words & Definitions

|    |                           |                                                                                                     |
|----|---------------------------|-----------------------------------------------------------------------------------------------------|
| 1  | Illustrator               | Artist who draws pictures to explain written material                                               |
| 2  | Identity                  | Who a person is, or the qualities of a person or group that make them different from others.        |
| 3  | Cartoon                   | A drawing or series of drawings that make people laugh or think.                                    |
| 4  | Imagination / Imaginative | The power of the mind to form a an image of something or someone that is not present to the senses. |
| 5  | Anthropomorphic           | Ascribing/giving human characteristics to something non human.                                      |
| 6  | Proportions               | The relationship in number or size of two things: ratio                                             |
| 7  | Distinctive features      | Individual facial features eg/ small nose.                                                          |
| 8  | Characteristics           | Typical or special quality of a person or thing.                                                    |
| 19 | Animator                  | A person who creates moving cartoons.                                                               |
| 10 | Harmonious Colours        | Colours that blend well together : near to each other on the colour wheel.                          |
| 11 | Complementary Colours     | Colours that are opposite on the colour wheel; they pop next to each other.                         |

Colour Theory continued...



# Year 8 Anthropomorphic Art Timeline



Prehistoric - Egyptian - Medieval - Victorian Illustration - 20th Century animation - 21st Century Illustration - Contemporary Animation



## Computing-Networks KO

|               |                                                                                                                                                                    |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network       | A group of <b>devices</b> connected together, either wirelessly or with a network cable.                                                                           |
| Protocol      | A set of rules                                                                                                                                                     |
| Network cable | Used to connect different devices together. They are often made up of a number of wires.                                                                           |
| Hub           | Connects a number of computers together. Ports allow cables to be plugged in from each connected computer.                                                         |
| Server        | A powerful computer which provides services to a network                                                                                                           |
| Router        | Used to connect two separate networks together across the internet                                                                                                 |
| Wired         | Wired networks send data along cables.                                                                                                                             |
| Wireless      | Wireless networks send data through the air using radio waves                                                                                                      |
| 3G /4G /5G    | Wireless communications standards designed to provide different speeds for mobile devices, such as smartphones, tablets, and wireless hotspots                     |
| WiFi          | a facility allowing computers, smartphones, or other devices to connect to the Internet or communicate with one another wirelessly within a particular area.       |
| Bandwidth     | Bandwidth is the amount of data that can be moved from one point to another in a given time.                                                                       |
| Broadband     | a high-capacity transmission technique using a wide range of frequencies, which enables a large number of messages to be communicated simultaneously.              |
| Data capacity | How much <b>data</b> the storage type can hold, measured in <b>bits</b>                                                                                            |
| Buffering     | In streaming audio or video from the <b>Internet</b> , <b>buffering</b> refers to downloading a certain amount of data before starting to play the music or movie. |

| Layer | Protocols in this layer cover                                   | Protocol Examples                          |
|-------|-----------------------------------------------------------------|--------------------------------------------|
| 1     | Passing data (as electrical signals) over the physical network  | <b>Ethernet</b>                            |
| 2     | Making connections between networks and directing data          | <b>IP</b> (Internet protocol)              |
| 3     | Controlling data flow eg checking data is sent and delivered    | <b>TCP</b> (Transmission Control Protocol) |
| 4     | Turing data into websites and other applications and vice versa | <b>HTTP / FTP / SMTP</b>                   |

### Internet

The internet in a network of networks.

### Internet Protocol

a set of rules governing the format of data sent over the Internet or other network.

### IP address

a unique string of numbers separated by full stops that identifies each computer using the Internet Protocol to communicate over a network.

### VoIP

Voice Over Internet Protocol - the set of rules that makes it possible to use the Internet for telephone or videophone communication.

### IoT

A network of **Internet** connected objects able to collect and exchange data.

### Spam

Unsolicited messages sent over the Internet, typically to a large number of users, for the purposes of advertising, phishing, spreading malware, etc.

### WWW (World Wide Web)

Part of the internet that contains websites, web pages, and the links between them.

### Web browser

A **browser** is a software application used to locate, retrieve and display content on the World Wide **Web**, including webpages, images, video and other files. FOR example Chrome / FireFox

### Web server

A **web server** is a computer that runs websites. ... The basic objective of the **web server** is to store, process and deliver **web pages** to the users.

### Web page

A hypertext document connected to the World Wide Web.

### Search engine

A type of website that allows you to look up information on the World Wide Web.

### URL

Uniform Resource Locator (**URL**) is another name for a web address

### HTTPS

Stands for Hypertext Transfer Protocol Secure. This encrypts messages between a browser and the website so the messages cannot be understood by other devices.

### HTTP

Stands for Hypertext Transfer Protocol. Messages are sent between a browser and a website in plain text and can be read and understood by other devices.

### Domain Name

A **domain name** is a unique **name** that identifies a **website**.

**URL**  
<http://www.facebook.com>  
 protocol      world wide web      domain name

### Advantages of wireless network

- No trailing/trips/hazards
- It is quick and cheap to connect to new devices
- Allows portability

### Disadvantages of wireless network

- Lower bandwidth
- Wireless connections can be weakened by walls and ceilings
- Less Secure

### Advantages of a wired network

- Faster connection (little to no interference)
- Higher bandwidth

### Better security

### Disadvantages of a wired network

- Cables can be a trip hazard and look unpleasant
- More expensive and time-consuming to add devices, as each device needs cables
- Devices are in fixed positions (no portability)



# COMPUTING— Scratch <https://scratch.mit.edu> Name \_\_\_\_\_

| KEY TERMS        |                                                                                           |                                                                                    |
|------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Word             | Definition                                                                                | Image                                                                              |
| Sprite           | The name of a <b>character</b> in Scratch.                                                |  |
| Scratch          | The name of the <b>programming lan-</b>                                                   |  |
| Turn # # degrees | How far to the left or right you want to move your sprite. # is replaced with the number. |  |
| Block            | A single instruction in our algorithm.                                                    |  |

## Scratch blocks and program example



## Algorithms



An **algorithm** is a **sequence** of step-by-step **instructions** to solve a problem.

Algorithms can be written in code, or be a **sequence** of **BLOCKS**.

We can use **algorithmic prediction** to guess what will happen. My **Sprite** is going to get bigger!

The **repeat loop** in this example, will move ten times. This is **more efficient** than writing out ten **commands**.

The **turn # degrees block** will turn my sprite. This **algorithm** will turn my **sprite**.

|                      |                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|
| Instructions         | Detailed information about how something                                                                                  |
| Execute              | When you create a program for a computer, you give it a set of commands to execute.                                       |
| Sequence             | The order the instructions need to be in.                                                                                 |
| Selection            | Making choices.                                                                                                           |
| Iteration            | Doing the same thing more than once<br><b>Iteration</b> in computing is the process of repeatedly executing instructions. |
| Repeat               | The block that makes an instruction happen more than once.                                                                |
| Variables            | A <b>variable</b> is a name that refers to data being stored by the computer, which can change.                           |
| Subroutines          | In computer <b>programming</b> , a <b>subroutine</b> is a sequence of program instructions that                           |
| If block             | Allows us to check a <b>condition</b> and perform an operation if the condition <b>evaluates</b> to 'true'.               |
| Debugging            | Finding errors in our code.                                                                                               |
| Abstraction          | Taking away all the information that isn't needed.                                                                        |
| Decomposition        | Breaking down a problem.                                                                                                  |
| Count-controlled     | Count-controlled iteration will execute the commands a set number of times.                                               |
| Condition-controlled | Condition-controlled will execute the commands until the condition you set is no longer being met.                        |



## Year 8 Drama Knowledge Organiser – Darkwood Manor

### Darkwood Manor

Your characters see a poster advertising a cash prize to stay the night in Dark Wood Manot. Each lesson is going to be a different episode in the story, which you will create within your groups, mastering your story development skills you first used in Cluedo., during Year 7

| <u>Performance Techniques</u> |                                                                   |
|-------------------------------|-------------------------------------------------------------------|
| Split Scene                   | Two or more scenes which are performed on stage at the same time. |
| Narrative captions            | Sentences that explain a freeze frame fully to an audience        |
| Characterisation              | The creation of a fictional character.                            |
| Tone                          | The emotional quality of your voice                               |
| Storyline development         | Process of creating and improving a story.                        |



### Tasks for this topic:

- Using your voice to create tension and suspense when telling stories
- Creating and developing storyline for a horror piece
- Using split scenes to represent different scenes happening at the same time
- Using narrative captions to enhance a freeze frame
- Creating characters that a different yourself



## Year 8 Knowledge Organiser – Story Theatre

### Story Theatre

You will be creating a piece of drama for an audience that is younger than you, using Roald Dahl's Three Little Pigs. Story Theatre requires two techniques, physical theatre and narration, so you will complete workshops on these two techniques.

Tasks for this topic:

- Use and practice narration to tell a story
- Take part in a workshop to gain knowledge and understanding of physical theatre
- Work as a team to develop a piece of work for a younger audience using the skills you have learnt over KS3 already and applying narration and physical theatre.



| Performance Techniques |                                                                  |
|------------------------|------------------------------------------------------------------|
| Physical Theatre       | Physical movement used to tell a story                           |
| Narration              | Spoken commentary used to convey a story to an audience          |
| Expression             | Changing the tone and sound of your voice to communicate emotion |
| Rehearsal              | Practicing work to improve and refine it.                        |



# YEAR 8 AUTUMN TERM KNOWLEDGE ORGANISER: THE MONSTER IN THE MIRROR THE YELLOW WALLPAPER BY CHARLOTTE PERKINS-GILMAN

**Plot Overview:** Set in 1890's New England, Charlotte Perkins Gilman's classic short story, "The Yellow Wallpaper" tells the story of a young woman's gradual descent into psychosis.

## Key Characters

|           | Plot Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Beginning | <ul style="list-style-type: none"> <li>The unnamed narrator begins her journal entry describing at the house and grounds her husband has taken her to for the summer due to her nervous depression.</li> <li>The narrator writes that John, the narrator's husband and doctor, mocks her illness and her perspective.</li> <li>John has prescribed the 'rest cure' treatment.</li> <li>The narrator reveals that she disagrees, and feels that activity, freedom and interesting work would help her condition. She begins her secret journal for this reason.</li> <li>The narrator notes how the house used to be beautiful but has been neglected for years due to its emptiness.</li> <li>At the very top floor of the house, the narrator finds what she assumes is a nursery with yellow wallpaper. The strange pattern disturbs the narrator.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Middle    | <ul style="list-style-type: none"> <li>As the weeks pass, the narrator manages to hide her journal from her husband.</li> <li>The narrator writes about her frustration with John's treatment choice- the rest cure. She takes a new interest in the yellow wallpaper.</li> <li>John worries about her strange obsession and refuses to re-paper the room.</li> <li>The narrator describes her bedroom and assumes it was used as a nursery due to the paper being torn off in spots, the huge scratches on the floor and the furniture being fixed to the wall.</li> <li>John's sister, Jennie, who is also staying with them as a housekeeper and nurse, keeps interrupting the narrator's writing.</li> <li>The Fourth of July passes. The narrator writes that her family came to visit which made her very tired.</li> <li>John threatens to send her to Weir Mitchell; the fearsome real-life doctor who treated the author and caused her great suffering.</li> <li>The narrator reveals in her journal that she is alone most of the time and often studies the wallpaper because she finds it entertaining.</li> <li>The narrator shares that she starts to see a woman 'stooping down and creeping' behind the pattern on the wallpaper which, at nighttime, looks like the bars of a cage.</li> <li>John thinks his wife's condition is improving but the narrator is barely sleeping and believes she can smell the wallpaper over the house.</li> <li>The narrator reaches the conclusion that there is a woman trapped in the wallpaper at night and escapes during the day.</li> </ul> |
| End       | <ul style="list-style-type: none"> <li>Suspecting that John and Jennie know of her obsession, the narrator decides to destroy the wallpaper by peeling it off during the night.</li> <li>The next day, the narrator goes mad: she bites and tears the paper in order to free the trapped woman.</li> <li>The narrator is hopelessly insane and is convinced that there are many women creeping in the wallpaper. She grabs a chair and a rope to reach more of the paper.</li> <li>The narrator starts to think she has also come out of the wallpaper.</li> <li>John breaks into the locked room and sees her insanity.</li> <li>John faints in the doorway.</li> <li>The narrator 'creeps over him.'</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>The Narrator (Jane)</b><br/>Protagonist / narrator / young married woman / a new mother / upper-middle class / suffers with postnatal depression / manipulated / highly imaginative / obsessive.</p> |  <p><b>Doctor John</b><br/>Husband / doctor / practical and logical / attempts to control his wife / dominant / believes in the rest-cure.</p>    |
|  <p><b>Jennie</b><br/>John's sister / housekeeper / traditional / content with performing a domestic role / suspects the narrator is more troubled than she lets on.</p>                                    |  <p><b>The Woman in the Wallpaper</b><br/>A figment of the narrator's imagination / trapped / desperate / prisoner of the wallpaper.</p>          |
|  <p><b>Mary</b><br/>Nurse who looks after the narrator's baby / embraces her domestic role / subservient.</p>                                                                                              |  <p><b>Weir Mitchell</b><br/>Real-life doctor / created the rest-cure / cruel / lack of empathy for women / treated the author in real life.</p> |

## Key Symbols

|                                                                                       |                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Wallpaper                                                                             | Journal                                                                               | Light/dark                                                                            |
|  |  |  |
| The Woman                                                                             | The Bedroom                                                                           |                                                                                       |
|  |  |                                                                                       |



# YEAR 8 AUTUMN TERM KNOWLEDGE ORGANISER: THE MONSTER IN THE MIRROR THE YELLOW WALLPAPER BY CHARLOTTE PERKINS-GILMAN

Context – *The Yellow Wallpaper* written by Charlotte Perkins-Gilman is a semi-autobiographical short story and was published in 1892.

## Charlotte Perkins-Gilman:

Author / born in 1860 in Connecticut, USA / lived in poverty after her father abandoned her family / moved all over America during her childhood and teenage years / she wasn't allowed to make friends or read books to keep her 'domesticated' for her future husband / eventually, she attended the Rhode Island School of Design and worked briefly as an artist / she suffered from a 'nervous condition' (poor mental health) after the birth of her daughter – we now know this to be postpartum depression / she was prescribed the rest cure / Charlotte Perkins-Gilman used her personal experience to create *The Yellow Wallpaper*



## Gothic Literature:

Gothic literature is a genre of fiction. Many of the most famous Gothic novels were written during the Victorian period (1900s). Gothic literature can be recognised by the following conventions: darkness / night, power vs powerlessness, imprisonment, uncertainty, death, madness, phobias, an innocent victim, good vs evil, an isolated or abandoned setting, supernatural beings, romance and the uncanny.



*The Yellow Wallpaper* is Gothic story, as it includes the following conventions: an isolated setting, imprisonment, power vs powerlessness, the uncanny, uncertainty and madness.

## Big Ideas

### Patriarchy

A system of society or government in which men hold the power and women are excluded from it.



## Silas Weir Mitchell:

An American doctor, scientist, novelist and poet. He pioneered the rest-cure to treat women who suffered from 'nervous conditions' such as melancholia and hysteria.

Weir Mitchell treated Charlotte Perkins-Gilman using the rest cure. Gilman described leaving Mitchell's treatment as a 'narrow escape' and used *The Yellow Wallpaper* to expose the truth about this damaging treatment.



## The Uncanny:

The uncanny is a critical theory that was developed by Sigmund Freud. It refers to a psychological experience where something familiar becomes unfamiliar. This means that the 'familiar' becomes strange, unsettling, or frightening and gives a sense of unease and dread.



### Manipulation

To influence or control another, Usually in an unfair or cruel way.



## The Rest Cure:

A form of treatment developed by Weir Mitchell in the 19<sup>th</sup> century and prescribed to women who suffered from 'nervous conditions,' such as melancholia and hysteria. It was a strictly enforced regime of six to eight weeks of bed rest, isolation and forced feeding. No creative or intellectual activity were allowed. Most patients considered the 'cure' to be worse than their original illness.

In *The Yellow Wallpaper*, the rest cure is used forced upon the narrator and has an oppressive and harmful impact on her mental health.



## 19th Century Attitudes Towards Mental Health:

Mental health conditions were misunderstood during the 1800s. Society had negative and fearful attitudes towards mental health: people who suffered from poor mental health were stigmatized, thought of as 'mad', 'insane' and often seen as less than human.

Women experiencing poor mental health often experienced the worst treatment. Many were forced to confinement in asylums. Other women were subjected to the rest cure. As a result, treatment was harsh, barbaric and harmful.

In *The Yellow Wallpaper*, the narrator is stigmatized and experiences the rest cure.



### Deceit

The act of convincing one or many people of untrue information by concealing or misrepresenting the facts.



## Melancholia:

Melancholia / melancholy means a feeling of deep and extreme sadness. In the 19th century, it was a term used to describe a 'nervous condition' (what we now know as mental health conditions). It was an illness that caused delusions and hallucinations which often led to the patient being diagnosed with psychosis (insanity). Today, we could refer to this illness as chronic depression or other forms of mental health conditions such as bipolar disorder or schizophrenia.

In *The Yellow Wallpaper*, the narrator suffers from a 'nervous condition', which was based on Charlotte Perkins-Gilman's own experience of 'melancholia'.



## Hysteria:

An outdated medical term for what we now understand to be mild depression or anxiety. Some symptoms included: anxiety, shortness of breath, fainting, nervousness, insomnia, fluid retention, irritability and loss of appetite.

The term 'hysteria' originates from the Greek word 'hystera', meaning 'womb' or 'uterus', reflecting the belief that the uterus was responsible for mental health conditions. We now understand this to be a misogynistic (prejudiced against women) diagnosis, as it led to the belief that women were emotionally fragile. This condition was associated with female patients. The controversial Hysteria Theory was created by Sigmund Freud, the famous Austrian psychoanalyst. In *The Yellow Wallpaper*, the narrator's behaviour is often described as 'hysterical' by her husband.



### Perception

The way in which something is regarded, understood, or interpreted.



### Trauma

A distressing or Disturbing experience that is overwhelming and leaves a lasting negative impact.





| YEAR 8 AUTUMN TERM KNOWLEDGE ORGANISER: THE MONSTER IN THE MIRROR                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                               |                                                                                                                                                                                    |                                                                                                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                                                        |                                                                                           |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
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| TECHNICAL ACCURACY & KEY DEVICES                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                               |                                                                                                                                                                                    |                                                                                                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                                                        |                                                                                           |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
| 'FOUR FOR MORE'-THE 4-PART SUCCESS STORY                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                               | Device / Feature/ Skill                                                                                                                                                            |                                                                                                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                                                        | Tenses                                                                                    |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
| Part                                                                                                                                                               | Key Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                               |                                                                                                                                                                                    |                                                                                                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                                                        |                                                                                           |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
| <b>SETTING</b><br>                                                                | <ul style="list-style-type: none"><li>Introduce your story by focusing on the <b>setting</b></li><li>Describe the <b>weather</b> / environment / surroundings / <b>objects</b></li><li>DEVICES: <b>Personification</b> / <b>pathetic fallacy</b> / symbolism / <b>prepositions</b></li></ul>                                                                                                                                                                                    |                                                                                                                                                                               | <b>Metaphor</b><br>Describing something by stating it is something else<br>                     |                                                                                                                                                                                                   | <b>Anthropomorphism</b><br>Giving human characteristics or behaviour to a god, animal, or object.<br> |                                                                                                                                                                        | <b>PAST</b><br>Something that has already happened<br>Had / went / said / walked          |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
| <b>CHARACTER</b><br>                                                              | <ul style="list-style-type: none"><li>Describe your <b>character(s)</b> within your setting</li><li><b>One or two characters</b> – keep it minimal</li><li><b>Craft their actions</b> / behaviour to reflect their personality and emotions</li><li>DEVICES: <b>Sensory language</b> / <b>similes</b> / <b>metaphors</b> / minimal dialogue</li></ul>                                                                                                                           |                                                                                                                                                                               | <b>Juxtaposition</b><br><b>Contrasting ideas / images</b><br>                                   |                                                                                                                                                                                                   | <b>Personification</b><br>Giving living qualities to something non-human<br>                          |                                                                                                                                                                        | <b>PRESENT</b><br>Something that is currently happening<br>Have / go / say / walk         |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
| <b>FLASHBACK</b><br>                                                              | <ul style="list-style-type: none"><li>Include a flashback to teach the reader something about your character and / or their world</li><li><b>Begin this section with a trigger</b></li><li>This memory should contrast your character's current situation</li><li>DEVICES: <b>Sensory language</b> / <b>juxtaposition</b> / <b>light imagery</b> / <b>similes</b> / <b>metaphors</b> / <b>symbolism</b></li></ul>                                                               |                                                                                                                                                                               | <b>Show Not Tell</b><br>Describing a character through their actions and facial expressions<br> |                                                                                                                                                                                                   | <b>Sensory language</b><br><b>Five senses</b><br>                                                     |                                                                                                                                                                        | <b>FUTURE</b><br>Something that will happen<br>Will have / will go / will say / will walk |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
| <b>RETURN TO THE SCENE</b><br>                                                   | <ul style="list-style-type: none"><li><b>Begin this section with a trigger that forces your character back to their current world</b></li><li><b>Offer a glimpse of change / a subtle change to end your story</b></li><li>Return to something that you described in your opening paragraph to create a cyclical structure</li><li>DEVICES: <b>Sensory language</b> / <b>personification</b> / <b>pathetic fallacy</b> / <b>symbolism</b> / <b>cyclical structure</b></li></ul> |                                                                                                                                                                               | <b>Temporal Reference</b><br>Using a time reference to indicate a flashback<br>                |                                                                                                                                                                                                   | <b>Simile</b><br>Comparing something to something else: 'as', 'like'<br>                             |                                                                                                                                                                        | <b>Common Homophones</b>                                                                  |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
|                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                               |                                                                                                                                                                                    |                                                                                                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                                                        |       |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
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| Word Classes                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                               |                                                                                                                                                                                    |                                                                                                                                                                                                   |                                                                                                                                                                                          |                                                                                                                                                                        |                                                                                           |                                                                                                                                                                                  |  |                                                                                                                                                           |  |
| <b>Adjective</b><br>Describes a noun or pronoun.<br>Blue / young / powerful<br> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Adverb</b><br>How, when or where something happens.<br>Furiously / yesterday / here<br> |                                                                                                                                                                                    | <b>Preposition</b><br>Where something is; the time, direction or cause of something.<br>On / under / above<br> |                                                                                                                                                                                          | <b>Pronoun</b><br>Words that replace nouns or noun phrases.<br>She / he / they<br> |                                                                                           | <b>Noun</b><br>Person, place, thing, idea or state of being.<br>Manchester / cat / love<br> |  | <b>Verb</b><br>An action or state of being.<br>Jump / write / be<br> |  |



# YEAR 8 AUTUMN TERM KNOWLEDGE ORGANISER: THE MONSTER IN THE MIRROR

## TECHNICAL ACCURACY & KEY DEVICES

Sentences are created by using different types of clauses

**Main clause**

A main clause contains one subject and one verb. It has one main idea and it forms a complete sentence (it makes sense on its own).



**Subordinate clause**

A subordinate clause adds extra information to a sentence and does not function as a complete sentence (it does not make sense on its own). It depends on the main clause to make sense and is usually separated by a comma.



**Sentence Structure**

**Example**

**Simple sentence:** one main clause



The prisoner escaped.

**Compound sentence:** two main clauses linked with a connective / conjunction



The prisoner escaped and he never returned.

**Complex sentence:** one or two main clauses with embedded dependent / subordinate clauses



The prisoner escaped despite the elaborate security system.

**2V/3V:** use two or three verbs



The prisoner anxiously **sprinted**, **jumped** and **climbed** over any barrier that blocked his way.

**2A/3A:** use two or three adjectives



The road was **long**, **empty** and **bewildering**.

**Fronted adverbial:** begin your sentence with an adverb



**Quickly**, he leapt over the wall.

**As / When / Although:** use any of these words at the beginning of your sentence to introduce a subordinate clause



**Although** sweat trickled down her face, she continued to climb.

**Punctuation**

**Capital Letters**

- Start of a sentence
- Proper nouns: names of places, people or things
- The pronoun 'I'
- Months and days of the week



**Commas**

- Separate three or more items in a list
- After a fronted adverbial
- Before and after a subordinate clause (like brackets)
- After subordinate clauses and phrases that begin a sentence
- Separate question tags
- Separate direct speech from non-speech
- Before and after a relative clause



**Apostrophes**

- To show that letters are missing in a word
- To show possession



**Full Stops**

- To end a sentence



**Semicolons**

- Separate two main clauses that are closely connected to each other but could stand alone as two separate sentences
- To replace a coordinating conjunction
- To break up a list using longer phrases to signal which items are together



**Colons**

- At the end of a clause to elaborate / give more details
- At the end of a clause to give an explanation
- At the end of a clause to show an answer



**Exclamation Mark**

- To show strong feelings
- To show a raised voice



**Question Mark**

- After a direct question



**Speech Marks**

- Around direct speech (after the punctuation)





## Year 8 Topic 1: Qu'est-ce que tu fais? - What do you do?

### I read...

- Je lis des livres sur les animaux  
 - I read some books about animals  
 Je lis des magazines sur les célébrités  
 - I read celebrity magazines  
 Je lis des roman policiers  
 - I read crime novels/thrillers  
 Je lis des romans d'amour  
 - I read love novels

### Opinions of book genres

- J'adore les livres sur les animaux  
 - I love books about animals  
 Je n'aime pas les magazines sur les célébrités  
 - I don't like celebrity magazines  
 Je déteste les romans policiers  
 - I hate crime novels/thrillers  
 J'aime beaucoup les romans d'amour  
 - I really like love novels

### I watch (films)

- Je regarde les films d'action  
 - I watch action films  
 Je regarde les films d'amour  
 - I watch love films  
 Je regarde les films d'horreur  
 - I watch horror films  
 Je regarde les films de science-fiction  
 - I watch science-fiction films  
 Je regarde les comédies  
 - I watch comedies

### My favourite...

- Mon émission préférée, c'est...  
 My favourite programme is...  
 Mon film préféré, c'est...  
 My favourite film is...  
 Mon acteur / actrice préféré(e), c'est...  
 My favourite actor/actress is...  
 Mon livre préféré, c'est...  
 My favourite book is...  
 Mon personnage préféré, c'est...  
 My favourite character is...



### I watch (programmes)

- Je regarde les documentaires  
 - I watch documentaries  
 Je regarde les émissions de sports  
 - I watch sports programmes  
 Je regarde les infos / informations  
 - I watch the news  
 Je regarde les séries  
 - I watch TV series  
 Je regarde les séries policières  
 - I watch crime/police series  
 Je regarde les comédies  
 - I watch comedies

### Key ideas

- Watching TV  
 Watching films  
 Reading  
 Online habits

### In the past...

- Je lisais des (romans policiers)  
 - I used to read some (crime novels/thrillers)  
 Je regardais les (séries)  
 - I used to watch (series)  
 J'aimais les (films d'amour)  
 - I used to like (love films)  
 Je détestais les (documentaires)  
 - I used to hate (documentaries)

### Negatives

- Je ne regarde pas de comédies  
 I don't watch comedies  
 Je ne lis jamais de documentaires  
 I never watch documentaries  
 Je ne fais que les quiz  
 I only watch quizzes

### Online

- Je fais beaucoup de choses  
 - I do lots of things  
 Je fais des recherches pour mes devoirs  
 - I do research for my homework  
 Je fais des achats  
 - I do online shopping (I make purchases)  
 Je fais des quiz  
 - I do quizzes  
 Je joue à des jeux en ligne  
 - I play games online  
 Je vais sur mes sites préférés  
 - I go on my favourite websites  
 J'envoie des emails  
 - I send emails  
 Je poste des commentaires  
 - I post comments

### Online recently

- J'ai discuté  
 - I discussed/chatted  
 J'ai écouté la radio  
 - I listened to the radio  
 J'ai joué à des jeux en ligne  
 - I played games online  
 J'ai posté des photos  
 - I posted photos  
 J'ai regardé la télé  
 - I watched the TV  
 J'ai regardé des clips vidéo  
 - I watched video clips  
 J'ai téléchargé des chansons  
 - I downloaded songs



### Time expressions

Quelquefois – sometimes  
Normalement – normally  
D'habitude – usually  
En ce moment – at the moment  
Souvent – often  
Tous les jours – every day  
Tous le soirs – every evening  
Tout le temps – all the time  
De temps en temps – from time to time  
Une fois par mois – once a month  
Deux fois par semaine – twice a week  
Rarement – rarely  
Après le dîner – after dinner/tea  
Avant de me coucher – before going to bed  
Hier – yesterday  
Hier soir – yesterday evening/last night  
Le weekend dernier – last weekend  
Avant – before  
Dans le passé – in the past

### Aller – to go

Je vais – I go  
Tu vas – you go (singular / informal)  
Il va – he goes  
Elle va – she goes  
On va – we go  
Nous allons – we go  
Vous allez – you go (plural / polite)  
Ils vont – they go (m / m+f)  
Elles vont – they go (f)

### Key verbs in the present tense

### Lire – to read

Je lis – I read  
Tu lis – You read (singular / informal)  
Il lit – he reads  
Elle lit – she reads  
On lit – we read  
Nous lisons – we read  
Vous lisez – you read (plural / polite)  
Ils lisent – they read (m / m+f)  
Elles lisent – they read (f)

### Faire – to do/make

Je fais – I do/make  
Tu fais – you do/make (singular / informal)  
Il fait – he does/makes  
Elle fait – she does/makes  
On fait – we do/make  
Nous faisons – we do/make  
Vous faites – you do/make (plural / polite)  
Ils font – they do/make (m / m+f)  
Elles font – they do/make (f)

### Opinions

À mon avis – In my opinion  
Je pense que – I think that  
J'aime – I like  
J'adore – I love  
Je préfère – I prefer  
Je n'aime pas – I don't like  
Je déteste – I hate  
Je trouve que – I find that  
Je pense que – I think that  
Je crois que – I believe that  
parce que / car - because  
car - because  
Je trouve que – I find that  
Je pense que – I think that  
Je crois que – I believe that  
c'est – it is  
ce n'est pas – it isn't  
c'était – it was  
Je trouve ça – I find that  
très - very  
assez - quite  
un peu – a bit  
important - important  
intéressant - interesting  
marrant – funny  
génial / chouette – great  
ennuyeux / barbant – boring  
nul – rubbish

### Sequencers

D'abord / Tout d'abord  
– firstly / first of all  
Puis - then  
Ensuite - next  
Après - after  
Un peu plus tard – a bit later  
Finalement - finally



### Regarder – to watch

Je regarde – I watch  
Tu regardes – you watch (singular / informal)  
Il regarde – he watches  
Elle regarde – she watches  
On regarde – we watch  
Nous regardons – we watch  
Vous regardez – you watch (plural / polite)  
Ils regardent – they watch (m / m+f)  
Elles regardent – they watch (f)



Year 8 Topic 1: Transferable language



## Year 8 Topic 1: Vamos – Let's go

### Introductions

¿Cómo te llamas? – What are you called?

Me llamo (María) – I am called (María)

Mi amigo se llama (Juan) – My friend is called (Juan)

¿Cómo se escribe tu nombre? – How do you write your name?

Mi nombre se escribe... – My name is written...



### Classroom items

¿Qué tienes en tu bolsa? – What do you have in your bag?

En mi bolsa – In my bag

¿Qué tienes en tu estuche? – What do you have in your pencil case?

En mi estuche – In my pencil case

tengo - I have

veo - I see

hay - there is

necesito - I need

un estuche - a pencil case

un boli - a pen

un lápiz - a pencil

una goma - a rubber

una regla - a ruler

un cuaderno - an exercise book

un libro - a book

una agenda - a diary/planner

No tengo (bolígrafo) - I don't have (a pen)

### Nationalities

Soy español / española - I am Spanish

Soy europeo / europea - I am European

Soy canario / canaria - I am Canarian

Soy balear - I am Balearic

Soy del Reino Unido - I am from the United Kingdom

Soy latinoamericano / latinoamericana - I am Latin American

### Where we live

¿Dónde vives? – Where do you live?

Vivo en (Bolton) – I live in (Bolton)

Mi amigo (m) / Mi amiga (f) vive en (Salford) - My friend lives in (Salford)

En el futuro me gustaría vivir – In the future I would like to live

en - in

el norte - the north

el este - the east

el sur - the south

el oeste - the west

el centro - the centre

de - of

España - Spain

Europa - Europe

las Islas Canarias - the Canary Islands

las Islas Baleares - the Balearic Islands

el Reino Unido - the United Kingdom (\*del Reino Unido – of the UK)

América Latina / Latinoamérica - Latin America

### Key ideas

Greetings

Introductions

In my bag

Where I live and nationality



## Year 8 Topic 1: Transferable Knowledge

### The – Definite Article

El – masculine singular  
La – feminine singular  
Los – masculine plural  
Las – feminine plural

### A / an / some – Indefinite Article

un – masculine singular  
una – feminine singular  
unos – masculine plural  
unas – feminine plural

### Connectives

y – and  
o – or  
también – also  
pero – but  
porque – because  
ya que – since  
dado que – given that  
sin embargo – however  
no obstante – however

### Greetings

¡Hola! – Hello!  
Buenos días – Good morning/day  
Buenas tardes – Good afternoon  
Buenas noches – Good evening  
Adiós – Goodbye  
¡Hasta luego! – See you later  
¡Hasta pronto! – See you soon



### Greetings

¿Qué tal? – How are you? (informal)  
¿Cómo estás? – How are you? (Informal)  
¿Cómo está usted? – How are you? (formal)  
Estoy bien – I am good  
Estoy muy bien – I am very good  
Estoy bastante bien – I am quite good  
Tengo frío – I am cold  
Tengo calor – I am hot  
Tengo hambre – I am hungry  
Tengo sed – I am thirsty

### Ser – to be

Soy – I am  
Eres – You are (singular / informal)  
Es – He is/ She is  
Somos – We are  
Sois – You are (plural / informal)  
Son – They are

### Tener - to have

Tengo – I have  
Tienes – You have (singular / informal)  
Tiene – He has/ She has  
Tenemos – We have  
Tenéis – You have (plural / informal)  
Tienen – They have

### Key verbs in the present tense



### Llamarse - to be called

Me llamo – I am called  
Te llamas – You are called (singular / informal)  
Se llama – He is/ She is called  
Nos llamamos – We are called  
Vos llamáis – You are called (plural / informal)  
Se llaman – They are called

### Vivir - to live

Vivo – I live  
Vives – You live (singular / informal)  
Vive – He lives / She lives  
Vivimos – We live  
Vivís – You live (plural / informal)  
viven – They live



### Physical descriptions

De qué color tienes el pelo?  
– What colour is your hair?  
Tengo el pelo rubio – I have blonde hair  
Tengo el pelo castaño – I have brown hair  
Tengo el pelo negro – I have black hair  
Soy pelirrojo – I have ginger hair  
Tengo el pelo largo – I have long hair  
Tengo el pelo corto – I have short hair  
¿De qué color tienes los ojos? – What colour are your eyes?  
Tengo los ojos verdes – I have green eyes  
Tengo los ojos azules – I have blue eyes  
¿Cómo eres? – What are you like?  
Soy alto / alta – I am tall  
Soy bajo / baja – I am short  
Soy de talla mediana – I am of average height

### Pets

¿Tienes animales/mascotas?  
– Do you have pets?  
Tengo... – I have...  
un pájaro – a bird  
un conejo – a rabbit  
un pez – a fish  
un perro – a dog  
un gato – a cat  
un caballo – a horse  
No tengo animales – I don't have pets  
Antes tenía  
– before I used to have/had  
En el futuro me gustaría tener  
– in the future I would like to have...

### Family

¿Tienes hermanos? – Do you have siblings?  
Tengo un hermano – I have a brother  
Tengo dos hermanos – I have two brothers  
Tengo una hermana – I have a sister  
Tengo tres hermanos – I have three sisters  
Tengo un hermanastro – I have a stepbrother  
Tengo una hermanastra – I have a stepsister  
No tengo hermanos  
– I don't have any brothers / siblings  
No tengo hermanas – I don't have any sisters  
Soy hijo único / Soy hija única  
– I am an only child  
En mi familia hay ... personas  
– In my family there are ... people  
mi madre – my mum  
mi madrastra – my stepmum  
mi padre – my dad  
mi padrastro – my stedad  
y yo – and me



### Key ideas

Personality  
Age and birthday  
Family  
Physical descriptions  
Pets

### Age

¿Cuántos años tienes?  
– How old are you?  
Tengo doce años  
– I am twelve years old

### Birthdays

¿Cuándo es tu cumpleaños?  
– When is your birthday?  
Mi cumpleaños es el... de...  
– My birthday is on the...of...  
El cumpleaños de... es el... de...  
– ...'s birthday is on the...of...  
Su cumpleaños es el... de...  
– his/her birthday is on the...of...

### Personality

¿Cómo es tu personalidad?  
– What is your personality like?  
Pienso que – I think that  
En mi opinión – in my opinion  
Mis amigos dicen que – my friends say that  
soy responsable – I am responsible  
soy paciente – I am patient  
soy inteligente – I am intelligent  
soy listo / lista – I am clever  
soy divertido / divertida – I am fun  
soy tímido / tímida – I am shy  
soy estricto / estricta – I am strict  
soy serio / seria – I am serious  
soy tranquilo / tranquila – I am calm  
soy simpático / simpática – I am nice  
soy hablador / habladora – I am chatty  
soy trabajador / trabajadora – I am hard-working  
soy un poco... – I am a little bit  
soy muy... – I am very  
soy bastante... – I am quite  
soy demasiado... – I am too  
no soy (tranquilo) – I am not (calm)  
Antes era – Before I was  
En el pasado era – In the past I was  
Ahora soy – Now I am

Year 8 Topic 2: Tu vida – Your Life



## Numbers

|                         |                 |                    |
|-------------------------|-----------------|--------------------|
| uno (primero) – 1 (1st) | once – 11       | veintiuno – 21     |
| dos – 2                 | doce – 12       | veintidós – 22     |
| tres – 3                | trece – 13      | veintitrés – 23    |
| cuatro – 4              | catorce – 14    | veinticuatro – 24  |
| cinco – 5               | quince – 15     | veinticinco – 25   |
| seis – 6                | dieciséis – 16  | veintiséis – 26    |
| siete – 7               | diecisiete – 17 | veintisiete – 27   |
| ocho – 8                | dieciocho – 18  | veintiocho – 28    |
| nueve – 9               | diecinueve – 19 | veintinueve – 29   |
| diez – 10               | veinte – 20     | treinta – 30       |
|                         |                 | Treinta y uno – 31 |

## Year 8 Topic 2: Transferable Knowledge

### Months

|                    |                        |
|--------------------|------------------------|
| enero – January    | julio – July           |
| febrero – February | agosto – August        |
| marzo – March      | septiembre – September |
| abril – April      | octubre – October      |
| mayo – May         | noviembre – November   |
| junio – June       | diciembre – December   |

### Connectives

|             |              |
|-------------|--------------|
| y           | - and        |
| o           | - or         |
| también     | - also       |
| pero        | - but        |
| porque      | - because    |
| ya que      | - since      |
| dado que    | - given that |
| sin embargo | - however    |
| no obstante | - however    |

### Possessive Adjectives

|     |                 |
|-----|-----------------|
| Mi  | - my singular   |
| Mis | - my plural     |
| Tu  | - your singular |
| Tus | - your plural   |



### A / an / some – Indefinite Article

|      |                      |
|------|----------------------|
| un   | - masculine singular |
| una  | - feminine singular  |
| unos | - masculine plural   |
| unas | - feminine plural    |

### Tener – to have

|         |                                  |
|---------|----------------------------------|
| Tengo   | - I have                         |
| Tienes  | - You have (singular / informal) |
| Tiene   | - He has/ She has                |
| Tenemos | - We have                        |
| Tenéis  | - You have (plural / informal)   |
| Tienen  | - They have                      |

### Colours

|          |          |
|----------|----------|
| azul     | - blue   |
| verde    | - green  |
| rojo     | - red    |
| marrón   | - brown  |
| naranja  | - orange |
| amarillo | - yellow |
| rosa     | - pink   |
| gris     | - grey   |
| blanco   | - white  |

### Adjectives

In Spanish, adjectives usually go after the noun they are describing and agree with the noun (masculine, feminine, singular, plural).

For example:

|               |                |                    |
|---------------|----------------|--------------------|
| Un gato       | <i>blanco</i>  | - a white cat      |
| Una serpiente | <i>blanca</i>  | - a white snake    |
| Dos gatos     | <i>blancos</i> | - two white cats   |
| Do serpientes | <i>blancas</i> | - two white snakes |

### Key verbs in the present tense



### Ser – to be

|       |                                 |
|-------|---------------------------------|
| Soy   | - I am                          |
| Eres  | - You are (singular / informal) |
| Es    | - He is/ She is                 |
| Somos | - We are                        |
| Sois  | - You are (plural / informal)   |
| Son   | - They are                      |



# 1. Africa Knowledge Organiser



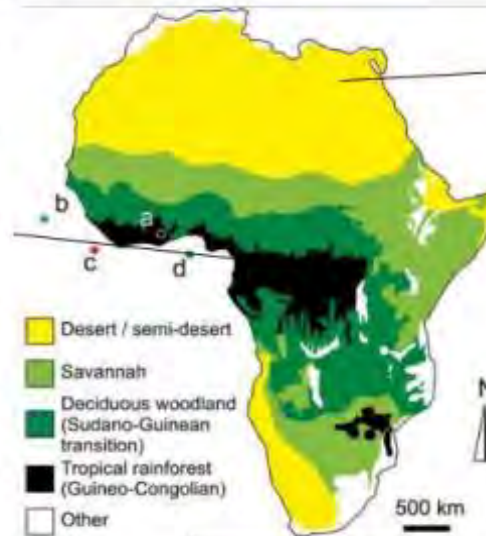
Africa, the **second-largest continent**, to the north is the **Mediterranean Sea**, to the east is the **Indian Ocean**, and to the west is the **Atlantic Ocean**. It is divided in half almost equally by the **Equator**.

There are **54 countries in Africa**. The largest country in Africa is **Algeria** and the smallest is the **Seychelles**. The most populated country is **Nigeria**.

Africa is the **second largest country** and Africa is also the world's **second most populous continent**. Africa is one of the most diverse places on the planet with a wide variety of terrain, wildlife, and climates.



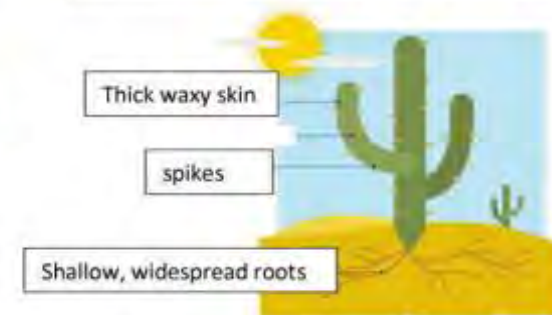
| Key Terms            |                                                                                      |
|----------------------|--------------------------------------------------------------------------------------|
| Continent            | One of the seven major land masses on the earth.                                     |
| Biome                | A large ecosystem (collection of plants and animals) for example deserts.            |
| Desert               | A place that receives under 250mm of rainfall per year.                              |
| Plate tectonics      | The earth's surface is divided into series of plates which slowly move.              |
| Poverty              | The state of being poor. When people's income is below 60% of the country's average. |
| Economic Development | Increasing wealth and quality of life within a country.                              |
| Diversity            | This is differences. It could be about animals, ecosystems, people and plants.       |
| Quality of Life      | The level of comfort and wellbeing a person enjoys. Linked to wealth and happiness.  |
| Tourism              | Travelling to a place for pleasure and leisure.                                      |



## Desert Biome

**What is a desert?** Deserts are dry or arid areas that receive less than 250 mm of rain each year. They contain plants and animals that are specially adapted to these extremely dry conditions.

Plants and animals in the desert have to cope with very little water. There is also a big variation in temperature between day and night. They do this by **adapting to their surroundings**.



The continent of Africa is a very diverse place with different climates, ecosystems and cultural landmarks making certain places very popular with tourists. For example the Pyramids in Egypt, The Savannah's of Kenya where you can see lions and elephants on Safari as well as hot places with beautiful beaches such as Madagascar, The Seychelles, Tunisia. Plus rainforests in the East.



## The Great Rift Valley



At a constructive plate boundary two tectonic plates are moving apart. This has created the Great Rift Valley and also surrounding mountains and volcanoes as the plate plates crack and split.

The Great Rift Valley is the location of many of Africa's most famous physical features. Mount Kilimanjaro is a large volcano in the Rift Valley and also Africa's highest mountain. In places the valley has filled with water creating huge lakes such as Lake Victoria and waterfalls such as Victoria Falls.

## Life in the Horn of Africa

Life in Africa is very different depending where you live as it is the second biggest continent and places have different climates, ecosystems and countries have different levels of wealth. We studied the Horn of Africa which is located in North Eastern Africa and includes the countries of Ethiopia, Djibouti, Eritrea and Somalia.



## Physical Features of the Horn of Africa

Mountains, rivers, lakes, deserts, beaches, volcanoes ... the Horn of Africa has them all.



The Ethiopian Highlands are largest area of high land in Africa. They are divided in two by the Rift Valley, which holds a string of lakes. All of the rivers on the map start in the Ethiopian Highlands. The Blue Nile leaves Ethiopia and heads north to join the White Nile to form the River Nile, which flows on to Egypt. The Horn of Africa is in the tropics, and quite close to the Equator. So it is generally hot all year, on the low land. But the higher you go, the cooler it gets. Rain is in very short supply in some places.

## Peoples lives in the Horn of Africa

This table gives some data about the countries of the Horn, and the UK. You can see that compared to the UK the wealth of the countries (GDP) is low. \$37,500 in the UK per person on average and only \$600 per person in Somalia.

|                                                   | Djibouti | Eritrea | Ethiopia | Somalia | UK       |
|---------------------------------------------------|----------|---------|----------|---------|----------|
| Population (millions)                             | 0.9      | 5.9     | 85.2     | 9.8     | 64       |
| % aged 14 or under                                | 34       | 41      | 44       | 44      | 17       |
| % living in towns and cities                      | 77       | 21      | 17       | 38      | 80       |
| How long a new baby is likely to live for (years) | 62       | 63      | 60       | 51      | 80       |
| % of population with access to clean safe water   | 29       | 61      | 44       | 29      | 100      |
| What % of workforce are farmers?                  | under 30 | 80      | 85       | 71      | 1.4      |
| GDP per person (PPP) (in dollars)                 | \$1700   | \$800   | \$1200   | \$600   | \$37,500 |

Today, the countries of the Horn of Africa are not well off. There are many causes of poverty. But for these countries, one factor is the years of conflict they have suffered. The good news is ... They may be poor today – but the good news is that the countries of the Horn are developing quite fast, and especially Ethiopia. More and more factories are opening. Education and healthcare are improving, with help from other countries. Peoples lives can be very different in Ethiopia many people are coffee farmers, in Djibouti (the smallest country) they work in the ports. In the semi-desert areas of Somalia and Ethiopia many people are animal farmers and nomadic (they move with their animals always looking for food and water). In Ethiopia Addis Ababa is the biggest city and is developing fast but there are problems with people living in slums. Much is being done to improve the area economically though and Ethiopia is experiencing rapid economic development.



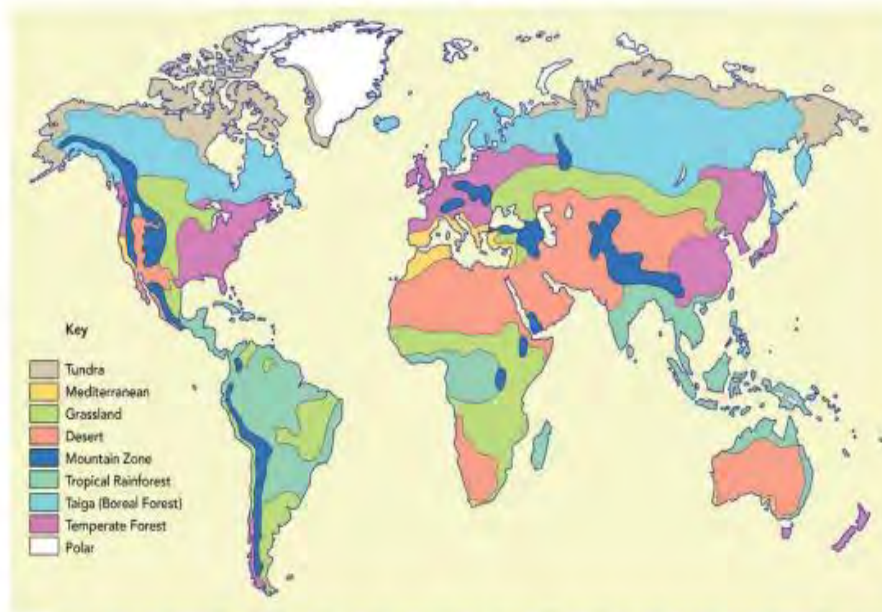
Climate is important because it determines the types of plants and animals—the ecosystem—that can survive in a biome.

### Location of the Amazon Rainforest

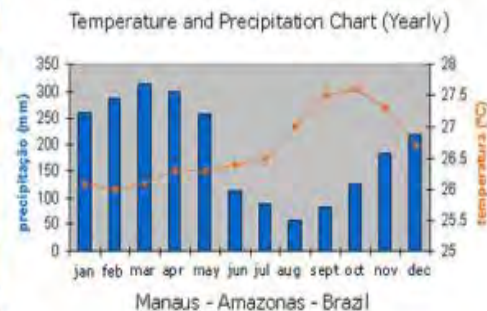


The Amazon Rainforest is in the continent of South America. The ocean to the east is the Atlantic Ocean. The rainforest includes the longest river in the world which is called the Amazon River. The Amazon Rainforest stretches across a number of countries including: Brazil, Colombia and Peru. The Amazon Rainforest has an annual average temperature of 27 °C and annual rainfall of 2104 mm.

## Biomes and Rainforests



### Climate graph and why it rains



Evapotranspiration creates clouds. Loss of water from evaporation pulls more water up from the soil. The heavy clouds cause precipitation to occur where they are formed.



### Characteristics of Biomes

Tropical rainforests are **hot** and **wet** all year round. They are home to **half** of all the different types of **plants** and **animals** on the planet.

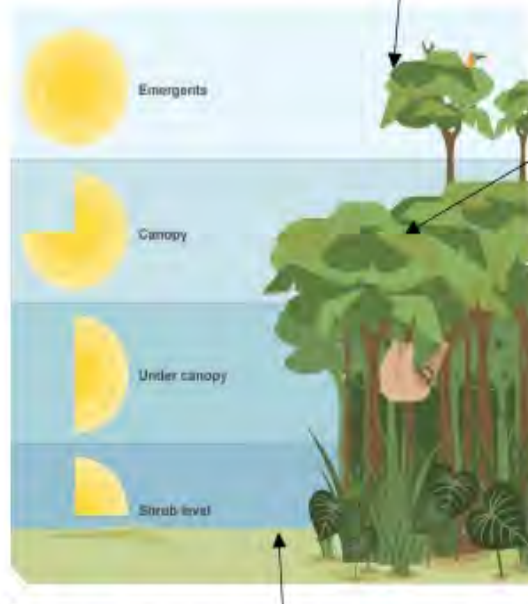
Deserts are **hot** and **dry** all year round. The only things that grow are **cacti** and small **shrubs** because the soil is shallow and rocky. Animals come out at **dusk** when it is **cooler**.

The **savannah** is **hot** all year round with a long, **dry season**. Only **grasses** and **shrubs** grow here but it is home to lots of different types of animals such as **elephants**, **zebras** and **wildebeest**.

The **tundra** is the **coldest** of all the **biomes**. There is very little **rain** or **snow** and the temperatures are **freezing**. Winters are **long** and summers are **short**. Part of the soil is **frozen** all year round, although the top part **defrosts** in summer and plants such as **mosses** can grow.



### The layers of the Rainforest



**Emergents.** These are the tops of the tallest trees in the rainforest. These are much higher, and so are able to get more light than the average trees in the forest canopy.

**The canopy.** This is where the upper parts of most of the trees are found. The canopy is typically about 65 to 130 feet (20 to 40 metres) tall. This leafy environment is home to insects, birds and some mammals.

**The under canopy.** It is the second level up. There is limited sunlight. Saplings wait here for larger plants and trees to die, leaving a gap in the canopy which they can grow into. Woody climbers called lianas are also found here

**The shrub layer.** It is dark and gloomy with very little vegetation between the trees. During heavy rainfalls this area can flood.

### The climate in the Tropical Rainforest

Very wet with over 2,000 mm of rainfall per year.

Very warm with an average daily temperature of 28°C. The temperature never drops below 20°C and rarely exceeds 35°C.

The atmosphere is hot and humid.

The climate is consistent all year round.

### Animals and plants have to adapt to the climate in the Tropical Rainforest

**Drip tips** - plants have leaves with pointy tips. This allows water to run off the leaves quickly without damaging or breaking them.



**Buttress roots** - large roots have ridges which create a large surface area that help to support large trees.



**The sloth** uses camouflage and moves very slowly to make it difficult for predators to spot.



### Threats to the Tropical rainforest

The tropical rainforests of the Amazon Basin face the threat of deforestation. Deforestation is happening due to the following reasons: Farming, logging, mining, roads and population growth- All of these threats have one thing in common- **HUMANS**

### But what can we do?

- ❑ **Education** - It is important that local people, businesses and politicians understand the true value of the tropical rainforest.
- ❑ **Ecotourism** - this encourages sustainable tourism that creates jobs for local people whilst ensuring that the money generated is used to protect and conserve the tropical rainforest for future generations to enjoy.



## Y8 - Knowledge Organiser - Empire and Slavery - Was the British Empire a good thing?

### What do I need to know?

- Why did Britain want an Empire?
- Why and how did India come under British control and was British rule in India a good thing or a bad thing?
- What were the causes of the Indian Mutiny?

| Key vocabulary                  |                                                                                          | Why was India attractive to European countries?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trade                           | The buying and selling of goods. For profit.                                             | <ul style="list-style-type: none"> <li>• <b>Rich in spices</b> - India was renowned for <b>Gold, Tea, Herbs and Spices</b> (like pepper, cardamom, and cinnamon) and luxurious textiles (such as cotton and silk).</li> <li>• <b>Thriving Trade Networks</b> - India was a central hub in the <b>Indian Ocean trade network</b>. European merchants wanted to make money using/controlling these well-established routes.</li> </ul>                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Colony                          | A country that is controlled by another leading country.                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Sepoy                           | An Indian soldier serving British authorities                                            | <b>What was the Indian Mutiny, 1857</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Empire                          | A collection of areas of land that are ruled over and controlled by one leading country. | <b>Causes</b><br><b>Disrespect of Indian values</b> – British rulers forced many Indians to be Christians and tried to introduce new laws.<br><b>Money</b> – The British took land away from the Indian peoples and charged them high taxes and rents. They also made Indian farmers grow 'cash crops' (tea, cotton) instead of food.<br><b>The treatment of the Sepoys</b> – Many Sepoy soldiers were not given promotions and were paid less than the British.<br><b>The use of the Lee Enfield Rifle</b> – Loading it involved biting the end off the cartridge, which was lubricated with beef and pork fat. Hindus saw cows as sacred, and Muslims saw pigs as unclean. Soldiers refused to use the rifle. |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| East India Company              | The organisation that first set up trading stations in India                             | <b>Consequences</b><br>Indian rebels murdered hundreds of British men, women and children. The British then took revenge, murdering innocent civilians. The East India Company could no longer be trusted in India, in 1858 the British parliament introduced British Rule in India called the British Raj                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Why did Britain want an empire? |                                                                                          | British rule in India was positive                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | British rule in India was negative                                                                                                                                                                                                                                                                                                                                                                                                             |
| Social                          | Spreading Christianity.<br>To civilise natives.<br>To spread the British way.            | <ul style="list-style-type: none"> <li>• Britain built roads, canals and railways in India</li> <li>• Industrialization began, providing millions of jobs.</li> <li>• Communication improved as Britain created a telegraph and postal system.</li> <li>• The number of schools increased from 170 to 2,900.</li> <li>• Land used for farming increased from 400,000 acres to 2.2 million acres.</li> </ul>                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>• British settlers tried to make natives change to Christianity</li> <li>• The Salt Tax was introduced to make money for the British which many Indians could not afford.</li> <li>• Too many Indians were growing cash crops (tea, cotton) for Britain and not enough food crops.</li> <li>• There were 24 famines between 1850 and 1899 with 19 million dying from starvation and disease.</li> </ul> |
| Economic                        | To protect trade.<br>To sell British goods.<br>To provide raw materials.                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Political                       | Be stronger than other countries                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Military                        | More soldiers for her army.                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                |



## Y8 - Knowledge Organiser - Empire and Slavery - What was Britain's role in the slave trade?

### What do I need to know?

- What was the slave trade?
- What was Britain's role in the Slave Trade?

| Key word                                                                                                                    | Definition                                                          |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>Plantation</b>                                                                                                           | A large farm where one crop is grown, e.g. sugar, rice, cotton      |
| <b>Transatlantic slave trade triangle</b>  | The system of transporting slaves from Africa to the Americas       |
| <b>Slavery</b>                                                                                                              | A person who is the property of another and is forced to obey them. |

### What was life like in Africa before the arrival of Europeans?

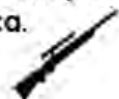
- Africa is a diverse continent, with a range of rich cultures and backgrounds.
- Many Europeans had incorrect stereotypes of Africans, and believed they were uncultured and 'heathens'.
- There were many Kingdoms, City-states.
- Many African countries were massively rich.

### What was Britain's role in the slave trade?

- Slave traders like John Hawkins captured slaves and sold them.
- Coffee shop owners demanded the sugar that was grown by slaves on plantations.
- Charles II was a partner in the Royal African Company – responsible for capturing and selling enslaved people
- Liverpool – half of its trade was linked to slavery.
- Banks provided the money needed to buy slave ships (Barclays was started by slave traders) 

### How did the slave trade triangle work?

The **first part** of the slave trade triangle was the journey from **Europe to Africa**.



European ships left ports like Liverpool, Bristol, and London, loaded with manufactured goods such as guns, textiles, metal tools, alcohol, and beads. These goods were highly valued in West Africa and were exchanged with African rulers and traders for enslaved people. The trade was often supported by local African leaders who captured people from rival communities or through warfare. This leg of the journey was essential for acquiring human cargo, and it laid the foundation for the rest of the triangular trade system.

The **second part** was the **Middle Passage**, the journey from **Africa to the Americas**.



This was the most horrific stage of the triangle. Enslaved Africans were packed tightly into the holds of ships, often chained together with barely any space to move. Conditions were filthy, with little food, poor ventilation, and no sanitation. Disease spread quickly, and many died from dysentery, smallpox, or starvation. Others were beaten or thrown overboard. It's estimated that millions died during this journey. Those who survived were sold at auctions in the Americas, where they faced a life of forced labour on plantations. The Middle Passage is remembered as one of the darkest chapters in human history.

The **third part** was the journey from the **Americas back to Europe**.



Once enslaved people were sold, they were forced to work on plantations producing sugar, tobacco, cotton, and coffee—luxury goods that were in high demand in Europe. These raw materials were loaded onto ships and transported back to Europe. The profits made from selling these goods in Europe were enormous and helped fund further voyages. British banks, merchants, and even the monarchy, benefited from this trade. The wealth generated helped fuel the growth of cities and industries in Britain, while the enslaved people who made it possible remained in brutal conditions with no freedom or rights.



## Y8 - Knowledge Organiser - Empire and Slavery - What was the experience of slavery for Africans?

### What do I need to know?

- What was life like in Africa before the arrival of Europeans?
- What did enslaved people experience when they were captured?
- What did enslaved people experience when they arrived in the Americas?
- Why was the slavery abolished?

### What did enslaved people experience when they were captured?

- They would be stowed on ships and transported across the middle passage. This journey typically took 2-3 months, and many enslaved people would get sick because of the horrific conditions and some even took their own lives. Around 10–15% of enslaved people died on the middle passage.
- During their time on the middle passage, they would remain chained together, only going on deck to be cleaned with salt water or made to dance for exercise. They would be whipped and beaten if they tried to resist. They would be given food in the form of rice and beans that was boiled and mushed together.



### What did enslaved people experience when they arrived in the Americas?

- After they had arrived, they would be cleaned, and wounds sealed or hidden with tar. Then many enslaved people would be sold either in an auction or a scramble. Families would be split up and sold. Strong men would sell for more as they could carry out more manual labour. Women would be brought to do domestic work within the plantation house.
- Many enslaved people would then go to work on a plantation where they would have to do manual labour for many hours a day. During this time, they would be severely mistreated through verbal and physical abuse. The overseers would keep watch on the enslaved people, and they would usually work from sunrise to sunset, with very few breaks.

| Key word          | Definition                                                                       |
|-------------------|----------------------------------------------------------------------------------|
| <b>Abolition</b>  | The action of ending a system of practice, often used to mean the end of slavery |
| <b>Resistance</b> | To fight back or rebel against a person in authority.                            |

### Why was the Slave trade Abolished?

| The actions of slaves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Anti-slavery campaigners                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• In 1791 slaves in Saint-Domingue rebelled and took control of the island after killing many of the plantation owners. Saint-Domingue was renamed Haiti. It was declared independence and slavery was outlawed by the people, this proved that slaves were not inferior.</li> <li>• Many enslaved people resisted their enslavement through active and passive means. They would kill livestock and try to escape, or they would work slowly.</li> <li>• Working slowly – Many enslaved Africans would still work all day, but collectively slowing their pace would mean less work got done, affecting profits.</li> </ul> | <ul style="list-style-type: none"> <li>• William Wilberforce was a politician and abolitionist who made speeches in Parliament calling for an end to the slave trade.</li> <li>• Ex-slave, Olaudah Equiano, campaigned to convince people that the slave trade was wrong. The book he wrote about his experiences was widely read and turned many British people against slavery.</li> <li>• The fact that Equiano was intelligent and articulate made a nonsense out of the claims that Africans were inferior and only suited to manual labour.</li> <li>• The Society for the Abolition of the Slave Trade wanted to end slavery. The society played a crucial role in raising awareness about the horrors of the slave trade and campaigning for its abolition.</li> </ul> |



## Y8 - Knowledge Organiser - Industrial Revolution - How did industrialisation change the way people worked?

### What do I need to know?

How did life change between 1750 and 1900?  
What was the domestic and factory system?

What new inventions were there and how did they change the textile industry?

What was it like to work in a factory in the 19th century?



### How did life change between 1750 and 1900?

#### What was life like in the 1750s?

- 11 Million people in Britain.
- Farming was the most common job, even people with other jobs still farmed their food.
- The only way to travel is by foot, horse or boat. The journey from Edinburgh to London would take 12 days.
- At this time there were lots of killer diseases, like smallpox. Operations were painful because patients were awake.
- No one knew dirt made them ill.

#### What was life like in the 1900s?

- 40 million people in Britain.
- Many people worked in factories which relied on steam power.
- At this time there were railways all over Britain. It took 9 hours to get from London to Edinburgh on the train.
- Doctors learnt about the causes of infection and used anaesthetics to put people to sleep during operations.
- People found out about germs and what made them ill. Water was piped into town; waste was piped away.



### What new inventions were there?

- **Flying shuttle** - Invented by John Kay, in Burnley, Lancashire, in 1733. Allows for quicker weaving and wider cloth. This meant fewer weavers were needed. It could be hand powered and used at home.
- **Spinning jenny** - Made by James Hargreaves, in Blackburn, Lancashire, in 1767. Allowed spinners to weave 8 threads at once, it made fine but weak thread. It allowed people to spin at home.
- **Water frame** - Made by Richard Arkwright, in Preston, Lancashire, in 1796. This was powered by a water wheel so could not be used at home. Created strong thick yarn. 1 factory produced 60 times more yarn than a family at home.
- **Spinning mule** - Made by Samuel Compton, in Bolton, Lancashire, in 1779. Created a finer and stronger thread than what the hand spinners could make. It did not require a worker to power it.
- **Power loom** - Made by Edmund Cartwright in Leicestershire, in 1785. The Power Loom meant that weavers could keep up with the spinners. Due of its size, it had to be used in factories, meaning thousands of handloom weavers lost their jobs.

### What was it like to work in a factory in the 19th Century?

- **Long working hours** - Normal shifts were usually 12-14 hours a day, with extra time required during busy periods.
- **Low wages** - People would be paid wages that only meant they could afford their basic needs- food and rent.
- **Cruel discipline** - Whipping, hanging iron weights on children's necks, hanging them from the roof in baskets.
- **Fierce systems of fines** - These were imposed for talking or whistling or having a little dirt on a machine.
- **Accidents** - Forcing children to crawl into dangerous, unguarded machinery led to many accidents.

### Key vocabulary

|                        |                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------|
| <b>Domestic system</b> | When cloth and clothing was produced in peoples' homes.                                         |
| <b>Factory system</b>  | When machines were invented and the production moved into larger buildings- mills or factories. |



## Y8 - Knowledge Organiser - Industrial Revolution - Who had the biggest impact on public health during the 19th century?

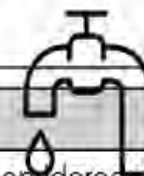
### What do I need to know?

Why were towns and cities so filthy?

How important was John Snow's discovery about the cause of cholera?

How important was Florence Nightingale's work for improvements in hospital care?

Who had the biggest impact on improving public health?



### Why were towns so filthy?

**Waste** - There would be privies connected to cesspits (big underground pools of waste) and sewers which whole streets shared. The sewer systems would be old and would leak in to the water supply making people ill.

**Food** - It was difficult to get fresh fruit and vegetables, diets usually consisted of bread and potatoes. There was little food regulation therefore sellers added things to products to make them go further, such as adding chalk to milk. This caused malnutrition and illness.

**Water** - All water was unsafe throughout the 19th century. This was because the water companies took water from the rivers, which were contaminated by human waste and pollution from industry. Even rainwater might be unsafe as it had fallen through the smoke from factories.

**Back-to-back housing** - Landlords and builders took advantage of the lack of building regulations. They packed as many houses as they could onto small plots of land. Some better-off working-class people rented 'through' houses, which had their own outside spaces. Many people lived in shared accommodation with 8/9 people per room.



### Key vocabulary

|                      |                                                                      |
|----------------------|----------------------------------------------------------------------|
| <b>Disease</b>       | An illness or sickness that affects a person.                        |
| <b>Public health</b> | The health of the population as a whole.                             |
| <b>Epidemic</b>      | An outbreak of disease that affects people of the same area.         |
| <b>Hygiene</b>       | Conditions or practices used to maintain health and prevent disease. |

### John Snow and Cholera

**Who is he?** - John Snow was a prominent 19th-century Doctor and considered one of the founding figures in researching epidemics. His work changed our understanding of disease transmission.

**Why is he important?** - Cholera Investigation (1854): John Snow gained recognition for his investigation during the Broad Street cholera outbreak in London. He created a map of the affected area, in Soho, London, marking the locations of cholera cases. This helped him identify a contaminated public water pump on Broad Street as the likely source of the outbreak.

**Did he have a big impact?** His discoveries helped save people in the area. He also advised the government, showing the importance of clean water and sanitation in preventing infectious diseases. The government did not act straight away.

### Florence Nightingale and hospital improvements

**Who is she?** Florence Nightingale, born in 1820, is celebrated as the founder of modern nursing and a pioneer in healthcare reform. Her dedication to patient care and advocacy for sanitation transformed nursing practices and hospital care.

**Why is she important?** She gained prominence during the Crimean War, where she and a team of nurses cared for wounded soldiers. Her emphasis on hygiene, cleanliness, and proper nutrition reduced the death rate among soldiers. She then established the first nursing school at St Thomas' Hospital in London in 1860.

**Did she have a big impact?** Nightingale's emphasis on education and training improved the quality of nurses and made nursing a respected profession. Also, her work influenced the design of future hospitals.



## Y8 - Knowledge Organiser - Industrial Revolution - What was the impact of the Industrial Revolution on life in Westhoughton?

### What do I need to know?

- Why was working in a coal mine so dangerous?
- What happened at the Pretoria Pit in 1910?

| Key vocabulary    |                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Colliery</b>   | A place where coal mining takes place.                                                                         |
| <b>Fire Damp</b>  | Methane, especially as forming an explosive mixture with air in coal mines.                                    |
| <b>Choke damp</b> | A suffocating gas, typically carbon dioxide, that is found in mines.                                           |
| <b>Trapper</b>    | Someone who would open and close the wooden doors (trap doors) that allowed fresh air to flow through the mine |
| <b>Drawer</b>     | A child or woman employed by a collier to transport the coal that they had mined                               |

### What happened at the Pretoria Pit in 1910?

#### Why was the Pretoria Pit important to Westhoughton?

Located around 3 miles from Westhoughton high street, 55% of all men in Westhoughton were mineworkers. The Hulton Colliery employed 2,400 men and produced 2,400 tons of coal per day. The cage pulleys could be seen from every angle of the town. Pretoria Pit was one of the newest pits in England.

#### What happened?

On the morning of the 21st December, the local mine workers went into the Pretoria pit. At 7.50am there was a loud explosion heard from the mine. It could be heard miles away. Many in the town rushed towards the pit fearing that the mine had suffered from a firedamp explosion. They were worried about their relatives who were working in the mine. There had been a build-up of gas and an explosion collapsing shaft number 3. All three of the seams and killing 344 men and boys.

#### Why is it important?

Over 80% of the people that worked in the Pretoria pit were aged 21-15. 158 victims were from the Westhoughton area, this is around half the total victims. Westhoughton at the time had a population of 15,046, this means around 1% of the total population of Westhoughton died in the mining explosion.

### Why was working in a coal mine so dangerous?

**Flooding** - Coal was dug out from underground layers called seams by coal miners. To reach and dig out these seams, miners worked in long tunnels. These could be hundreds of metres under the ground. The risk of flooding was a constant threat because water would collect in the confined spaces of the tunnels. The water could cause the wooden support props to collapse, leading to the tunnels caving-ins – in some cases with the miners still trapped inside.

**Ventilation** - The lack of ventilation would be dangerous because miners would not get enough clean air to breathe. Miners could die if there was too much carbon dioxide present (known as choke damp).

**Explosions** - Gas explosions were another hazard as methane gas from the coal seams would mix with stale air. This mix, called firedamp, could ignite causing fires in the pits. This problem was made worse when miners used candles for light, or sparks were caused by hitting the rocks. A candle flame could ignite the gas and cause an explosion.

**Mine accidents** - As wooden structures were used to support mine tunnels, they were sometimes prone to collapsing. This was made especially worse through explosions and flooding.



## Y8 - Knowledge Organiser - Industrial Revolution - Why was there so much protest in England during the Industrial Revolution?

### What do I need to know?

- Why was there so much protest in England during the Industrial Revolution?

- Why did the Luddites destroy machines?
- What was the Peterloo massacre?

| Key vocabulary   |                                                                           |
|------------------|---------------------------------------------------------------------------|
| <b>Protest</b>   | An action showing you are against something that is happening.            |
| <b>Suffrage</b>  | The right to vote in elections                                            |
| <b>Democracy</b> | A system that allows people to vote for who should be in the government   |
| <b>Reform</b>    | Making changes in order to improve something.                             |
| <b>Yeomanry</b>  | a volunteer cavalry force, sometimes used as an early form of the police. |

### Why was there so much protest in England?

There was a revolution in France in 1789 which spread the idea of equal rights. Many working-class people saw that real change was possible through the use of violent revolution and protest.



There were no official limits on working hours. The working conditions in factories were very poor and people were becoming increasingly frustrated at the conditions they were expected to work in. Also, the pay was very low this and new machines meant that less people had to work. As people were already in poverty people started to grow angry at the political system

Houses were overcrowded, full of damp and shared outside toilets. Many people were living in relative poverty, with many being unable to afford basic needs. This poverty also helped the spread of disease people lived close to each other and there was no proper waste removal.

Manchester had a population of 85,000 but no MPs in 1815. Many believed this was not fair as people did not have proper representation.

### Why did the Luddites protest?

The Luddites were backward-looking victims of modernisation. They were actually concerned with labour rights and the free-market. Most were textile artisans resentful of the use of machinery to suppress wages and employ fewer workers. The Industrial Revolution threatened a 'race to the bottom', using less skilled labour. Organising collectively for their rights, they represent a big moment in the rise of a British labour movement.

### Who was to blame for Peterloo?

#### Why did people protest?

The working people were not allowed to vote for the Members of Parliament (MPs), in fact at the time less than 2% of the population had the right to vote. Moreover, all the MPs were farmers and landowners, and they were not interested in helping poor workers to improve their living and working conditions.

#### What were the events of the Peterloo massacre?

Manchester, August 16th, 1819 - St. Peter's Field 60,000 gathered to hear speeches by Henry Hunt on voting rights and poor living conditions. The atmosphere, initially charged with anticipation, quickly turned chaotic. The local magistrates called on the Yeomanry to arrest the speakers. The Yeomanry then charged into the crowd on horseback. As the cavalry attempted to disperse the crowd there was a violent clash, knocking a woman down and killing a child. Tragically, numerous lives were lost in the ensuing chaos, with many more injured.

#### What were the consequences?

The government crackdown on the parliamentary reform movement led to the imprisonment of every significant figure in the movement and introduced a law that banned reformist meetings and slapped an unaffordable tax on newspapers sympathetic to the cause. However, the growing public outrage over Peterloo led to the 1832 Great Reform Act. This finally saw Manchester finally getting its very first members of parliament.





## Life Lessons – Summer Term KS3 – Health and Wellbeing

| Topics                                                                                                                 | For Further Information and Advice                                                                                                                                                                                                                                                                                                             |                                                                                       |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Puberty</b><br>                    | <b>For help and advice:</b> <ul style="list-style-type: none"> <li>• <b>Childline:</b> Scan the QR code for lots of free resources for all teenagers to better understand puberty.</li> <li>• If you have concerns about your health speak to your <b>GP</b> or our <b>school nurse</b>.</li> </ul>                                            |    |
| <b>Healthy Eating</b><br>             | <b>For help and advice:</b> <ul style="list-style-type: none"> <li>• <b>Health For Teens:</b> Scan the bar code for information about diet, nutrition and staying healthy.</li> <li>• <b>Healthy eating recipe ideas:</b> Why not search on BBC Good Food.</li> </ul>                                                                          |    |
| <b>Drugs, smoking and vaping</b><br> | <b>For help and advice:</b> <ul style="list-style-type: none"> <li>• <b>Childline:</b> Whether you're worried about yourself or someone else, you can find information about drug and alcohol use and smoking by scanning the QR code.</li> </ul>                                                                                              |   |
| <b>Mental Health</b><br>            | <b>For help and advice:</b> <ul style="list-style-type: none"> <li>• <b>The Mix:</b> Life can feel overwhelming, and that's okay. Whether you are struggling with anxiety, feeling low or just need someone to talk to, we're here. Find real stories, practical advice and support from people who get it by scanning the QR code.</li> </ul> |  |



## Rounding



**What do I need to be able to do?**

- To round numbers to the nearest 10, 100, 1000 etc.
- To round numbers to nearest 1, 2 & 3 decimal places
- Round numbers to the nearest 1 significant figure.
- Round numbers to the nearest 2 or 3 significant figures

### Key Vocabulary

|             |                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------|
| Round       | Making a number simpler but keeping its value close to what it was. The result is less accurate |
| Significant | The number of digits that are meaningful; they have an accuracy matching our measurements       |
| Integer     | A number with no fractional part                                                                |
| Decimal     | Based on 10. Decimal number is often used to mean a number that uses a decimal point            |
| Lower Bound | A value that is less than or equal to every element of a set of data                            |
| Upper Bound | A value that is greater than or equal to every element of a set of data                         |

## HOW TO ROUND NUMBERS

THE ADVERTISER HAS HAD TO  
KIDNAP US ON DOWN.

'Last Diet'

Rolling up  
first 9/11

KEEP THE LIST  
DIRTY THE SMOKE

8500

| Round to        | Circle, Underline, Decide | Answer    |
|-----------------|---------------------------|-----------|
| Nearest 1000    | <u>5</u> 783.199          | = 6000    |
| Nearest 100     | 57 <u>8</u> 3.199         | = 5800    |
| Nearest 10      | 578 <u>3</u> .199         | = 5780    |
| Nearest integer | 5783. <u>2</u> .199       | = 5783    |
| 1 dp            | 5783. <u>2</u> 99         | = 5783.2  |
| 2 dp            | 5783.1 <u>9</u> 9         | = 5783.20 |

### Rounding decimal places

1. Identify the position of the decimal place to be rounded to, e.g. 2.600 would be the 2nd digit after the decimal place.
2. Then look to the right of this digit, this is called the decider, this number now decides whether the decimal place is rounded up or kept the same.
3. If the decider is 5 or more then round the digit up.
4. If the decider is 4 or less, then leave the digit as it is.

### Significant Figures

The first significant figure is the first non-0 digit, as you read from left to right.

### Example 1

Round 3785 to one significant figure

И. П. У

7 B 6

The first significant figure is in the thousand's column so to the nearest thousand it is 4000

### Example 2

Round 0.0145 to two significant figures

0145

The first significant figure is in the thousandth's column, the 5 rounds the 4 up so the nearest thousandth is 0.015.

0.008070

significant figures.

19400

= 19000 when rounded to 2 significant figures.

## Online

## clips

M111,

M431,

M1994,

M131



# Error Intervals



## Component Knowledge

- To use understand how to round to different degrees of accuracy
- To be able to write error intervals when rounding using correct inequality notation
- To be able to write error intervals when rounding using correct inequality notation

## Key Vocabulary

|                     |                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Rounding            | Rounding means making a number simpler but keeping its value close to what it was. The result is less accurate, but easier to use. |
| Accuracy            | How close the rounded value is to the original value.                                                                              |
| Place value         | The value of the digit in a number                                                                                                 |
| Lower bound         | The smallest possible value that can be rounded to the number given                                                                |
| Upper bound         | The largest possible value the rounded value can take                                                                              |
| Truncation          | Truncation comes from the word <b>truncate</b> , meaning 'to shorten'. The number is cut off at a certain point.                   |
| Inequality notation | Symbols used to describe the relationship between two expressions that are not equal to one another.                               |

**Inequality Notation** All error intervals look the same like this:

The value,  $n$ , can be greater or equal to this number.

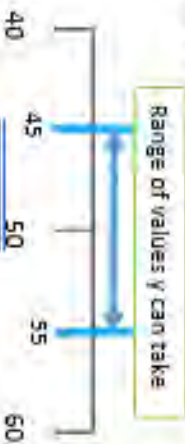
$\leq n <$

The value,  $n$ , can only be less than this number but we use it to make any calculations easier to perform, should we need to.

## Error intervals - rounding according to place value

**Example 1-** Frank rounds a number,  $y$ , to the nearest ten. His result is 50 Write down the error interval for  $y$ .

Begin by finding the ten, in this case, greater than and less than 50.



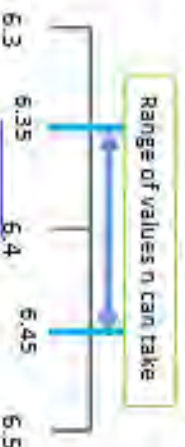
The midpoint between 40 and 50 is 45. This is the lower bound.

The midpoint between 50 and 60 is 55. This is the upper bound (this can never = 55 but can be as large as 54.9999999... 55 is easier to calculate with. Additionally, we use  $<$  as well.

The answer is  $45 \leq y < 55$ .

**Example 2-** Freya rounds a number,  $n$ , to one decimal place. Her result is 6.4 Write down the error interval for  $n$ .

Begin by finding the tenth, in this case, greater than and less than 6.4. (Note: 1dp = tenths column.)



The midpoint between 6.3 and 6.4 is 6.35. This is the lower bound.

The midpoint between 6.4 and 6.5 is 6.45. This is the upper bound (this can never = 6.45 but can be as large as 6.49999999... 6.45 is easier to calculate with. Additionally, we use  $<$  as well.

The answer is  $6.35 \leq n < 6.45$ .

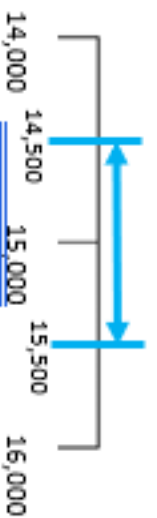


### Error intervals - rounding according to significant figures

Depending on the size of the number, the rounding will change when rounding to significant figures. Rounding like this keeps all numbers rounded to the same degree of accuracy relative to the size of the number.

**Example 3-** A number,  $g$ , is 15,000 when rounded to 2 significant figures. Write down the error interval.

Begin by finding the place value of the 2<sup>nd</sup> significant figure, in this case, this is 5000. This means we are rounding to 2 sig figs = rounding to nearest thousand.



The midpoint between 14,000 and 15,000 is 14500. This is the lower bound.

The midpoint between 15,000 and 16,000 is 15,500. This the upper bound.

The answer is  $14,500 \leq g < 15,500$ .

**Example 4-** A number,  $x$ , is 0.07 when rounded to 1 significant figure. Write down the error interval.

Begin by finding the place value of the 1<sup>st</sup> significant figure, in this case, this is 0.07. This means we are rounding to 1 sig fig = rounding to nearest hundredth.



The midpoint between 0.06 and 0.07 is 0.065. This is the lower bound.

The midpoint between 0.07 and 0.08 is 0.075. This the upper bound.

The answer is  $0.065 \leq x < 0.075$ .

### Error intervals - truncation

Be careful when reading error interval questions as truncating is not rounding like place value. The number has been "chopped", which means the value given IS THE LOWER BOUND. It commonly applies to decimals.

**Example 5-** State the error interval of 4.5 when it has been truncated to 1 decimal place.

Begin by finding the tenth, in this case, greater than 4.5. (Note: 1dp = tenths column.) This is the upper bound.

Remember: the value cannot equal 4.6!



The answer is  $4.5 \leq n < 4.6$ .

Online clip

M730



# Estimation



## Component Knowledge

- Estimate values of numeric problems
- Estimate values of worded problem solving questions
- Identify whether an estimation is an under-estimate or an over-estimate

## Key Vocabulary

|                     |                                                                                 |
|---------------------|---------------------------------------------------------------------------------|
| Round               | Making a number simpler whilst keeping its value close to the original.         |
| Significant Figures | The number of digits in a value that carry a meaning to the size of the number. |
| Estimate            | Find a value that is close to the right answer by rounding.                     |

When estimating any calculation, you need to round every number to one significant figure

## Estimating Calculations

Estimate  $39 \times 4.85$

$$39 \times 4.85 \\ \approx 40 \times 5 \\ = 200$$

Estimate

$$52 \times 6.78 \\ \approx 0.51$$

First round all the numbers to 1 significant figure

$$50 \times 7$$

$$0.5$$

$$350$$

Then calculate the numerator

$$0.5$$

Dividing by 0.5 is the same as multiplying by 2

$$750$$

## Online clips

M994, M131, M878

## Significant figures

### Example

Round 3786 to one significant figure

3 7 8 6

The first significant figure is in the thousands column so to the nearest thousand it is 4000

## Estimation worded problems

Mr Sykes wants to buy a calculator for every student in year 11. There are 105 students in year 11. Each calculator costs £6.99

Work out an estimate for the amount of money Mr Sykes will spend on calculators

First round all the numbers to 1 significant figure

$$105 \text{ students} \quad \text{£6.15}$$

$$100 \text{ students} \quad \text{£6}$$

$$100 \times \text{£6} = \text{£600}$$

How to decide if your solution is an underestimate or overestimate.

Decide if you have made each number bigger or smaller by rounding. When dividing remember that if you divide by a number that has been rounded up, your answer will be an underestimate and vice versa

For example: in the calculator example above we rounded the cost and number of students down so this is an under estimate of the cost





# Fractions, decimals, & Percentages

## Component Knowledge

- Convert between simple fractions, decimals and percentages.
- Order fractions, decimals and percentages by converting.

## Key Vocabulary

|                      |                                                                                                                                 |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Fraction             | Made up of a numerator (top) and denominator (bottom). Compares parts in question to total number of parts.                     |
| Integer              | Whole number                                                                                                                    |
| Ascending order      | Place numbers in order from smallest to largest                                                                                 |
| Descending order     | Place numbers in order from largest to smallest                                                                                 |
| Percentage (percent) | 'Out of' (per) one hundred (cent)                                                                                               |
| Decimal              | Comparable number to a fraction or mixed number, written using place value, e.g. $\frac{2}{5} = 0.4$ , or $3\frac{3}{4} = 3.75$ |

### Convert % to fraction:

% "means out of 100" =  $\frac{\quad}{100}$   
 eg  $65\% = \frac{65}{100}$  simplify where possible  
 $= \frac{13}{20}$

### Convert % to fraction to decimal:

Convert to fraction out of 100,  $\frac{\quad}{100}$   
 as % "means out of 100" =  $\frac{\quad}{100}$   
 eg  $9\% = \frac{9}{100}$  use place value table to write as a decimal

### Convert decimal to a fraction

Use place value to convert to fraction out of 10, 100, 1000, etc  
 eg  $0.8 = \frac{8}{10}$   
 then simplify where possible  
 eg  $\frac{8}{10}$  becomes  $\frac{4}{5}$

| Place Value     |                 |
|-----------------|-----------------|
| Units           | Decimals        |
| Thousands       | Tenths          |
| Hundreds        | Hundredths      |
| Tens            | Thousandths     |
| Units           | Ten thousandths |
| Tenths          |                 |
| Hundredths      |                 |
| Thousandths     |                 |
| Ten thousandths |                 |

| Units           | Decimals        |
|-----------------|-----------------|
| Thousands       | Tenths          |
| Hundreds        | Hundredths      |
| Tens            | Thousandths     |
| Units           | Ten thousandths |
| Tenths          |                 |
| Hundredths      |                 |
| Thousandths     |                 |
| Ten thousandths |                 |

place the 9

in the hundredths column

fill in with any zeros

### Convert decimal to a fraction to a percentage:

Use place value to convert to fraction out of 10, 100, 1000, etc  
 eg  $0.126 = \frac{126}{1000}$   
 % means out of 100 so convert to equivalent fraction out of 100 =  $\frac{126}{1000} = \frac{12.6}{100}$   
 eg  $\frac{126}{1000}$  becomes  $\frac{12.6}{100} = 12.6\%$



### Convert fraction to decimal

Convert to fraction out of 10, 100, 1000, etc" =  $\frac{\text{or}}{10} \text{ or } \frac{\text{or}}{100} \text{ or } \frac{\text{or}}{1000}$   
then use place value to write as a fraction

$$\text{eg } \frac{3}{8} = \frac{x}{10} = \frac{x}{100} = \frac{375}{1000}$$

| Place Value |             |  |  |
|-------------|-------------|--|--|
| Units       | Decimals    |  |  |
| Ten         | Tenths      |  |  |
| One         | Hundredths  |  |  |
|             | Thousandths |  |  |
|             |             |  |  |

place the end digit

in the thousandths column

fill in with any zeros

### Convert fraction to percentage

Convert to fraction out of 10, 100, 1000, etc" =

$$\frac{\text{or}}{10} \text{ or } \frac{\text{or}}{100} \text{ or } \frac{\text{or}}{1000}$$

$$\text{eg } \frac{1}{200} = \frac{x}{10} = \frac{x}{100} = \frac{5}{1000}$$

then write as an equivalent fraction "out of 100" as percentage

$$\text{eg } \frac{15}{1000} = \frac{1.5}{100} \text{ since "out of 100" write as a percentage } = 1.5\%$$

### Ordering FDP

To be able to order FDP, we need to write them all in the same format.

Example: Order from smallest to largest:  $\frac{1}{4}$  0.19 0.3 26%  $\frac{1}{5}$

You can choose to convert them all into fractions, decimals or percentages as long as you convert them all into the same.

Changing them to percentages:

$$\frac{1}{4} = 25\% \quad 0.19 = 19\% \quad 0.3 = 30\% \quad \frac{1}{5} = 20\%$$

25%, 19%, 30%, 26%, 20%

From smallest to biggest:

19%, 20%, 25%, 26%, 30%

Answer:

$$0.19, \frac{1}{5}, \frac{1}{4}, 26\%, 0.3$$

Make sure you write your answer using the original numbers in the question.

Online clips

M958, M264, M553



# Express a Quantity

## as a Fraction of

## Another



### Component Knowledge

- Express one quantity as a fraction of another
- Express a fraction in its simplest form

### Key Vocabulary

|             |                                                                                                     |
|-------------|-----------------------------------------------------------------------------------------------------|
| Fraction    | A way to express a part of a whole                                                                  |
| Amount      | The sum total of 2 or more quantities of sums                                                       |
| Quantity    | A certain amount or number of something                                                             |
| Numerator   | To top number of a fraction showing how many parts of the whole                                     |
| Denominator | The bottom number that names the fraction                                                           |
| Simplify    | To reduce a fraction to a simpler form by dividing the numerator and denominator by a common factor |
| Proportion  | The comparison of the size of a share to the size of the whole                                      |

### Simple Examples

What fraction of these shapes are red?  $\frac{3}{7}$

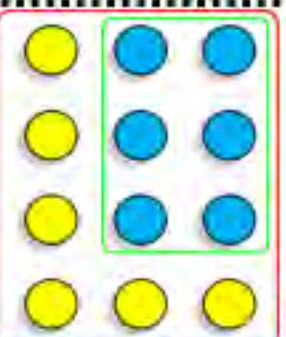
What fraction of these shapes are circles?  $\frac{4}{7}$

What fraction of the circles are red?  $\frac{1}{4}$

What fraction of the squares are yellow?  $\frac{1}{3}$

What fraction of the red shapes are squares?  $\frac{2}{3}$

What fraction of the yellow shapes are circles?  $\frac{3}{4}$



Expressing a Quantity as a fraction in its simplest form.

What fraction of these shapes are blue?

$$\frac{6}{12} = \frac{1}{2}$$

### Applied Examples

Adam buys a bag of 60 sweets.  
6 of the sweets are apple. How many are pear?  
What fraction of the sweets will Adam eat?



$$\frac{6}{30} = \frac{1}{5}$$

six-fifth of the sweets  
1 out of every 5 sweets

Find 100 500 meters.  
David ran 1.5 kilometers.



How the 500 meters as a fraction of how the David ran?

$$\frac{500}{1600} = \frac{5}{16}$$

Also must use the same units in the fraction.

What fraction of the drink is juice?



$$\frac{30}{240 + 30} = \frac{30}{270} = \frac{1}{9}$$

### Online clips

U163



# Percentages



## Key Vocabulary

|            |                                                                                      |
|------------|--------------------------------------------------------------------------------------|
| Percentage | Parts per 100. The unit is %                                                         |
| Equivalent | Having the same value                                                                |
| Convert    | The change a value or expression from one form to another                            |
| Fraction   | How many parts of a whole                                                            |
| Decimal    | Based on 10. Decimal number is often used to mean a number that uses a decimal point |
| Growth     | To increase/to grow                                                                  |
| Reduce     | To make smaller in value                                                             |

## What do I need to be able to do?

- Be able to write a quantity as a percentage of another
- Be able to find percentages of an amount.
- To be able to find a percentage increase and decrease
- Be able to find a percentage change.
- To be able to use reverse percentages.

To calculate any percentage it is useful to start with 10%.

30% of 120:  $10\% = 120 \div 10 = 12$

To find 10% we divide by 10.

$30\% = 3 \times 12 = 36$

To find 30% we multiply 10% by 3.

80% of 120:  $80\% = 0.80$

$80\% \text{ of } 120 = 0.80 \times 120 = 96$

Change the percentage to a decimal and then multiply.

33% of 90:  $33\% = 0.33$

$33\% \text{ of } 90 = 0.33 \times 90 = 29.7$

By converting the percentage a less than 10.

4% of 88:  $4\% = 0.04$

$4\% \text{ of } 88 = 0.04 \times 88 = 3.52$

Take care using decimal percentages will divide by 100.

12.5% of 42:  $12.5\% = 0.125$

$12.5\% \text{ of } 42 = 0.125 \times 42 = 5.25$

## Percentage change



$\frac{200 - 100}{100} \times 100 = 100\%$

**Difference in values**  
 $\frac{\text{Difference in values}}{\text{Original value}} \times 100$

"You'll be home by 16:00!"  
She said to Li Wei.



They took half →  $\frac{5000}{10000} \times 100 = 50\%$

## Percentage Increase and Decrease

Example 1) Increase £320 by 20%.  
Work out 20%, (0.20 x 320 = 64) Add this onto the original number, 320 + 64 = £384

Example 2) Decrease £50 by 12%.  
 $12\% = 0.12 \times 50 = 6$ . Subtract this from 50 = 50 - 6 = £44.

## Reverse Percentages

"50% of my money is what are 'the rest'?"

(Original Number) (100%)



$(100\% - 50\%) = 50\%$   
 $50\% = 4$   
 $100\% = 40$

Try to scale down to 10% and then scale back to 100%

"40% of my money is what are 'the rest'?"

(Original Number) (100%)



$(100\% - 40\%) = 60\%$   
 $60\% = 6$   
 $100\% = 60$

Online Clips: M235, M437, M905, M476, M533, M528



# Expanding single

## brackets



### Component Knowledge

To be able to expand a single bracket, including problems with powers.

### Key Vocabulary

|            |                                                                         |
|------------|-------------------------------------------------------------------------|
| Expression | A mathematical statement written using symbols, numbers or letters.     |
| Simplify   | In general, an expression is in simplest form when it is easiest to use |
| Expand     | Expand is when we multiply to remove the ( )                            |

**Expanding brackets** means multiplying everything inside the bracket by the letter or number outside the bracket.

For example, in the expression  $3(m+7)$  both  $m$  and  $7$  must be multiplied by  $3$ :

$$\begin{aligned} 3(m+7) \\ = 3 \times m + 3 \times 7 \\ = 3m + 21 \end{aligned}$$

Expanding brackets involves using the skills of simplifying algebra. Remember that  $2 \times a = 2a$

### Example

$$\begin{aligned} \text{Expand } 4(3m+y): \\ = 4 \times 3m + 4 \times y \\ = 12m + 4y \end{aligned}$$

### Using arrows

Expand:

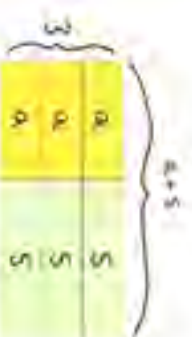
$$7(3+a) = 21 + 7a$$

$$3x(5x+2) = 15x^2 + 6x$$

### Using grid method

$$\text{Expand: } 3(a+5)$$

$$3 \times (a+5)$$



$$3 \times a = 3a$$

$$3 \times 5 = 15$$

$$3a + 15$$

### Expanding and simplifying

To expand and simplify more than one bracket, first expand each bracket then collect like terms.

$$2(5+a) + 3(2+a) = 10 + 2a + 6 + 3a$$

$$= 5a + 16$$

Note - Collect like terms to simplify

$$4(x+2) - 2(x+2) = 4x + 8 - 2x - 4$$

$$= 2x + 4$$

Note: Remember the rules when multiplying negatives:  $-2$  multiplied by  $5 = -10$ .

### Online clips

M237, M792





# Expanding Double Brackets

## Component Knowledge

- To use algebraic notation when multiplying terms.
- To be able to expand double brackets and simplify where necessary.
- Use identity notation correctly.

## Key Vocabulary

| Expand                | Multiplying out a bracket.                                                                                                                           |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Term                  | Either a single number or variable, or the product of several numbers or variables.                                                                  |
| Collecting like terms | Simplifying an expression by grouping the same type of terms together.                                                                               |
| Identity              | An equality that relates one variable to another. It will be equal for ALL values of the variable, unlike an equation which gives a single solution. |

## Expanding double brackets

Expanding double brackets is long multiplication using algebraic terms as well as numerical values. There are 2 common ways of completing this.

Example 1 - Expand  $(x + 4)(x + 6)$

$$(x + 4)(x + 6)$$

We multiply all terms together (this can be known as FOIL method):

$$x \times x = +x^2$$

$$x \times 6 = +6x$$

$$4 \times x = +4x$$

$$4 \times 6 = +24$$

$$(x + 4)(x + 6) \equiv x^2 + 6x + 4x + 24$$

We now collect like terms:

$$\equiv x^2 + 10x + 24$$

Example 1 - Expand  $(x + 4)(x + 6)$

We can also use an area model (also known as the grid method):

| X  | x      | +4    |
|----|--------|-------|
|    | $+x^2$ | $+4x$ |
| +6 | $+6x$  | $+24$ |

We have still multiplied all the terms together, like the previous method, but they remain in the grid. We can see all 4 terms in the expanded expression:

$$(+x^2 + 6x + 4x + 24),$$

We now collect like terms:

$$(x + 4)(x + 6) \equiv +x^2 + 10x + 24$$



Example 2 -Expand  $(x - 3)(x + 6)$


$$(x - 3)(x + 6)$$

This gives  $x^2 + 6x - 3x - 18$

This simplifies to

$$x^2 + 3x - 18$$

Example 3 -Expand  $(2x - 3)(x - 5)$


$$(2x - 3)(x - 5)$$

This gives  $2x^2 - 10x - 3x + 15$

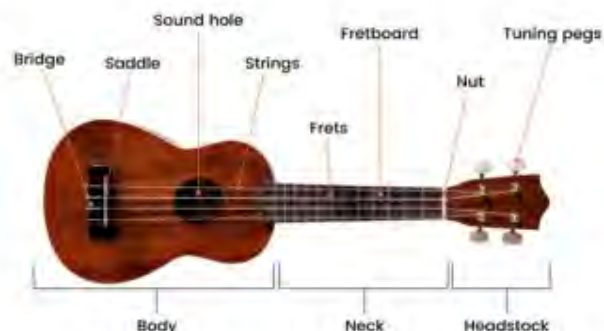
This simplifies to

$$2x^2 - 13x + 15$$

Online clips

Q976, M527





## Year 8 Ukulele Knowledge Organiser.

The ukulele is a useful instrument to learn as it introduces us to some of the techniques used to play the guitar such as using frets to place notes, playing chords and using different strumming patterns. Having only 4 strings makes it easier to learn new chords quickly and enables us to learn a number of songs in a short amount of time.

| <b>HARMONY</b> - How notes of different pitch blend together.       |                                                                                               | <b>RHYTHM</b> - How notes (and rests) of different length are arranged. |                                                                                                            |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>PITCH</b>                                                        | How high or low the notes are.                                                                | <b>BEAT</b>                                                             | A steady pulse that continues throughout the music.                                                        |
| <b>FRETS</b>                                                        | A bar on the fingerboard to show the pitch of different notes.                                | <b>TIME SIGNATURE</b>                                                   | The amount, and type, of beats in each bar.                                                                |
| <b>STAVE</b>                                                        | Five lines that we write notes on - the higher up we write them, the higher pitched they are. | <b>DURATION</b>                                                         | How long a note or chord is held for.                                                                      |
| <b>TREBLE CLEF</b>                                                  | Sign at the start of the music indicating a high range of notes.                              | <b>STRUM</b>                                                            | Playing a number of strings at once in a sweeping motion.                                                  |
| <b>CHORD</b>                                                        | Two or more notes played at the same time.                                                    | <b>STRUMMING PATTERN</b>                                                | Strumming the strings down or up in a particular order and rhythm.                                         |
| <b>MAJOR CHORD</b>                                                  | A bright/happy sounding chord 😊                                                               |                                                                         |                                                                                                            |
| <b>MINOR CHORD</b>                                                  | A chord with a darker/sad sound 😞                                                             |                                                                         |                                                                                                            |
| <b>CHORD SEQUENCE</b>                                               | A pattern of chords, often repeated in the same order.                                        |                                                                         |                                                                                                            |
| <b>TECHNIQUE</b> - The correct way to play notes to achieve fluency |                                                                                               | <b>STRUCTURE</b> - How the different sections of a piece are arranged.  |                                                                                                            |
| <b>FLUENCY</b>                                                      | Performing music without gaps                                                                 | <b>INTRODUCTION</b>                                                     | A short piece of music to set the pace for a song.                                                         |
| <b>PRACTICE</b>                                                     | Repetition of a piece of music to build confidence and fluency.                               | <b>VERSE</b>                                                            | Usually the first section of a song (tells the story) then returns with the same tune but different words. |
| <b>SELF-APPRAISAL</b>                                               | Listening to your own performance and setting targets for improvement.                        | <b>CHORUS</b>                                                           | A recognisable section of a song that keeps on returning in between verses.                                |



# hooks and riffs

## A. Key Words

**HOOK** – A ‘musical hook’ is usually the ‘catchy bit’ of the song that you will remember. It is often short and used and repeated in different places throughout the piece. HOOKS can either be a:

**MELODIC HOOK** – a HOOK based on the instruments and the singers

**RHYTHMIC HOOK** – a HOOK based on the patterns in the drums and bass parts or a

**VERBAL/LYRICAL HOOK** – a HOOK based on the rhyming and/or repeated words of the chorus.

**RIFF** – A repeated musical pattern often used in the introduction and instrumental breaks in a song or piece of music. RIFFS can be rhythmic, melodic or lyrical, short and repeated.

**OSTINATO** – A repeated musical pattern. The same meaning as the word RIFF but used when describing repeated musical patterns in “classical” and some “World” music.

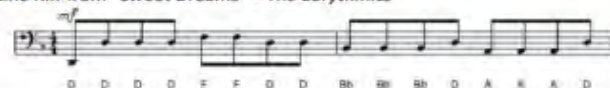
**BASS LINE** – The lowest pitched part of the music often played on bass instruments such as the bass guitar or double bass. RIFFS are often used in BASS LINES.

**MELODY** – The main “tune” of a song or piece of music, played higher in pitch than the BASS LINE and it may also contain RIFFS or HOOKS. In “Classical Music”, the melody line is often performed “with” an OSTINATO pattern below.

## Exploring Repeated Musical Patterns

### B. Famous Hooks, Riffs and Ostinatos

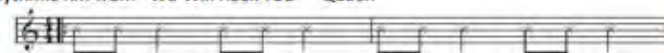
Bass Line Riff from “Sweet Dreams” – The Eurythmics



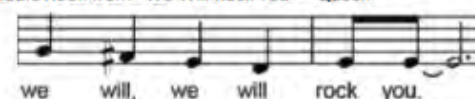
Riff from “Word Up” – Cameo



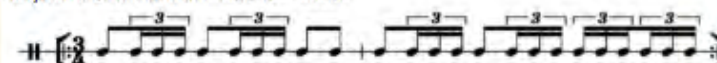
Rhythmic Riff from “We Will Rock You” – Queen



Vocal and Melodic Hook from “We Will Rock You” – Queen



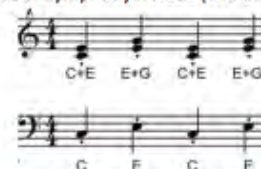
Rhythmic Ostinato from “Bolero” – Ravel



Bass Line Ostinato from “Habanera” from ‘Carmen’ – Bizet



Ostinato from 2<sup>nd</sup> Movement of Symphony No.101 (The Clock) – Haydn



### C. Music Theory

**REPEAT SYMBOL** – A musical symbol used in staff notation consisting of two

vertical dots followed by double bar lines



showing the performer should go back to either the start of the piece or to the corresponding sign facing the other way and repeat that section of music.

**TREBLE CLEF** – A musical symbol showing that notes are to be performed at a higher pitch. Also called the G clef since it indicates that the second line up is the note G.



**BASS CLEF** – A musical symbol showing that notes

are to be performed at a lower pitch. The



BASS LINE part is often written using the BASS CLEF. Also called the F clef since it indicates that the fourth line up is the note F.



## Westhoughton High School – ACTIVITY: Basketball

### Passing:

#### Chest pass/Bounce pass:

- W shape with hands on the back of the ball
- Bring hands to chest.
- Step in push ball to partners chest or into floor for bounce pass

#### Shoulder pass:

- Start with the arm back behind the shoulder.
- Arm goes straight over the shoulder. Arm follows the path of the ball.

#### Overhead pass

- Two hand on the ball above your head.
- Take a step toward the teammate with your dominant foot.
- Step forward with the back foot, release the ball forward, and follow through.

### Dribbling

- Keep your head up. Don't look at the ball.
- Bend knees for low centre of gravity
- Extend your arm and snap your wrists to send the ball into the ground.
- Use your fingers, not your palm, to control the ball.
- Bounce the ball to hip height and to the side of the body. That will give you more control over the ball make it harder for defenders to steal the ball.
- Use your body and your non-dribbling arm to shield the ball from defenders



### Shooting:

#### BEEF:

- Balance- feet shoulder width apart, bend knees.
- Elbow- 90 degree angle and under ball
- Eyes- Always looking at the target (basket)
- Follow through- Shoot ball by straightening arm, wrist points downwards

#### Lay up:

- Dribble to the side of net.
- Place the non-shooting hand on the side of the ball, and shooting hand on top of the ball.
- The last step before the lay-up jump should ensure that take off foot is opposite to the shooting hand (left foot/right hand).
- extend the shooting knee and raise the ball up.
- Direct the wrist and fingers straight at the basket and release the ball at the highest point.

### Defending

#### Man to Man:

- Each player marks their opposing player



#### Zonal:

- Each player has a zone on the court they must defence



Both defence types can be done full court or half court

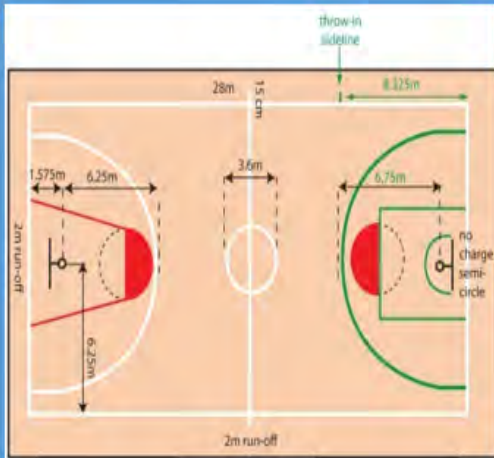
- Full court = applying pressure across the entire court.
- Half Court = Drop back to your own half before applying pressure.



## Westhoughton High School– ACTIVITY: Basketball

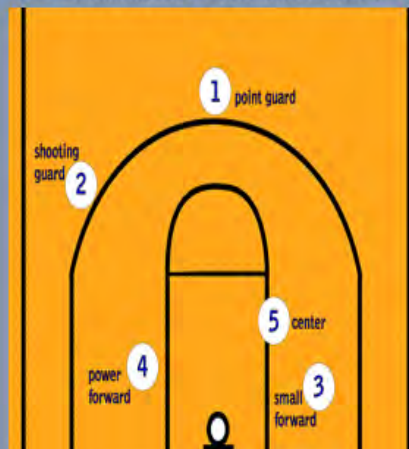
### Rules:

- Each team can have a maximum of 5 players on the court at any one time
- The ball can only be moved by either dribbling (bouncing the ball) or passing the ball.
- Violations in basketball include travelling (taking more than one step without bouncing the ball), double dribble (picking the ball up dribbling, stopping then dribbling again with two hands)



### Positions:

- **Point guard** direct play going forward and decide which moves the team should make.
- **Shooting guard** are the main shooter in the team but it is usually from long distance.
- **Small forward** is normally the tallest player, shooting is a large part of their game.
- **Centre** will look to score from close to the basket and also block shots and deal with rebounds
- **Power Forward** specialises on the rebounds and defence.



### Scoring System:

#### → Inside three-pt line

Any baskets not scored from the free throw line or from outside the three-point line will be worth two.

#### → Outside the three-pt line

These baskets will be rewarded with 3 points, your feet have to be behind the 3 point line for it to count.

#### → Free throw line

A free throw from the free-throw line is worth one point. It is an unchallenged shot at the basket. This is awarded after a technical foul, or a personal foul on a player in the act of shooting.



### Tactics:

- Defending tactics- Full court and half court press
- Attacking tactics - rebounding and manipulating speed of play.



### Key Words:

Chest Pass  
Bounce Pass  
Shoulder Pass  
Intercept  
Marking  
Defensive Third  
Centre Third  
Attacking Third  
Goal Circle  
Net  
Attacking  
Defending  
Centre Pass



## WESTHOUGHTON HIGH SCHOOL KS3 PE KNOWLEDGE ORGANISER – ACTIVITY: FOOTBALL

### Passing/ Receiving

- Head down and eye on the ball.
- Ensure that non-kicking foot is planted along side the ball.
- Side footed pass- strike the ball in the centre of the ball.
- Laces pass- strike the ball with the top of your boot to ensure ball stays along the floor.
- Chip pass- strike ball slightly under the ball to gain height.
- Follow through in the direction you want the ball to go.
- When receiving the ball, ensure head is up.
- Eye contact with the passer to receive the ball.
- On the balls of your feet.
- Check shoulder to see of any defenders

### Dribbling

- Keep the ball close to your feet.
- Use the inside and outside of your foot
- Keep head up.
- Use your body to throw the defenders off balance to create space.
- Look for spaces to move the ball into.

### Moving with the ball

- Big touches.
- Use the laces to knock the ball forwards so you can run onto it.
- Accelerate into the run and keep speed up

### Shooting

- Lean forward when you go to kick the ball.
- Make sure your leg is fully extended.
- Lock your ankle into the kick.
- Kick the ball in the centre of the ball.

### Attacking Play

- Using different tactics to beat your opponent.
- Working on attacking overloads i.e 2v1 or 3v1.
- Breaking on set plays i.e Corners or Free kicks to gain advantage.

### Heading

- Use the middle of your forehead to head the ball.
- Aim for the centre of the ball.
- Attacking heading and defensive headers. \_

### Defensive Play

- Jockeying your opponent, don't dive in and be patient.
- Force the attacker on their weaker foot.
- Be on your toes.
- Keep your eye on the ball.

### **Key Words:**

Side foot pass  
Lofted pass  
Corner  
Free Kick  
Throw-in  
Dribble  
Shoot  
Heading  
Tackle  
Jockey  
Marking  
Attacking  
Defending  
Crossing





## WESTHOUGHTON HIGH SCHOOL KS3 PE KNOWLEDGE ORGANISER – ACTIVITY: FOOTBALL

### Tactics:

- Teams attack and defend together
- Create width to create more space
- Tactics are also used in different formations and how best they suit different teams.
- 4-3-3, This formation is great with having the extra midfielder in the middle of the pitch which can add that overload system.
- 5-3-2, This formation gives more a defensive option but allows the two wing backs to push forward, giving more attacking options.



### Rules:

- The Game is started by one team in the middle of the pitch
- One referee officiates the game with the help of two assistant referees
- Players are not allowed to use their hands or arms to control the ball unless they are the goalkeeper
- Usually a game consists of 45 minutes each half
- Depending on the level of football will depend on how many substitutes you can use



### Positions:

1. Goalkeeper
2. Left Back
3. Right Back
4. Centre Back
5. Centre Defensive Midfielder
6. Centre Attacking Midfielder
7. Left Wing
8. Right Wing
9. Striker/ Number 9

- Year 7's will play 9 a side which will consist of different formations such as: 3-3-2 or 2-4-2. Year 7 will also play 30 minute games.
- Year 8-11 will be 11 a side games. 35-40 minute games.

### Scoring System:

- To score a goal, the ball must be put over the line into the goal
- The team with the most goals at the end of the game wins.
- Incase of a cup game and both teams have scored the same, it will then go to extra time and penalties



### Key Words:

Side foot pass  
Lofted pass  
Corner  
Free Kick  
Throw-in  
Dribble  
Shoot  
Heading  
Tackle  
Jockey  
Marking  
Attacking  
Defending  
Crossing



**WESTHOUGHTON HIGH SCHOOL KS3 PE KNOWLEDGE ORGANISER – ACTIVITY: NETBALL**

| Skills and Techniques:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Rules:                                                                                                                                                                                                                                                                                                            | Positions:                                                                                                                                                                        | Scoring System:                                                                                                                                                                                                                                         | Key Words:                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>→ <b>Catching:</b></p> <p>Hands form W shape behind ball. Catch at speed, catch with one hand and catch a ball at different heights</p> <p>→ <b>Passing:</b></p> <p>Perform different types of passes selecting the right pass under pressure. Place throwing hand behind ball, move opposite foot in front of body. Full extend arm when passing, following through with pass.</p> <p>→ <b>Footwork:</b></p> <p>Land correctly with one foot landing or <u>two foot</u> landing. Pivot to send the ball in a different direction.</p> <p>→ <b>Shooting:</b></p> <p>Ball on fingertips, use non throwing hand to steady ball. Bend knees and elbows, lifting ball up to net.</p> | <p>→ Game is started by centre pass within the centre third</p> <p>→ Two umpires officiate the game</p> <p>→ Players are not allowed to travel with the ball</p> <p>→ Players must remain within their designated zones</p> <p>→ A defending player must stand three feet away from the person with the ball.</p> | <p>GK - Goalkeeper<br/>GD - Goal Defence<br/>WD - Wing Defence</p> <p>C - Centre</p> <p>WA - Wing Attack<br/>GA - Goal Attack<br/>GS - Goal Shooter</p> <p>7 players in total</p> | <p>→ To score a goal, the ball must be put through the opposition's goal ring</p> <p>→ The team with the most points at the end of the game wins.</p> <p><b>Tactics:</b></p> <p>→ Quick Passing</p> <p>→ Dodging and changing speed to receive ball</p> | <p>Chest Pass<br/>Bounce Pass<br/>Shoulder Pass<br/>Intercept<br/>Marking<br/>Defensive Third<br/>Centre Third<br/>Attacking Third<br/>Goal Circle<br/>Net<br/>Attacking<br/>Defending<br/>Centre Pass</p> |

→ Catching:

Hands form W shape behind ball. Catch at speed, catch with one hand and catch a ball at different heights

Perform different types of passes selecting the right pass under pressure. Place throwing hand behind ball, move opposite foot in front of body. Full extend arm when passing, following through with pass.

Land correctly with one foot landing or two foot landing.  
Pivot to send the ball in a different direction.

Ball on fingertips, use non throwing hand to steady ball. Bend knees and elbows, lifting ball up to net.

- Game is started by centre pass within the centre third

- Two umpires officiate the game

- Players are not allowed to travel with the ball

- Players must remain within their designated zones

→ A defending player must stand three feet away from the person with the ball.



GK - Goalkeeper  
GD - Goal Defence  
WD - Wing Defence

C - Centre

WA - Wing Attack  
GA - Goal Attack  
GS - Goal Shooter

7 players in total

→ To score a goal, the ball must be put through the opposition's goal ring

→ The team with the most points at the end of the game wins.

- Quick Passing
- Dodging and changing speed to receive ball

Chest Pass  
Bounce Pass  
Shoulder Pass  
Intercept  
Marking  
Defensive Third  
Centre Third  
Attacking Third  
Goal Circle  
Net  
Attacking  
Defending  
Centre Pass

| GOAL THIRD | CENTRE THIRD | GOAL THIRD |
|------------|--------------|------------|
|------------|--------------|------------|



DIRECTION OF PLAY





# WESTHOUGHTON HIGH SCHOOL - PE and Sport Dance knowledge organiser



| Skills and Techniques:                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Choreographic devices:                                                                                                                                                                                  | Positions and groupings:                                                                                                                                                 | Performance skills:                                                                                                                                                                                     | Key Words:                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <p>→ <b>Actions</b> (eg travel, turn, elevation, gesture, stillness, use of different body parts, floor work, transfer of weight)</p> <p>→ <b>Dynamics</b> (eg fast/slow, sudden/sustained, strong/light, flowing/abrupt)</p> <p>→ <b>Space</b> (pathways, levels, directions, size of movement, patterns, spatial design)</p> <p>→ <b>Relationships</b> - lead and follow, mirroring, action and reaction,, complement and contrast, formations)</p> <p>→ <b>Timing</b></p> <p>→ <b>Rhythm</b></p> | <p>→ Motif and development</p> <p>→ Repetition</p> <p>→ Contrast</p> <p>→ Highlights</p> <p>→ Climax</p> <p>→ Changes in numbers of dancers</p> <p>→ Unison and canon.</p> <p>→ Chance Choreography</p> | <p>Solo</p> <p>Duet</p> <p>Trio</p> <p>Group</p> <p>Centre stage</p> <p>Upstage</p> <p>Downstage</p> <p>Stage Left</p> <p>Stage Right</p> <p>Onstage</p> <p>Offstage</p> | <p>→ Posture</p> <p>→ Alignment</p> <p>→ Balance</p> <p>→ Coordination</p> <p>→ Control</p> <p>→ Flexibility</p> <p>→ Mobility</p> <p>→ Strength</p> <p>→ Stamina</p> <p>→ Extension</p> <p>→ Focus</p> | <p>Choreography</p> <p>Pathways</p> <p>Direction</p> <p>Level</p> <p>Speed</p> <p>Extension</p> <p>Timing</p> <p>Phrase</p> <p>Stimulus</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                         |                                                                                                                                                                          |                                                                                                                                                                                                         |                                                                                                                                             |



## WARM-UP

### 1. Pulse Raising Activity

- ❖ Pulse raising activities gently raises the heart rate.
- ❖ E.g. Jogging, cycling, skipping.



### 2. Stretches

- ❖ Stretches should be dynamic (moving, not held). They prepare the muscles.
- ❖ E.g. High knees to stretch the hamstrings, heel flicks to stretch the quadriceps.



### 3. Skill-Based Activity

- ❖ This is the final part of the warm-up.
- ❖ This is where you familiarise yourself with the skills and actions that will be needed in the session.
- ❖ E.g. Passing the ball in rugby.



**Cool down**- starts with low intensity exercise such as light jogging, medium pace walking or easy cycling, anything that allows the heart rate to maintain an increased rate then gradually decrease. This is followed by stretching, which is usually more static (held) in a cool down.

## Muscular system

Arms-Biceps and Triceps

Legs- Quadriceps and Hamstrings

Core-Abdominals



## Year 8:Term 1: Health Knowledge Organiser

### Sedentary lifestyle

A sedentary lifestyle is one with no or irregular physical activity and an excessive amount of daily sitting.

Consequences of a Sedentary lifestyle-obesity, Depression, Type 2 diabetes, Poor muscle tone, osteoporosis.



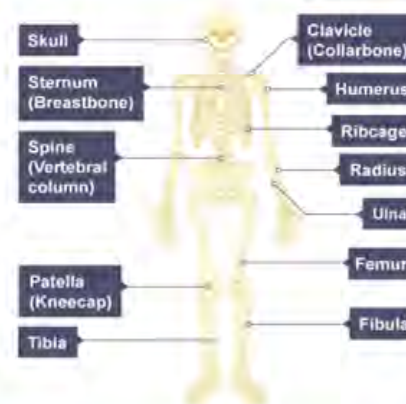
### Short term effects of exercise

on HR and breathing rate =increase  
Long term effect of exercise  
=decrease

## Skeletal System

Arms-Humerus, ulna and radius

Legs-Femur, Patella, Tibia and Fibula

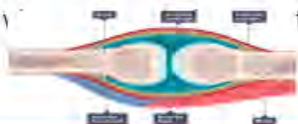


**Key Vocabulary:** Pulse raiser Sedentary. Triceps Biceps Humerus Radius. Ulna Femur Patella Tibia Fibula Abdominals



## Joints

A joint is a place where two bones meet and is also called an articulation



**Hinge** - these can be found in the elbow, knee and ankle. They allow flexion and extension of a joint.

**Ball and socket** - these types of joint can be found at the shoulder and hip and allow movement in almost every direction.

**Pivot** - this joint can be found in the neck between the top two vertebrae. It allows only rotational movement such as moving your head from side to side as if you were saying 'no'.

**Condyloid** - this type of joint is found at the wrist. It allows you to flex and extend the joint, and move it from side to side.



## Long term effects of exercise

### Cardiovascular system

Cardiac hypertrophy; increased stroke volume (SV); decrease in resting heart rate (HR); increase in maximum cardiac output (Q); capillarisation at the lungs and muscles; increase in number of red blood cells; increased size and strength of the heart; drop in resting blood pressure due to more elastic muscular wall of veins and arteries

### Respiratory system

Increased vital capacity; increased number of functioning alveoli; increased strength of the respiratory muscles (internal and external intercostals and diaphragm); increased lung capacity and volume

### Energy system

Increased production of energy from the aerobic energy system; increased tolerance to lactic acid

### Muscular system

Muscle hypertrophy; increased strength of tendons; increased strength of ligaments

### Skeletal system

Increase in bone density

## Year 8: Term 1 Health Knowledge Organiser

### Fitness Components

**Strength** = The maximum force that can be generated by a muscle or muscle group.

**Muscular Endurance** = The ability of muscles to continually contract over a period of time against a light to moderate resistance load.

**Power** = The product of strength and speed.

**Agility** - Ability to rapidly change body direction, accelerate, or decelerate.

**Cardiovascular endurance** - The ability of the heart, lungs and blood to transport oxygen during sustained exercise

### Fitness Test

- Strength - Hand grip dynamometer
- Maximal strength - One rep max test
- Select the body part that is to be tested and use the weight lifting technique for that body part - for example quadriceps a leg extension, pectorals - bench press
- Cardiovascular endurance - Multi-stage fitness test
- Flexibility - Sit and reach test
- Speed - 30 metre sprint test
- Muscular endurance - 60 second press-up test
- Muscular endurance - 60 second sit-up bleep test
- Agility - Illinois agility test
- Coordination - Alternate hand wall toss test
- Reaction time - Ruler drop test
- Balance - Standing stork test
- Power - Vertical jump test



### Short term effects of exercise

- Cardiovascular system - Increase in stroke volume (SV); increase in heart rate (HR); increase in cardiac output (Q); increase in blood pressure (BP)
- Respiratory system - Increase in breathing rate; increase in tidal volume
- Cardio-respiratory system - increase in oxygen uptake; increase in carbon dioxide removal
- Energy system - increase in lactate production
- Muscular system - increase in temperature of muscles; increased pliability; muscle fatigue

**Key vocabulary:** Hinge Ball and Socket. Hypertrophy. Vital Capacity. Tidal Volume Lactic acid Fitness Component



## Year 8 Religion & Society - How Should We Live?

### Unit 1: Citizenship – Crime & Justice

#### What do I need to know about the criminal justice system?



##### 1. What is a crime and why do we have laws?

- A crime is when the law has been broken.
- There are two types of law, criminal law and civil law.
- Laws keep us safe and protect our basic human rights.
- Laws also keep order in our society and avoid chaos.
- Civil is law deals with disputes about such things as contracts including marriage, land and employment.
- Criminal law deals with 3 categories of crime:
  - Crimes against property - e.g. theft or burglary
  - Crimes against people's health and safety - e.g. assault, robbery or drug dealing
  - Crimes against the Crown (the state or government) e.g. treason or perjury.
- Although we might not agree with every law, we are all expected to obey them all which is called 'Rule of Law'
- In the UK, laws are made by our elected MPs in Parliament.

##### 2. How are criminals dealt with in the justice system?

- Police can arrest anyone suspected of committing a crime
- Anyone arrested is entitled to receive advice from a solicitor to ensure they are dealt with fairly.
- This suspect can be charged with the offence if the police feel that there is enough evidence. The police pass the file to the Crown Prosecution Service (CPS) who decide if there is enough evidence for the case to proceed to court.
- A court then issue a summons requiring them to appear in a particular court on a certain date and at a certain time.
- The suspect then attends a Magistrates court where the Magistrate listens to the evidence and decides on the verdict and a sentence.
- More serious cases are passed onto a Crown Court where the verdict is reached by a jury although the sentencing is done by the Judge who is well trained to apply the law.

##### 3. What powers and duties to the police have?

###### **Some of the duties of the police include:**

- Provide a visible presence to reassure the community
- Teach the community about the law
- Diffuse violent situations and direct traffic
- Respond to calls from the public and conduct arrests
- Interview suspects or witnesses and gather crime scene
- Gather evidence at a crime scene

###### **The police have certain powers to do their job effectively:**

- Police can stop and search you in the street or in your vehicle if they have reasonable suspicion that you are carrying drugs, weapons, stolen goods, alcohol / tobacco if you are underage
- Police can ask you to remove outer clothing in the street
- Police can force you to go to the police station if arrested
- Police can arrest you if you refuse to co-operate



## Year 8 Religion & Society - How Should We Live?

### Unit 1: Citizenship – Crime & Justice

#### What do I need to know about the criminal justice system?



#### 4. What is the age of criminal responsibility?

- The age of criminal responsibility is the age at which the courts decide a person is responsible for their actions. There is much debate about what age a person knows the difference between right and wrong and should therefore stand trial in court for committing a crime.
- The age of criminal responsibility in England, Wales and Northern Ireland is 10.
- The age of criminal responsibility in Scotland is 12, as it also is in the Netherlands and Belgium.
- The age of criminal responsibility in France is 13.
- The age of criminal responsibility is 14 in Germany, Italy and Spain and 15 in Scandinavian countries such as Sweden, Denmark, Finland and Iceland.
- ***Learners know arguments for and against raising the age of criminal responsibility in UK***

#### 5. What is the direct and indirect impact of crime? (Case Study)

Learners can explore the direct and indirect impact of crime on individuals, groups and society giving examples. Learners will link this to the stories of James Bulger or Rhys Jones and will be able to identify how the crime has affected a range of victims and groups, directly and indirectly

#### The James Bulger Story

James was two years old on 12 February 1993 when he was abducted from a shopping centre in Merseyside, by two boys, then known as Jon Venables and Robert Thompson. His body was found on a railway line, after he had been beaten to death. His killers were both just 10 years old. They were both jailed for life but were later released with new identities on licence in 2001. Venables was sent back to prison in 2010 and 2017 for additional offences.

#### The Rhys Jones Story

On 22 August 2007, **Rhys Jones**, eleven, was murdered in Liverpool while walking home from football practice. Sean Mercer, aged 16 at the time of the shooting, went on trial on 2 October 2008 and was found guilty of murder on 16 December. Mercer was sentenced to life imprisonment serving a minimum of 22 years. Rhys's murder was later revealed to be a result of Mercer's failed attempt to shoot one or more rival gang members from the Strand Crew who had come into Croxteth, instead missing and hitting Rhys as he walked home.

#### 6. What are the risks associated with gang culture?

- County lines - gangs sending young people from cities into smaller towns and villages to sell drugs.
- Disenchantment - to be disillusioned, with society, and feeling like there is no part in it for you.
- Grooming - when young people are given attention, compliments, money, food or presents in order to build a relationship with a gang member. The young person being groomed is then made to feel like they owe something to the gang, which is how they are recruited.
- County Lines criminal activity has a negative impact on the communities involved. It brings further violence, abuse and drugs into rural communities. By flooding the market with class A drugs, it increases social problems associated with drug use eg anti-social behaviour & theft.
- As well as harming communities, County Lines activity has a negative impact on the individuals involved; if caught, drug dealers can face prison sentences of nine years. For young people there is also the risk of becoming a user of drugs, as well as becoming trapped in gang activity.
- While some see criminal gangs as an escape from their life of poverty and abuse, many find that they are trapped in a vicious cycle of working for violent gangs.
- If you are worried about you or someone you know being involved in County Lines, call Crimestoppers (0800 555 111)



## Year 8 Religion & Society - How Should We Live?

### Unit 2: Religious Education: Exploring the Abrahamic Religions

#### Part 1: How might holy days remind Jews of their shared values?



##### 1. What are rituals and why are they so important?

- A ritual is a ceremony consisting of a series of actions performed to a set order.
- We come across rituals in every-day life, they help to give us a strong sense of belonging in our many communities.
- A strong sense of belonging is important because strong, positive communities help us to develop the tools we need for life's journey and support us when we hit obstacles.
- Rituals bring communities together by helping them to:
  - **Connect** - e.g. Sunday Roast as a family
  - **Commit** - e.g. Wedding ceremony
  - **Celebrate** - e.g. Birthday party
  - **Commemorate** - e.g. Remembrance Day
- Ritual is a very important feature of religion and over the next few lessons we will explore how the many rituals of the Jewish faith brings a strong sense of community and belonging.

##### 2. What is Judaism?

- Judaism is an ancient religion that can be traced back to 1500 CE and has survived despite the many struggles faced by Jewish people in history.
- Jews believe in one eternal God who created the universe and declared a set of rules they should live by.
- These were delivered to Moses and were written down in the Torah, the first part of the Jewish scriptures.
- Jews believe they have a special agreement with God called a Covenant where they will follow these rules and in return, they will be God's specially chosen people.
- There are many different types of Jewish people, such as more traditional Orthodox Jews and more Liberal or Reform Jews.
- Orthodox Jews read the Jewish scriptures more literally and are more cautious of change.
- Reform Jews read the scriptures more liberally and are more willing to allow their faith to adapt.
- When Jews go to the synagogue they are more likely to feel closer to God and each other.

##### 3. What is God's Covenant with Abraham and why is it significant?

- Abraham is considered, the founder of Judaism because he made a covenant with God.
- A covenant is an agreement between two parties typically marked with a sign.
- The story of Abraham and the everlasting promise made with God can be read in the book of Genesis which is the first book of both the Jewish and Christian scriptures.
- Moses was promised by God:
  - That he would be given a huge family and millions of descendants
  - That he and his descendants would be God's special people and he would be their God
  - That he would be given the land of Canaan as their homeland
- This agreement was marked by Abraham, all the men in his household and all male Jews today with the sign of circumcision which is the removal of the foreskin from the penis.
- This takes place in a special service called a 'Brit Milah' (Covenant of circumcision) shortly after birth and it is an important reminder to the whole Jewish community that they are the children of the covenant, they are God's chosen people, and he is their God.



## Year 8 Religion & Society - How Should We Live?

### Unit 2: Religious Education: Exploring the Abrahamic Religions

#### Part 1: How might holy days remind Jews of their shared values?



#### 4. What is the story of Moses and the Exodus?

**Summary:** Moses was a Hebrew prophet who led the Israelites out of slavery in Egypt in the Book of Exodus. He received the Ten Commandments from God at Mount Sinai, establishing the basis for Jewish law. After fleeing Egypt, Moses led his people through the Red Sea and into the desert, where they wandered for 40 years before entering the Promised Land of Canaan.

- **Early Life:** Moses was born into a Hebrew family during a time of oppression by the Pharaoh of Egypt. He was saved from an order to kill all male Hebrew children by being placed in a basket on the Nile River and found by the Pharaoh's daughter, who raised him as a Prince of Egypt.
- **Fleeing Egypt:** Moses witnessed the mistreatment of Hebrews and, after killing an Egyptian guard who was abusing a Hebrew slave, he fled to Midian after his identity was exposed. There he settled, married Zipporah, had children and tended the herds of his father-in-law, Jethro.
- **The Burning Bush:** In Midian, God appeared to Moses in a burning bush that was not consumed by the fire, commanding him to return to Egypt and free the Israelites.
- **The Ten Plagues:** Moses and his brother Aaron demanded the Pharaoh release the Israelites, and when he refused, God inflicted ten plagues upon Egypt, each increasing in severity and impact on the Egyptians their crops and their animals: (1) Water turning to blood (2) Frogs (3) Flies (4) Livestock pestilence (5) Boils (6) Hail (7) Locusts (8) Darkness (9) Death of the firstborn
- **The Exodus:** After the final plague, the Pharaoh finally released the Israelites, and Moses led them through the Red Sea, which God miraculously parted, allowing the Israelites to escape. The Israelites would spend the next 40 years wandering the wilderness to the Promised land.
- **Mount Sinai:** After crossing the Red Sea, the Israelites settled at Mount Sinai, where Moses received the Ten Commandments from God. This established the basis for the Jewish law. Moses asked Aaron to build an Ark for the tablets of stone upon which the 10 commandments were written to be stored in and this was always kept in a special tent called the Tabernacle.
- **The Promised Land:** Moses was able to see the Promised Land before he eventually died but it was only after Moses and all the original slaves who had left Egypt had died that Joshua would lead their descendants across the River Jordan into Canaan, the Promised Land.

#### 5. Why is the story of Moses so important to Jews?

- **Liberation from Slavery:** Moses's leadership in the Exodus, the Israelites' escape from slavery in Egypt, is a major historical and religious event for Jews.
- **The Covenant at Mount Sinai:** Moses's ascent to Mount Sinai and his receipt of the Torah (including the Ten Commandments) from God are believed to have established a further covenant between God and the Jewish people that builds upon the Abrahamic covenant. This covenant, involving a set of laws and commandments, forms the basis of Jewish law.
- **Prophetic Role and Leadership:** Moses is revered as the greatest prophet in Judaism, and his role as God's messenger and teacher is central to Jewish belief. Moses's leadership, courage, and unwavering faith serve as an example for Jews to emulate, especially in face of adversity.
- **Chosen People:** The covenant with Moses, and the subsequent Jewish people's adherence to the Torah, reinforces the belief in Judaism as a chosen people with a special relationship with God. Many Jews believe that God was teaching his people how to live as his chosen people through the 40 year exodus (journey) out of Egypt to the promised land.



## Year 8 Religion & Society - How Should We Live?

### Unit 2: Religious Education: Exploring the Abrahamic Religions

#### Part 1: How might holy days remind Jews of their shared values?



##### 6. How is the story of Moses celebrated at Passover?

- The story of Moses and the Exodus is still very important to Jews today and is remembered annually during Passover or in Hebrew, Pesach, a holiday commemorating this pivotal event.
- The name Passover relates directly to the final plague, the death of the firstborn in each home. God told Moses that if he the Israelites mark their homes with Lamb's blood they would be spared, and death would pass-over their homes which is why this festival is called the Passover.
- Everything needs to be ready for Passover Seder, a special meal on the first night.
- Each specific piece of food on the Seder plate reminds Jews what it was like for the Hebrew Slaves in Egypt so that Jews today can experience the exodus all over again each year. For example, the charoset is a paste made from sugar, cinnamon, apple, wine and nuts which represents the mortar used by the slaves when building the pyramids. The egg and meat, reminds Jews of the offerings made to God in the holy temple in Jerusalem. Bitter herbs like horseradish help Jews to remember the bitter suffering of the slaves. Finally, the vegetable karpas (Parsley) is dipped in salt water to remember the tears of the Hebrew slaves.

##### Significance of observing this holy day:

**Observing this holy day and participating in this ritual helps Jews to connect with God and each other as part of a faith community. It enables them to commemorate the suffering of their ancestors in Egypt but also celebrate God delivering his people from slavery and providing for them as his children of the covenant, his chosen people.**

##### 7. What is a Bar/Bat Mitzvah and why is it important?

- The Bat Mitzvah for a boy and Bat Mitzvah for a girl takes place at either the age of 12 or 13 depending on what Jewish tradition you follow. Mitzvah is a Hebrew word meaning commandment from God, so becoming a Bat Mitzvah means becoming a daughter of the commandment and promising to follow God's rules.
- Therefore, this ritual is a coming-of-age ceremony where the Jewish community recognises and celebrates a boy or girl as now being a Jewish adult.
- Young Jews know that they won't become an adult by the laws of the land until they are 18, but they would be able to take on more adult roles and responsibilities in the Jewish community such as at the Synagogue.
- After the ceremony Jews will have a big party with their friends and family to celebrate their coming of age.
- Many Jews feel closer to the Jewish community after this celebration because it is where they make their own personal commitment to their faith community.
- This ceremony has similarities with the Christian Church through the idea of Confirmation (Church of England) or First Holy Communion (Roman Catholic church).

##### Significance of observing this holy day:

**Observing this holy day and participating in this ritual helps young Jews to connect with and show their own commitment to God and their Jewish faith by celebrating coming of age as a member of the Jewish community and taking on greater responsibilities within it.**



## Year 8 Religion & Society - How Should We Live?

### Unit 2: Religious Education – Judaism

#### How might holy days remind Jews of their shared values?



#### 8. What is Shabbat and why is it important?

- The first story in the Jewish and Christian scriptures is the creation story which says God created the world and everything in it in 6 days and on the 7th day God rested.
- Consequently, Jews have a day of rest where they stop their very busy everyday life.
- This is called the Sabbath or in Hebrew, Shabbat.
- Shabbat starts at sunset on Friday and lasts 25 hours into Saturday evening.
- Every week Jewish families make sure all the work is done to prepare for Shabbat so that they can enjoy it together, as a day of rest, connecting with God, their family and faith community
- During Shabbat, several prayers are given over the bread and wine and then a meal is enjoyed together as a family and traditional Hebrew songs are sung. Coming together and sharing meals as a family is a big part of being Jewish.
- A Jew, might feel that they can make a fresh start each week after celebrating Shabbat.
- Orthodox and Reform Jews celebrate Shabbat with varying degrees of strictness:
  - More traditional Orthodox Jews generally adhere to stricter interpretations of the Sabbath including restrictions on work and the use of technology. For example, most Orthodox Jews would have their ovens and lights on timers, and they wouldn't turn on the TV, phone or a console as all these examples would be considered 'work'
  - More liberal Reform Jews are more flexible in their interpretations of the Torah and Sabbath law, often allowing activities like driving and using technology but still value and uphold the underlying principle that Sabbath is a day of rest to connect with their God, their family and their faith community

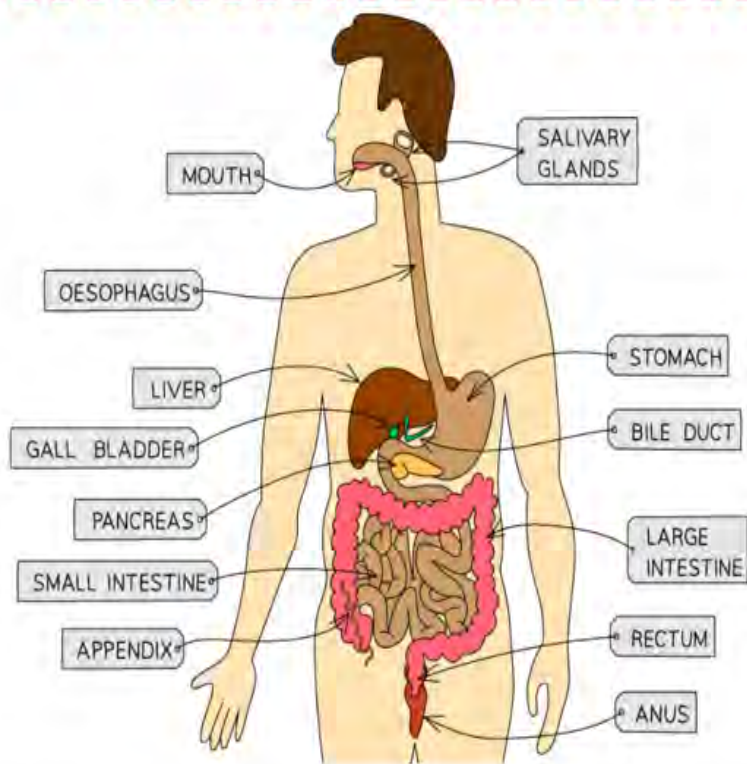
#### Significance of observing this holy day:

Observing Shabbat is a weekly opportunity for a Jew to rest and recover at the end of a busy week but also re-set and realign their commitment to God ahead of a new week. By doing this together with their family and faith community they also strengthen their connection to each other and to God which will help them to feel closer as a community. It is also a weekly reminder to Jews to celebrate what God has given through his creation and by observing it they keep God's commandments, given to Moses. A weekly day of rest is not just important to a Jewish person's faith but their health, wellbeing, and relationships.



# KS3 Nutrition and Digestion

**Digestion:** the breaking down of the large food we eat into other substances (smaller molecules) that our bodies can absorb and use.



Digestion starts in the mouth (where mechanical digestion happens and some enzymes begin chemical digestion).

- Food then travels through the oesophagus, a thin tube that connects the mouth to the stomach.
- The stomach is a sac where food is mixed with acidic juices to start the digestion of protein and kill microorganisms. **The stomach does not break food down!**
- The food then enters the small intestine, which is the upper part of the intestine where digestion is completed and nutrients are absorbed by the blood.
- Anything leftover moves to the large intestine, the lower part of the intestine from which water is absorbed and where faeces are formed.
- Faeces are stored in the rectum and leave the body via the anus.

**Gut bacteria:** Microorganisms that naturally live in the intestine and help food break down. The digestive system contains many bacteria and about half of the dry weight of faeces consists of bacteria. Bacteria in the digestive system are important. For example, they can digest some substances that humans cannot digest, such as certain carbohydrates, reduce the chance of harmful bacteria multiplying and causing disease, produce some vitamins that humans need, such as vitamins B and K.

## Keywords

- Respiration
- Energy
- Molecules
- Diffusion
- Bacteria
- Digestion
- Oesophagus
- Stomach
- Small intestine
- Large intestine
- Liver
- Rectum
- Anus
- Faeces
- Gut
- Dietary fibre
- Carbohydrates
- Lipids
- Calcium
- Iron
- Protein
- Vitamins
- Minerals



# KS3 Nutrition and Digestion

**Deficiency diseases** are the result of not consuming enough of a particular nutrient.

**Iron:** a mineral important for red blood cells.

**Calcium:** a mineral needed for strong teeth and bones.

**Vitamins and minerals:** needed in small amounts to keep the body healthy.

**Dietary fibre:** Parts of plants that cannot be digested, which helps the body eliminate waste.

**Carbohydrates:** The body's main source of energy. There are two types: simple (sugars) and complex (starch).

**Lipids (fats and oils):** A source of energy. Found in butter, milk, eggs, nuts.

**Protein:** Nutrient your body uses to build new tissue for growth and repair. Sources are meat, fish, eggs, dairy products, beans, nuts and seeds.

- Food is an example of a chemical energy store.
- Energy is measured in Joules (J)/kilojoules (kJ).
- Body mass index (BMI) is calculated from a person's height and body mass.
- Not consuming enough food can cause BMI to become too low, and eventually lead to starvation.
- Consuming too much food can cause BMI to become too high, and lead to obesity. Obesity can increase the risk of developing other health issues, including heart disease.

The **glucose** that is absorbed through the small intestine into the blood stream is transported around the body to be used in **respiration**.

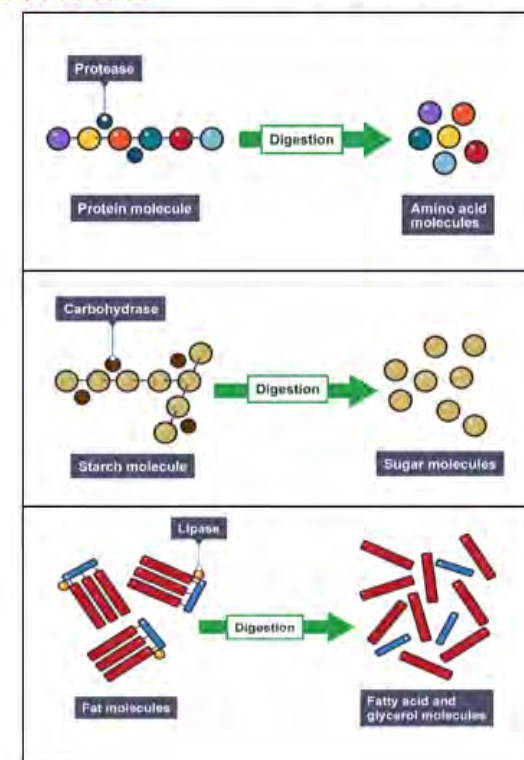
- The **energy** released by respiration is used for all living processes, such as movement, respiration, sensitivity, growth, reproduction, excretion and nutrition.
- Plants **produce** their own **glucose** from **photosynthesis** that they then use for respiration. Plants are called 'producers' for this reason. The transfer of energy from sunlight that ultimately allows living things to survive on Earth. All food chains start with producers.

**Organs of the digestive system** are adapted to break **large** food molecules into **small** ones which can travel in the blood to cells and are used for life processes. It can do this mechanically or chemically (using enzymes).

**Enzymes:** Substances that speed up the chemical reactions of digestion. **Lipase** break down lipids into fatty acids and glycerol. **Amylase** (a form of carbohydrase) breaks down starch into glucose. **Protease** breaks down proteins into amino acids.

## Keywords

- Enzymes
- Lipase
- Protease
- Carbohydrase
- Amino acids
- Fatty acids and glycerol
- Glucose
- Starch





# KS3 Acids and Alkalis

Acidic solutions < 7

Neutral solutions 7

Alkaline solutions > 7

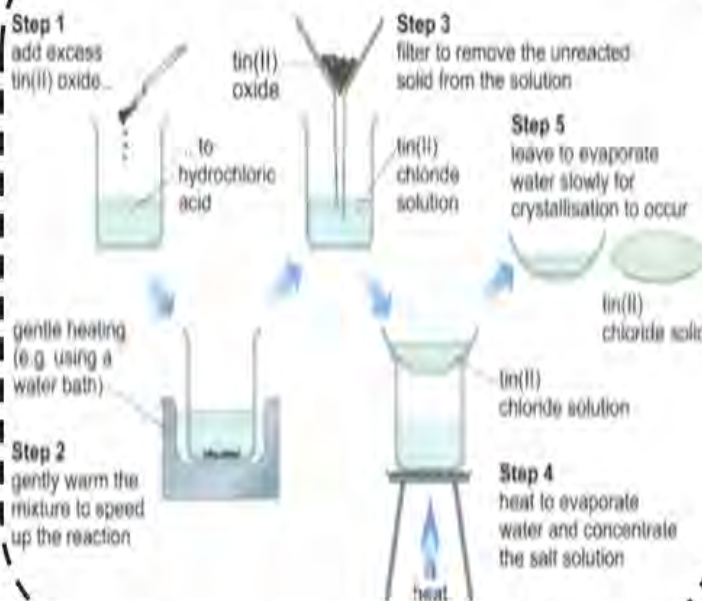


Litmus indicator turns **red** on **acidic** solutions and **blue** in **alkali** solutions.

Universal indicator is a mixture of different indicators.

It shows us whether a solution is acid or alkali and how strong or weak the acid or alkali is. It is measured using the pH scale (above).

## Making a salt



## Neutralisation

Neutralisation takes place when an acid and alkali are mixed together. The products of neutralisation are salt and water.

General equation for neutralisation:

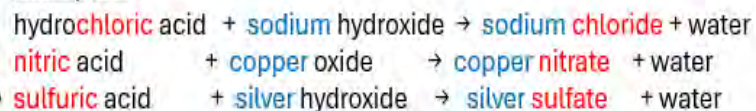


### Naming Salts

The name of a salt has two parts. The first part comes from the alkali. The second part comes from the acid:

- hydrochloric acid produces chloride salts
- nitric acid produces nitrate salts
- sulfuric acid produces sulfate salts

### Examples:



## Chemical Reactions

Chemical reactions are very useful as they make useful substances (medicine, fabrics, building materials). They also transfer energy (burning coal or gas to generate electricity).

Sometimes they are not useful (rotting fruit, rust on a bicycle).

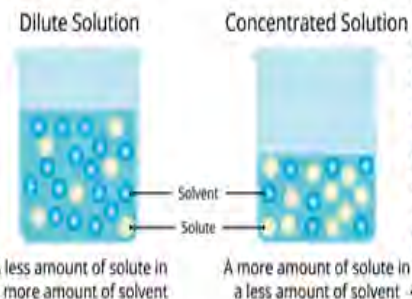
### Signs of a chemical reaction taking place:

- Flames or sparks
- Smell
- Change in temperature
- Colour change
- Loud pop/bang or gentle fizzing (bubbles of gas given off)

## Keywords

- Acid
- Alkali
- Corrosive
- Caustic
- Chemical reaction
- Indicator
- pH scale
- Neutralisation
- Salt
- Concentrated
- Dilute

## Concentrated and Dilute



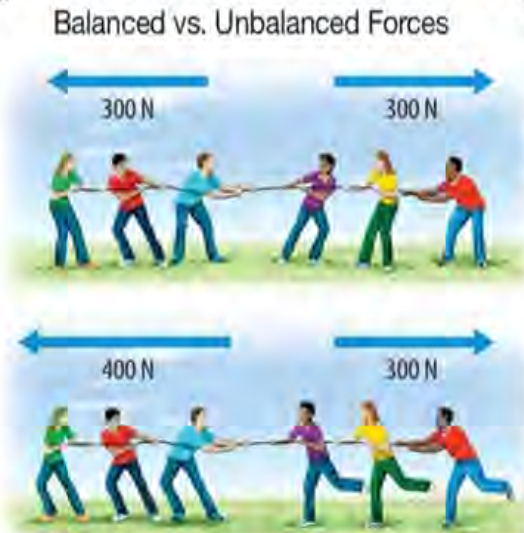


# KS3 Forces

**Force** – a vector quantity, any action that will maintain or alter the motion of a body or to deform it.

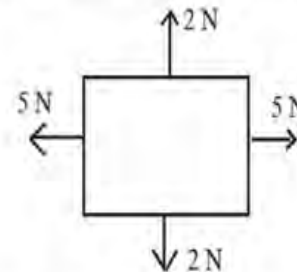
**Balanced force** – when two forces are the same size

**Unbalanced force** – when two forces are different sizes.



## Free body diagrams

Forces can be represented by arrows in diagrams where the size of the arrow is directly proportional to the size of the force and the direction of the arrow from the centre of mass shows the direction the force is working.

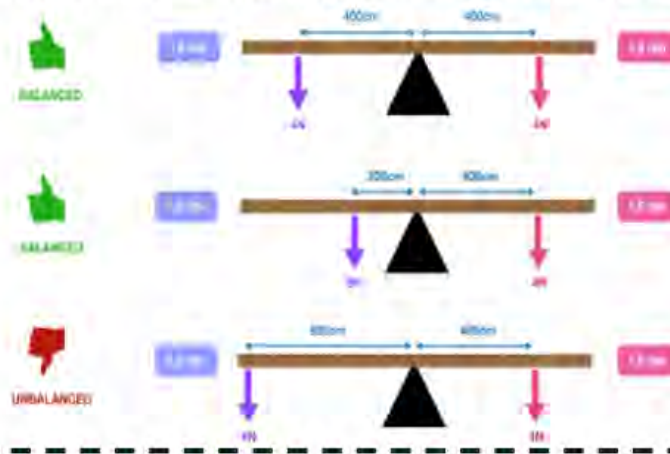


**Resultant force** = the single force that results from combining multiple forces acting on an object. Therefore the resultant force on the above object is 0N.

## Turning Forces

A moment is the turning effect of a force

Levers are used to apply force to an object, by using a smaller force applied at one end of the lever to generate a larger force at the other end.



## Keywords

- Force
- Balanced
- Unbalanced
- Gravity
- Weight
- Air resistance
- Water resistance
- Upthrust
- Tension
- Friction
- Resultant force
- Moment
- Lever
- Pivot
- Elasticity
- Mass
- Weight
- Pressure
- Speed
- Velocity
- Accelerating
- Decelerating

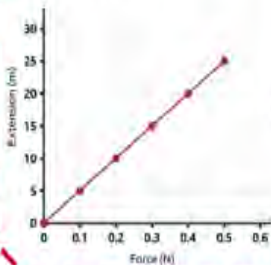
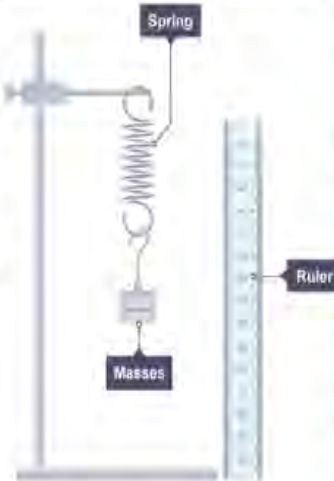


# KS3 Forces

## Elasticity

Forces can be used to stretch or squash objects.

There is a linear relationship between force and extension and this can be proven by adding different amounts of force to a spring and measuring the extension.



This relationship is called Hooke's Law.

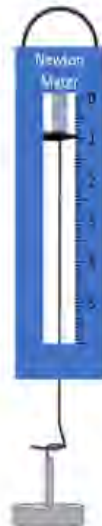
## Friction

Friction is the force that resists the sliding or rolling of one solid object over another.

Friction is increased by making surfaces rougher/more uneven and decreased by making surfaces smoother or adding a lubricant.

Friction generates thermal energy as the surfaces rub against each other (use rubbing hands together to demonstrate).

The size of a force acting on an object can be measured with a Newtonmeter.



## Weight and Mass

**Mass** – a measure of how much matter there is in an object, and is measured in kg.

**Weight** – a measure of the size of the pull of gravity on the object, and is measured in N.

$$\text{Weight} = \text{mass} \times \text{gravity}$$

Weight depends upon the gravitational pull of an object so it varies on different planets/moons.

The larger the object the stronger the gravitational pull, therefore the greater the weight of an object on that planet/moon.

## Speed

Speed is the distance travelled over a period of time.

Speed can be calculated using the following equation:

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

## Relative Motion

Relative motion is defined as the motion of one object relative to another object.

Relative motion of two objects can be calculated

As two objects move towards each other the forces they exert are higher than their individual forces

As two objects move in parallel to one another the forces they exert are lower than their individual forces.

## Pressure

Pressure is a measure of the force applied over a specific area and is measured in  $\text{N/m}^2$ .

Pressure can be calculated by using the equation:

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

Atmospheric pressure decreases with increase of height as the weight of air above decreases the higher you go.

Pressure in liquids increases with depth as the weight of water above increases the deeper you go.

## Distance-Time Graphs

