LIONHEART EDUCATIONAL TRUST

MARTIN HIGH SCHOOL
Lionheart Educational Trust

# Knowledge Organiser Booklet

Year 9

Autumn Term

# Ways to use your knowledge organiser

| | Look, Cover, Write, Check | Self Quizzing | Mind Maps | Paired Retrieval | Definitions to Key Words |
|---|---|---|---|---|---|
| Step 1 | Look at and study a specific area of your knowledge organizer.  | Use your knowledge organizer to create a mini quiz. Write down questions using your knowledge organizer.  | Create a mind map with information from your knowledge organiser.  | Like self quizzing, use your knowledge organizer to create a quiz.  | Write down the key words and definitions.  |
| Step 2 | Cover or flip the knowledge organizer over and write down everything you remember.  | Cover or flip the knowledge organizer over and answer the questions and remember to use full sentences and key words/vocabulary.  | Add pictures to represent different facts, knowledge. Try to categorise different areas in different colours.  | Ask a family member to ask you the questions and tell you which ones you get right and which ones you get wrong.  | Try not to use your knowledge organiser to help you.  |
| Step 3 | Check what you have written down. Correct any mistakes in a different coloured pen and add anything you missed. Repeat.  | Check your answers. Correct any mistakes in a different coloured pen and add anything you missed. Repeat.  | Try to make connections that link information together.  | Following the quiz, summarise which areas you got wrong and need to revise further.  | Use a different coloured pen to check you work and correct any mistakes you may have made.  |

# Lionheart Literary Canon:
# Curating a Lifelong Love of Literature

## Recommended books to have read by the end of Year 9

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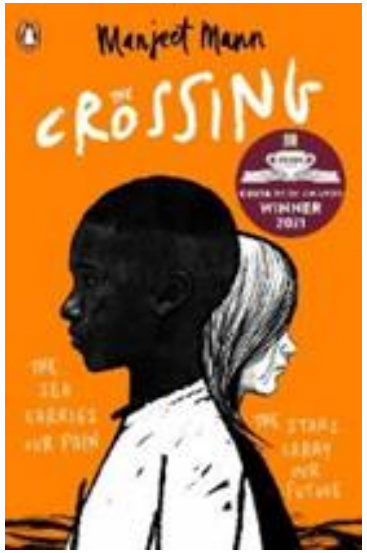
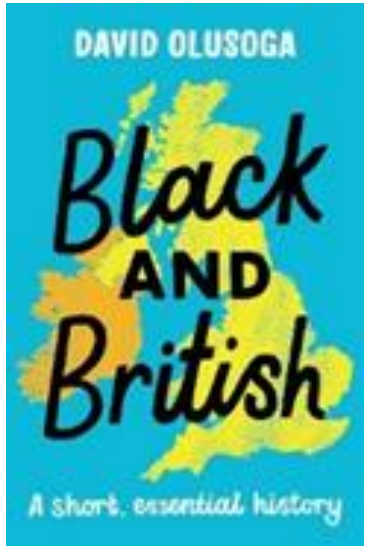
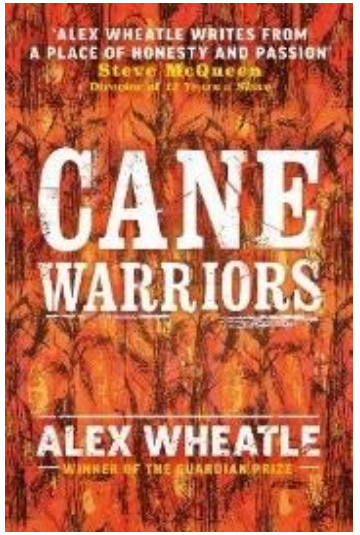



**The Crossing**
**Manjeet Mann**




**Black and British**
**David Olusoga**




**Cane Warriors**
**Alex Wheatle**


**Pet**
**Akwaeke Emezi**

**All books can be purchased online, or loaned from our library**

English

# Aspects of Narrative – Djinn Patrol

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**The study of narratology is the study of the choices a writer has made about how they tell their stories. Aspects of Narrative translates as 'ways of telling a story.' Significance is is about what is signified, what meanings arise in terms of values and ideas and how these meanings are produced by what writers do and the methods they use.**

## Narrative Voice

First person – introspective, extradiegetic or intradiegetic?
Third person – focalised, authorial or narrator?
Tense – retrospective (past tense) or present tense immediate?
Mulitperspectivity – a story told from many points of view
Reliable or unreliable (bias)?
Omniscient (all knowing) or inadequate (doesn't know the whole story)?
Who? Known/unknown? A character?

## Genre

Romantic or pastoral – ideal images of the natural world
romance – associated with romantic love
Gothic – creation of darkness and fear
Realism – portrays the real world with all its flaws
Comedy – intention to make people laugh
Tragedy – solemn and mournful tone
Crime - deals with crimes, their detection, criminals, and their motives.
Thriller – readers feel heightened feelings of suspense, excitement, surprise, anticipation and anxiety.

## Structure

Chronological or fragmented?
Complete or with narrative gaps?
Openings and endings? Climatic moments? Anti-climaxes?
Narrative frame? Media-res opening?
Flashbacks or flash-forwards?
Resolution or narrative-hook? Deus ex Machina? (ends tied up or ends on a Q)
Order of events within the plot
Change of narrators or use of dialogue or just description?

## Setting

Wider setting – (country, city community)
Place – precisely where? House, room, seat?
Time – specified?, unstated, present day, past, present?
Historically/geographically accurate or entirely fictional?
Setting change - from where to where?
Use of specific languages or place-specific references
Use of place names

## What not to do with narrative method and useful sentence frames

When discussing narrative method it is important to avoid feature spotting. Instead evaluate the impact of the writers choice.

Useful sentence frames

The introduction of the new setting at this point in the narrative allows the writer to show that the character has evolved because…
The gap in the narrative allows the writer to create a sense of confusion and means the reader is unsure who is the victim and who the villain because…
The shift into using typically Romantic generic conventions allows the writer to comment on the importance of the natural world when…
By employing a focalised narrator the writer allows the reader access to the character's unspoken thoughts meaning pity is created when…

## How to access "significance" in your analysis

You could consider an extract's significance in terms of the plot – what has happened earlier to instigate these events? What happens later as a result of these events?
You could consider what messages are being endorsed? Are any characters or ideas being given preferential treatment or being side-lined?
You could reference any cultural, moral or social contexts that are being endorsed by the book.
You could consider authorial intent or approval – is the writer advocating any specific ideologies?
You could consider whether a text fits into a traditional genre or whether it borrow from a few and what the effect of that is on the meaning

# English

| Year 9 Aspects of Narrative – Djinn Patrol | | | |
|---|---|---|---|
| superstitious | inequality | authentic | prestigious |
| persistent | intimidation | depiction | poignant |
| disadvantaged | concealment | ascertained | instinctive |
| urban | Incorporeal | unnerving | malevolent |
| influential | naive | insinuate | perpetuates |
| exploitation | exclusion | impulsive | accountability |
| basti | possession | inglorious | foreboding |
| Dickensian | minority | inevitable | culpability |
| dislocated | intuition | powerlessness | pessimistic |

# Maths – Year 9

## Block 13 – Graphs and Proportion

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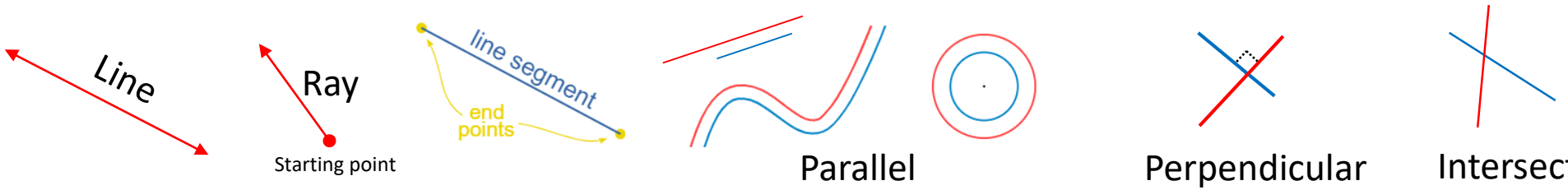
| | |
|---|---|
| **Line** | **Is straight entity that has no thickness and extends in both directions without end (infinitely).** |
| **Line segment** | A line with two ends |
| **Ray** | A part of a line with a start point but no end point (it goes to infinity) |
| **Parallel** | Lines, curves, surfaces that are always the same distance apart and will never meet.<br>The lines do not need to be the same length. |
| **Perpendicular** | A line that is at right angles to another line. |
| **Intersect** | To cut a line, curve or surface with another. |

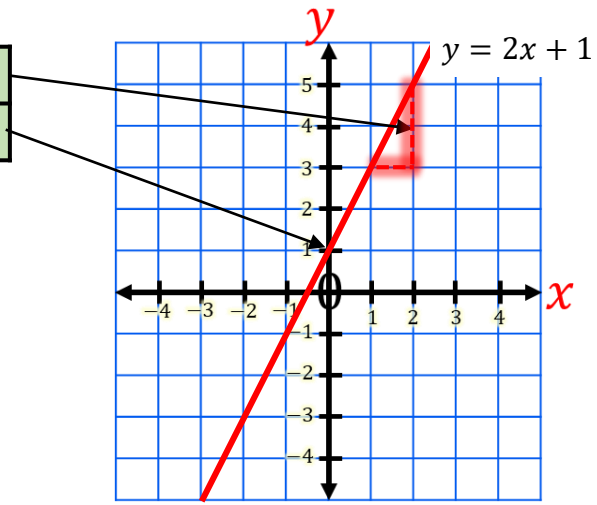



| | |
|---|---|
| **Graph** | A diagram showing the relationship between (two) variables |
| **Midpoint** | The midpoint is halfway between the two end points of a **line segment** |

| | |
|---|---|
| **Gradient** | The steepness of the line. Change in $y$ for every one increase in $x$ |
| **Y - Intercept** | Where the graph crosses the Y-axis |

$$y = 2x + 1$$

Gradient — y-intercept

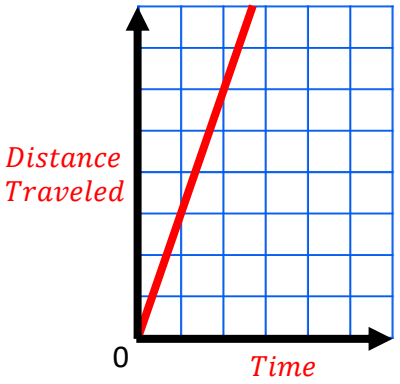


# Maths – Year 9

## Block 13 – Graphs and Proportion

| | |
|---|---|
| **Direct Proportion** | The relationship between two variables where the scale factor between them is constant. |
| **Inverse Proportion** | The relationship between two variables where the product of the variables is constant. |

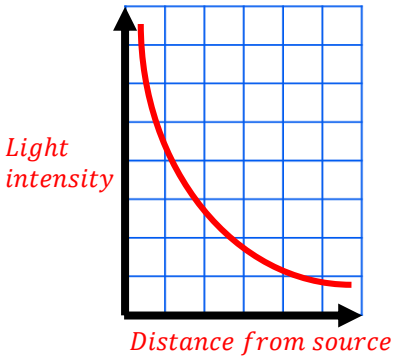
### Direct Proportion




$$Distance\ (miles) = 3 \times Time\ (hours)$$

Constant

### Inverse Proportion




$$Light\ intensity = 3 \div Distance\ from\ source$$

Constant

| | |
|---|---|
| **Standard Index Form** | A form where a number is expressed as a multiplication of a number between 1 to 10 by a power of 10.<br>$A \times 10^n$ where $1 \leq A < 10$ and $n$ is an integer. |

$$\mathbf{3.04 \times 10^5 = 304,000}$$

$$\mathbf{3.04 \times 10^{-5} = 0.0000304}$$

Computer Science

# KNOWLEDGE

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# KS3 – Cyber Security

# ORGANISER

| Cyber Security Key Terms | |
|---|---|
| Brute Force attack | A form of attack that makes multiple attempts to discover something (such as a password). |
| The Computer Misuse Act | A UK Law makes accessing a computer system without permission illegal. |
| The Data Protection Act | A UK Law that gives you the right to access the data an organisation stores on you. |
| DDoS attack | When multiple computers flood a network server with internet traffic in order to disrupt a service. |
| Hacking | Gaining unauthorised access to or control of a computer system. |
| Malware | Software that is designed to gain access to your computer with malicious intent. |
| Penetration testers | People who are paid legally to hack into computer systems with the sole purpose of helping a company identify weaknesses in their system. |
| Personal Information | Information that is used to describe or recognise a person (e.g. name, date of birth, address etc.) |
| Social Engineering | Methods used by cybercriminals to deceive individuals into handing over information. |

| Protecting yourself | |
|---|---|
| Firewalls | Checks incoming and outgoing network traffic. |
| Anti-Malware | Software that scans any file that is able to execute code. If something is at risk it is quarantined. |
| Auto-updates | Auto-updates refers to software that automatically checks for available updates for the software you have on your computer. |
| User authentication | Measures taken to keeping your data and information safe: passwords, biometrics, CAPTCHA, two-factor authentication etc. |
| User permissions | Ensuring information is only available to people that need it. |

| Malware | |
|---|---|
| Viruses | Malicious software that self-replicates. |
| Worms | Worms replicate themselves but do not attach themselves to files as a virus would. |
| Ransomware | Locks a computer, encrypts files, and therefore prevents the user from being able to access the data. The attacker demands that a ransom is paid. |
| Trojans | Software that appears to perform a useful function but unbeknown to the user it also performs malicious actions. |
| Spyware | Unwanted software that monitors and gathers information on a person an dhow they use their computer. |
| Adware | Can be a worm, virus, or Trojan. It infects a computer and causes it to download or display malicious adverts or pop-ups when the victim is online. |

| Methods of Social Engineering | |
|---|---|
| Shouldering | Involves the attacker watching the victim while they provide sensitive information (e.g. over their shoulder). |
| Name generator attacks | The victim could be asked to provide a few pieces of information in an app to complete a short quiz or produce a name. Attackers do this to find out key information that can help answer security questions. |
| Phishing | The victim receives an email disguised to look as if it has come from a reputable source in order to trick them into giving up valuable data. |
| Blagging | An attack in which the perpetrator invents a scenario in order to convince the victim to give them data or money. |

Computer Science

# KS3 – Representations: Going audio-visual

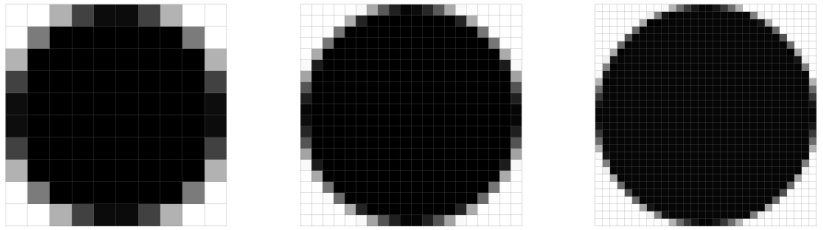
## KNOWLEDGE

## ORGANISER

| Overall Key terms | |
|---|---|
| Bit | Small unit of data within a computer system (e.g. 0 or 1) |
| Binary digit | A base 2 number system made up of bits. |
| Machine code | A language that a CPU is able to process. |

| Images | |
|---|---|
| Pixels | A picture element filled with colour. |
| Resolution | The number of pixels in a digital image. |
| Colour depth | The number of binary digits used to represent each pixel's colour. |
| Raster graphics | An image made up of pixels. |
| RGB Colour | The quantity of red, green and blue used to create a colour. |
| Representation size | resolution x colour depth |

| Sound | |
|---|---|
| Sample | Taking a regular measurement from sound so you can digitise it. |
| Sampling rate | The number of samples taken per second. |
| Sample size | The number of bits recorded per sample. |
| Representation size | Sampling rate x sample size x duration x channel |



**1x** (10 x 10 px)

**2x** (20 x 20 px)

**3x** (30 x 30 px)

| High resolution | |
|---|---|
| **Advantages** | **Disadvantages** |
| Increased quality | Increased representation size |
| Increased capability to capture detail | More space required for storage |
| | More effort required for processing |
| | More time required for transmission |
| | resolution x colour depth |

| High Colour Depth | |
|---|---|
| **Advantages** | **Disadvantages** |
| Increased quality | Increased representation size |
| More colours available | More space required for storage |
| | More effort required for processing |
| | More time required for transmission |
| | resolution x colour depth |

| High Sampling Rate | |
|---|---|
| **Advantages** | **Disadvantages** |
| Increased quality | Increased representation size |
| Increased ability to accurately represent the original sound. | More space required for storage |
| | More effort required for processing |
| | More time required for transmission |
| | resolution x colour depth |

PE

# Unit 1 Physical Education- Knowledge Organiser: Staying safe in Physical Activity

| Key learning content | Description / Explanation/ Example |
|---|---|
| **Stages of a warm up**<br>• Stage 1 – pulse raiser (5 mins)<br>• Stage 2 – mobility exercises<br>• Stage 3 – stretching (10s+)<br>• Stage 4 – dynamic movement<br>• Stage 5 – skills practice<br>• Names of muscles | **Examples of warm up**<br>• Stage 1 – (Low intensity exercise) A 5 minute jog around a netball court.<br>• Stage 2 – (To a move a joint through its full range of motion) Arm circles, ankle circles, hip circles.<br>• Stage 3 – (Static or dynamic stretches) quadriceps stretch.<br>• Stage 4 – (high intensity exercise) Shuttle runs<br>• Stage 5 – (Practice the skills you will be using) Chest/ shoulder passes (netball)<br>• Names of muscles: quadriceps, hamstrings, biceps, triceps |
| **Benefits of a warm up**<br>• Increase temperature and HR<br>• Decreased chance of injury<br>• Increased oxygen transport<br>• Increased flexibility<br>• Increased speed / strength of muscle contractions<br>• Mental preparation | **Benefits explained**<br>• Allow more oxygen to reach muscles<br>• Better for overall health. Can maintain involvement in physical activity .<br>• More oxygen gets to muscles, so can create more energy.<br>• Increased flexibility can enhance performance (Reach higher to catch a ball)<br>• Faster/ stronger movements - perform skills more effectively.<br>• Mental preparation – feel more alert/ focussed/ confident/ concentrating/ motivated/ relaxed etc. |
| **Stages of a cool down**<br>• Stage 1 – Low intensity exercise<br>• Stage 2 – Stretching<br>• Names of movements – flexion and extension | **Examples of cool down**<br>• Stage 1 – Steady jog on netball court, can move onto a walk<br>• Stage 2 – (Static stretches) Quadriceps stretch, hamstring stretch.<br>• Flexion = bending at an elbow or knee. Extension = straightening at an elbow or knee |
| **Benefits of cool down**<br>• Gradually lower heart rate<br>• Gradually lower breathing rate and temperature.<br>• Speeds up removal of waste products.<br>• Speeds up recovery<br>• Names of joints | **Benefits explained**<br>• Gradually lower heart rate from 150bpm when working to 70bpm when resting.<br>• To maintain blood flow/ oxygen transport/ carbon dioxide removal<br>• Carbon dioxide and lactic acid removed faster. Reduces aching, recovery is faster.<br>• Joints: Elbow and knee = hinge. Shoulder and hip = ball and socket |
| **Preparing for physical activity**<br>• Wear appropriate PE kit<br>• Long hair tied back<br>• Jewellery removed<br>• No chewing gum or food<br>• Water for hot weather | **Preparation explained**<br>• Sports trainers, shorts, t-shirt to avoid injury yourself or others.<br>• So you can see when playing<br>• Earrings taken out, bracelets off to avoid injuring yourself or others.<br>• To avoid chocking when active.<br>• To stay hydrated /avoid headaches/ feeling weak |
| **Risks and hazards to check for**<br>• Area free from rubbish<br>• Equipment tidied away<br>• Equipment undamaged<br>• Surface dry/ undamaged | **Hazards explained**<br>• Check there is no debris such as broken glass on football pitch, to avoid someone injuring themselves.<br>• Check there are no equipment such as bibs left out on a basketball court from a previous activity, to avoid someone slipping/ tripping over when warming up.<br>• Check the trampoline is up properly, to avoid injury to a player.<br>• Check there is no water spilled on the badminton court, to avoid a player slipping and hurting an arm. |

PE

# Year 9: Physical Activity- Key terminology

| Key word | Description |
|---|---|
| Aerobic | Use of oxygen for the duration of the exercise. Usually at moderate intensity at a continuous rate e.g. long distance running. Can be performed for a long period of time. |
| Anaerobic | Exercise which creates energy without the use of oxygen. Usually high or very high intensity for a short period of time. E.g. sprinting up a hill. |
| Flexibility | Range of movement available around a joint. |
| Mobility | The ability to move freely. |
| Dynamic movement | Movements performed at high speed/ intensity. |
| Oxygen | The gas we breathe in, transport and use to create energy. |
| Oxygen transport | Oxygen is transported through blood vessels within the red blood cells. |
| Gaseous exchange | The movement of oxygen and carbon dioxide within the lungs, muscles and vital organs. |
| Contraction | A muscle contracts and (usually) gets shorter to apply a force and create movement. |
| Heart rate | Number of heart beats per minute. |
| DOMS | Delayed Onset Muscle Soreness. Usually occurs 1 or 2 days after high intensity exercise. |
| Lactic acid | A waste product produced in the muscle tissues during anaerobic exercise. |
| Waste products | Bi-products of aerobic exercise are carbon dioxide and water. Lactic acid is also a bi-produce of anaerobic exercise. |
| Carbon dioxide | We produce carbon dioxide as a waste product. We transport it back to the lungs and breathe it out. |
| Recovery process | Returning the body to resting levels. |
| Intensity | How hard you work. |
| Team work | Working together to achieve a common goal. Requires good communication skills. |
| Reciprocity | Working positively with others as a group. |
| Demonstration | Showing someone how something should be done. |
| Communication | Transferring information by speaking, writing, demonstrating and using body language. |
| Risk | The chance or probability that someone will be harmed. |
| Hazard | A source of potential danger. |
| Injury | Damage or harm to the body. |
| Sprain | Damage to a ligament. |
| Mental Preparation | Getting your mind ready for competition through visualising the skills and imagining yourself being successful. |

Science

# KNOWLEDGE ORGANISER

## CHEMISTRY: Advanced Chemical Reactions

Name:

### Vocabulary

**Chemical Reaction**: Transfer of energy between reacting substances and the surroundings.

**Reactants**: Starting substances in a reaction.

**Products**: Substances that are made at the end of a reaction.

**Fuel**: A substance that can store energy and can release it when burnt.

**Combustion**: The process of burning.

**Thermal Decomposition**: A process in which a single substance is broken down on heating into smaller compounds /elements.

**Exothermic**: Energy transferred to the surroundings.

**Endothermic**: Energy transferred from the surroundings.

**Conservation of mass**: The total mass of the products in a chemical reaction will be the same as the total mass of the reactants as no mass is lost or gained

### Types of Reaction

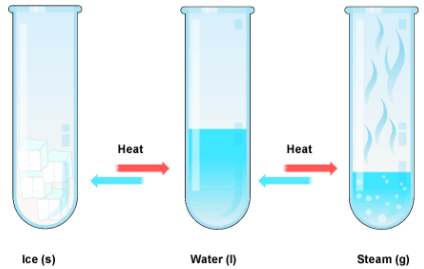
**Chemical Reactions:** atoms are rearranged to create a new substance. These reactions are NOT easily reversed.

**Physical Reactions:** no new substance is made but there is a change in appearance of a chemical. These reactions are easily reversed.

**Signs of physical and chemical reactions:**

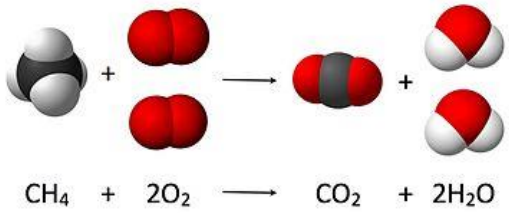
| Physical | Chemical |
|---|---|
| • Solid dissolving<br>• Change in state | • Change in appearance (colour)<br>• Change in energy (temperature, sound ect.) |

**Physical Change:** Dissolving or state change




*e.g. Change in state of water*

**Chemical Change:** forming a new substance




*e.g. Combustion of Methane (Natural Gas)*

**Word Equations:**

Reactants → Products

A chemical equation tells you which chemicals reacted together (the **reactants**) and the new chemicals that were made in the reaction (the **products**).
The simplest equation is a word equation.

For example:

Zinc + Chlorine → Zinc Chloride

Zinc + Carbon + Oxygen→ Zinc Carbonate

### Combustion:


Fire Triangle

**Fuel :** A material that can be burnt to release energy by heating.
EG. Glucose, Methane , Petrol

**Combustion**: Is another name for burning. It is where a fuel is burnt in oxygen and heat to release energy.

Testing for combustion

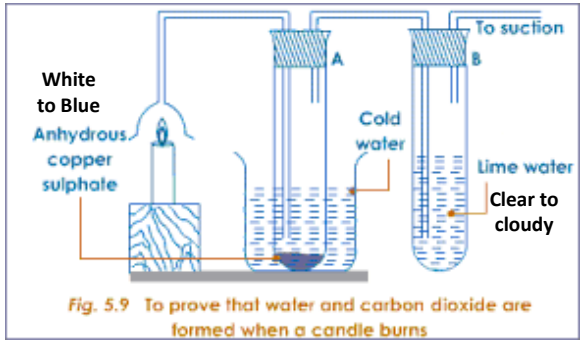



*Fig. 5.9 To prove that water and carbon dioxide are formed when a candle burns*

**When Coal, oil and natural gas undergo combustion ;**

- the hydrogen atoms combine with oxygen to make water vapour, $H_2O$ **[TEST A]**
- the carbon atoms combine with oxygen to make carbon dioxide, $CO_2$ **[TEST B]**
- the maximum amount of energy is release

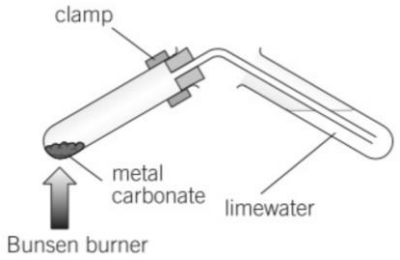
Science

# KNOWLEDGE ORGANISER

## CHEMISTRY: Chemical Reactions

Name:

## Thermal Decomposition:




**Thermal Decomposition:**
Type of reaction in which a compound breaks down to form two or more substances when it is heated.

**Many metal carbonates can take part in thermal decomposition reactions:**

Thermal decomposition of Metal carbonates:

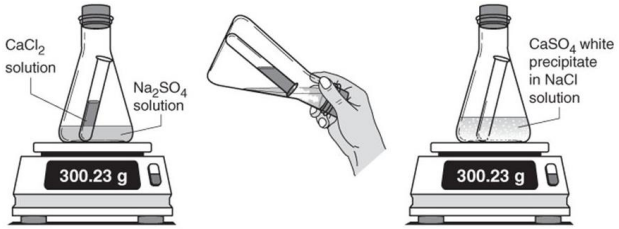
**Metal Carbonate** → **Metal Oxide** + **Carbon Dioxide**

EG.

Copper Carbonate → Copper Oxide + Carbon Dioxide

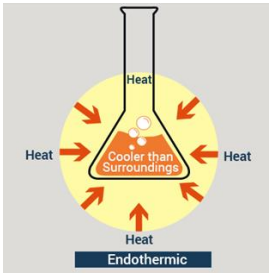
## Conservation of mass:

Atoms are not created or destroyed just rearranged in a reaction so the total mass of the products will be the same as the total mass of the reactants.



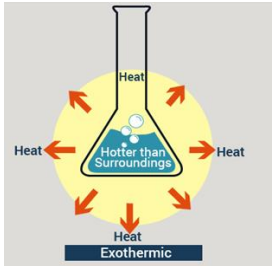

**mass (g) of reactants = mass (g) of products**

## Exo- and endo-thermic reactions:




**Exothermic :**
Reaction in which energy is given out to the surroundings. The surroundings then have more energy than they started with so the temperature increases.

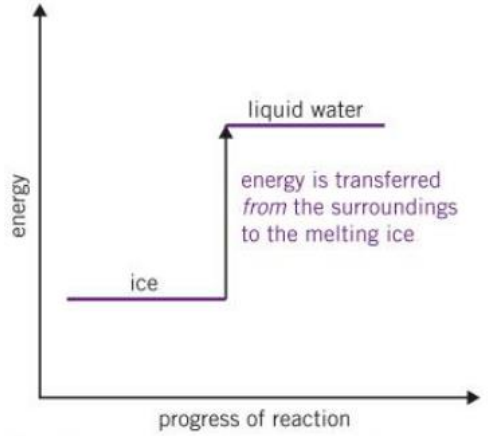
**Endothermic:**
Reaction in which energy is taken in from the surroundings.

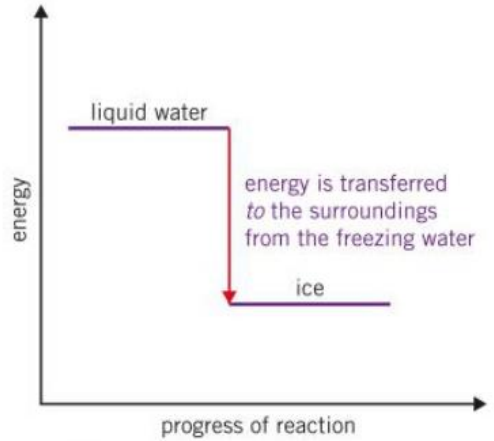



**Examples:**

| Exo | Endo |
|---|---|
| • burning<br>• neutralisation reactions<br>• respiration | • thermal decomposition<br>• carbonates and acids<br>• photosynthesis |

## Energy Level Diagrams




Endothermic Reaction e.g water melting

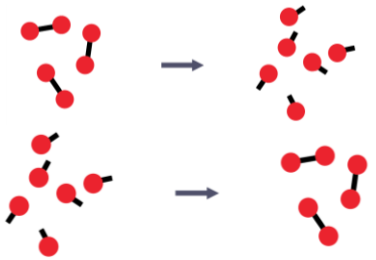
Exothermic Reaction e.g water freezing

Energy level diagrams help us to show the changes that occur during a reaction

## Making and Breaking Bonds:

Breaking Bonds = Endo

Making Bonds = Exo



Whether a reaction is endo or exo depends on which energy is greater- the making or the breaking of the bonds. Each chemical bond that is broken or made is given a value in kJ.

**Catalysts:**
**Speed up chemical reactions. They alter the rate of reaction without being changed by the reaction.**
**Enzymes: biological catalysts that speed up cellular reactions**

Be REFLECTIVE: Review your learning

# KNOWLEDGE ORGANISER
## YEAR 9: ADVANCED FORCES

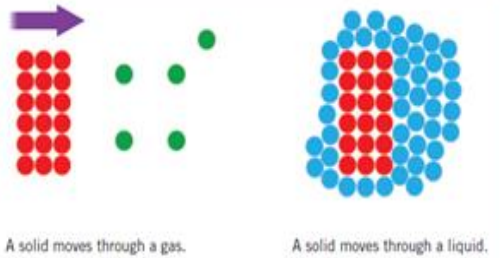


| | |
|---|---|
| **Contact force** | These forces only act when two things are touching. |
| **Non-contact force** | These forces can act when things are not touching |
| **Newtons** | The units for measuring forces |
| **Drag force** | The force acting on an object moving through air or water that causes it to slow down. |
| **Friction** | The forces that slows things down when they move on a surface e.g. a car on a road. |
| **Streamlined** | When something is shaped to reduce friction or air resistance |
| **Law of moments** | An object is in equilibrium if the clockwise moments equal the anticlockwise moments. |
| **Upthrust** | The force on an object in liquid or gas that pushes them up |
| **Moment** | A measure of the ability of a force to rotate an object around a pivot. |
| **Elastic** | Something which stretching and springs back to its normal shape |
| **Deform** | When something changes shape |
| **Compress** | When an object is squashed |
| **Extension** | The difference between the original length of an object and the length when you apply a force. |
| **Pressure** | The ratio of force to surface area, in $N/m^2$, and how it causes stresses in solids. |
| **Liquid pressure** | The pressure produced by collisions of particles in a liquid. |
| **Equilibrium** | When all of the forces on something are balanced and cancel out. |

## Friction and drag

- **Friction** is a force which will slow down a moving object due to two surfaces rubbing on one another
- The greater the friction, the faster an object will slow down, or the greater the force it will need to overcome the force of friction. For example, it is easier to push a block on ice than on concrete, as the ice is smoother and causes less friction

- When an object is moving through a fluid, either liquid or gas, the force which slows it down is known as **drag**
- The fluid particles will collide with the moving object and slow it down, meaning that more force is needed to overcome this
- Both drag and friction are **contact forces** as the two surfaces in friction, and the object and fluid particles in drag, come into contact with one another

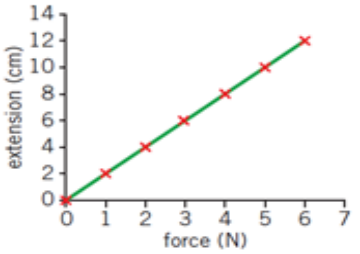


A solid moves through a gas. A solid moves through a liquid.

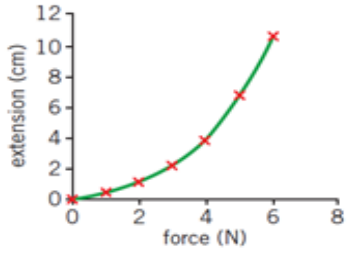
- Both drag and friction are forces so they are measured in **Newtons** (N)

## Hooke's law

- Some objects, like springs, can be stretched, the amount that they stretch is known as their **extension**
- A force needs to be applied to the spring for it to be stretched, we can achieve this by adding masses which exert the force weight
- A spring will continue to stretch until it passes it's **elastic limit**
- If an object obeys **Hooke's law** it will have a **linear relationship**: if the force applied to the spring is doubled, the extension will double too
- If an object does not obey Hooke's law, it will not have a linear relationship




This graph shows how the extension of a spring changes as you pull it




This graph shows the relationship between force and extension

# KNOWLEDGE ORGANISER
## YEAR 9: ADVANCED FORCES

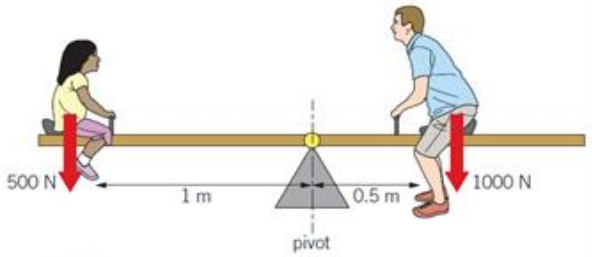


## Turning forces

- A **moment** is the turning effect of a force, it is measured in Newton meters
- We can calculate a moment with the equation:

moment (Nm) = force (N) × distance from the pivot (m)

- The size of the moment will increase as the distance from the **pivot** or the size of the force increases
- When an object, such as a seesaw, is balanced, the clockwise and the anticlockwise moments will be equal and opposite, which is known as **equilibrium**
- When forces are equal and opposite to each other, there is no **resultant force**




*clockwise moment = force × distance on the right*
*= 1000 N × 0.5 m*
*= 500 Nm*

*anticlockwise moment = force × distance on the left*
*= 500 N × 1 m*
*= 500 Nm*

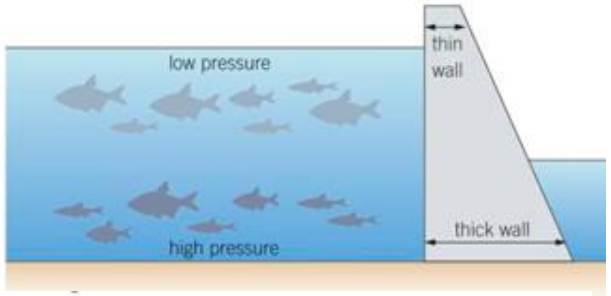
## Gas pressure

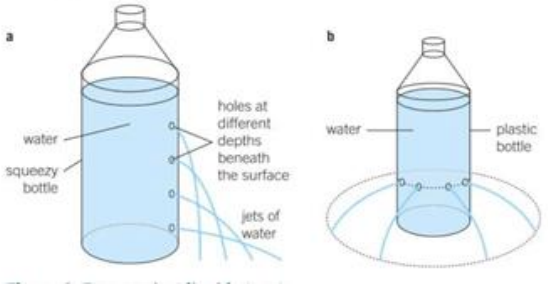
- **Gas pressure** is caused by the particles of a gas colliding with the wall of the container which they are in
- The more often that the particles collide with the wall of the container, the higher the pressure of the gas will be
- Gas pressure can be increased by:
  - Heating the gas so the particles move more quickly and collide with the container with a higher energy
  - Compressing the gas so there are the same amount of particles within a smaller volume meaning that there are more collisions
  - Increasing the amount of particles within the same volume so there are more collisions

- **Atmospheric pressure** is the pressure which the air exerts on you all of the time, nearer the ground there are more particles weighing down on you so the pressure is greater
- The higher you go, the smaller the atmospheric pressure, this is because there will be less particles weighing down on you

## Pressure in liquids

- Liquids are **incompressible**
- The particles in a liquid are already touching, meaning that there is little space between them to compress
- Liquids will transfer the pressure applied to them, this is seen in hydraulic machines
- As the ocean gets deeper, the pressure will increase, this is because the pressure depends on the weight of the water above
- The greater the number of water molecules above, the higher the pressure will be




## Pressure in solids

- The pressure which is exerted on a solid is known as **stress**
- The greater the area over which the force is exerted over, the lower the pressure, this is why snowshoes have a large area to prevent you sinking into the snow
- **Pressure** can be calculated using the following equation:

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

$$\text{pressure (N/m}^2\text{)} = \frac{\text{force (N)}}{\text{area (m}^2\text{)}}$$

**Worked example**

A caterpillar vehicle of weight 12 000 N is fitted with tracks that have an area of 3.0 m² in contact with the ground. Calculate the pressure of the vehicle on the ground.

**Solution**

$$\text{pressure} = \frac{\text{force}}{\text{area}} = \frac{12\,000\ \text{N}}{3.0\ \text{m}^2} = 4000\ \text{Pa}$$

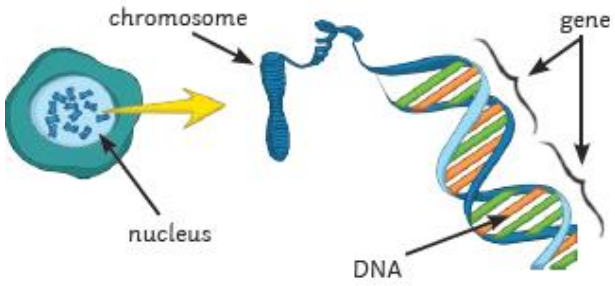
Science

Be REFLECTIVE: Review your learning

# KNOWLEDGE ORGANISER
## BIOLOGY: ORGANISMS - Genetics

Name:

## Structure of DNA




## Genetic modification

Altering an organisms genes to gain a desired characteristic of feature. GM crops are crops that have been produced by genetic engineering e.g.

**Examples of genetic modification:**

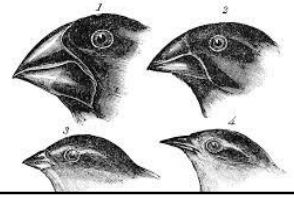
- Bacterial cells have human **insulin gene** inserted into them so that they produce insulin for diabetics.
- Frost resistant tomatoes
- Plants, such as rice, that have had genes inserted that make them **resistant to disease, insects**, **herbicides or more nutritious**.

**Examples of desired characteristics :**

- Disease resistance in food crops.
- Animals which produce more meat or milk.
- Domestic dogs with a gentle nature.
- Large or unusual flowers.

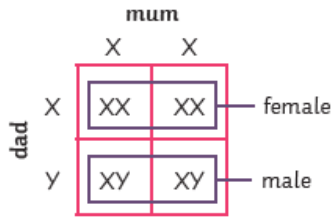
## Evolution

Scientific analysis of fossils shows that species have changed over long periods of time. This change is evolution. Charles Darwin first proposed this theory called **natural selection**. If a variation in the genes of an organism is advantageous in an environment, e.g. beak shape of finches beaks changed to allow them to find food easier, then it more likely to survive and pass that characteristic to its offspring.

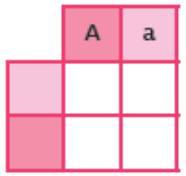


After the industrial revolution, the increased soot resulted in dark peppered moths being camouflaged more than light peppered moths, so they were less likely to be eaten and more survived and passed on their advantageous genes via **natural selection**

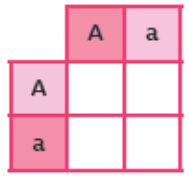
## Inheritance and Punnet squares



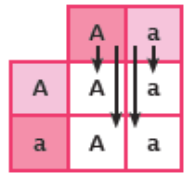

Females carry two X chromosomes.
Males carry one X and one Y chromosome.



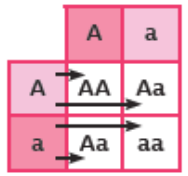

**Step 1:** Put the two alleles from one parent into the boxes at the top. This parent has one dominant allele and one recessive allele




**Step 2:** Put the two alleles from the second parent into the boxes on the left. This parent also has one dominant and recessive allele.




**Step 3:** Put the alleles from the first parent into the two boxes underneath them.




**Step 4:** Put the alleles from the second parent into the boxes next to the letters from the first parent (capital letters first).

## Extinction and conservation

**Extinction:** A species becomes extinct when there are no more individuals of that species left, so we must relay on fossils to prove existence.

**Conservation and biodiversity**

Seed banks are a conservation measure for plants. Seeds are carefully stored so that new plants may be grown in the future.

## Key vocabulary

| | |
|---|---|
| **DNA** | **Genetic material**. DNA is a **polymer** made up of **two strands** forming a **double helix**. The DNA makes up chromosomes. |
| **Gene** | A gene is a **small section of DNA** on a chromosome.. |
| **Chromosome** | A **long coil of DNA**. Found in the nucleus. |
| **Allele** | **Different versions of the same gene** – dominant and recessive. |
| **Dominant** | A dominant allele is **always expressed**. Only **one copy** is needed. |
| **Recessive** | Only **expressed if two copies are present**. |
| **Allele** | **Different versions of the same gene** – dominant and recessive. |
| **Mutation** | A **random change** in the **DNA** |
| **Genetic modification/ Engineering** | A process which involves **modifying the genome** of an organism by **introducing a gene** from another organism to give a desired characteristic. |
| **Evolution** | The **change in the genes of a population over time**. Occurs through natural selection. |
| **Fossil** | The preserved remains of an organism from many thousands of years ago. They can also show changes/evolution over time |
| **Gene banks** | Conservation method that stores genetic examples of different species |

# History

## Year 9 Knowledge Organiser – Women's fight for the vote

### Key Dates

| | |
|---|---|
| **1819** | **Peterloo Massacre** saw 15 people killed and 600 injured when people in Manchester protested for the vote. |
| **1832** | First petition for women's right to vote created by **Mary Smith** and presented by **Henry 'Orator' Hunt** |
| **1832 – 1848** | **The Chartists** fought for men's right to vote. |
| **1857** | **Divorce and Matrimonial Causes Act** allowed women to divorce husbands who abused them |
| **1865** | **Elizabeth Garrett Anderson** became the first female doctor in Britain. **Barbara Leigh Bodichon** forms the Women's Suffrage Committee. |
| **1866** | Famous petition signed by 1,499 women including **Florence Nightingale.** |
| **1882** | **Married Woman's Property Act** allowed women to keep their property when they married. |
| **1887** | **Leicester Women's Suffrage Society** was formed by **Agnes Archer Evans** |
| **1897** | **National Union of Women's Suffrage Societies (NUWSS)** formed by **Lydia Becker and Millicent Fawcett**. They are nicknamed the **Suffragists**. |
| **1903** | **Women's Social and Political Union (WSPU)** is formed by **Emmeline Pankhurst** with her daughters **Sylvia** and **Christabel**. |

### Key Words

**Cat and Mouse Act** – Law passed in 1913 which meant the government could release Suffragettes while they were ill and re-arrest them when they became well again.

**Constituencies** – An area of the country which can vote for their MP. Examples include Harborough or Leicester South.

**Democracy** – The system which allows people to vote for their government.

**Franchise** – The people who can vote. If people want to extend the franchise, it means they want to increase the number of people who can vote.

**Government** – The group of people who run the country.

**House of Commons** – The area of parliament which has MPs who are elected to serve the people. They debate and vote for laws.

**Member of Parliament (MP)** – The person who is voted for by people in a particular area who then represents them in the House of Commons.

**Monarch** – The king or queen.

**Parliament** – the name for both the House of Commons and the House of Lords. Both of these are part of Britain's system of running the country.

**Prime Minister** – The person who runs the government.

**Suffrage** – The right to vote.

**Vote** – A right to choose the government who runs the country.

**Women's Suffrage** – The right for women to vote.

### Key People

**Emmeline Pankhurst** – Lead of the Suffragettes (WSPU)

**Christabel & Sylvia Pankhurst** – Daughters of Emmeline Pankhurst and joint leaders of the WSPU. Sylvia refused to get involved in war work in World War One.

**Millicent Fawcett** – Leader of the Suffragists (NUWSS)

**David Lloyd George** – Politician who was a supporter of women's suffrage. His house was bombed by the Suffragettes in 1913. He became Prime Minister in 1915.

**Herbert Asquith** – Politician who was not a supporter of women's suffrage until around 1917.

**Emily Davison** – Suffragette who bombed Lloyd George's house and who was killed when trying to pin a scarf on the King's horse in 1913.

**Sophia Duleep Singh** – Indian princess and high profile Suffragette who protected people against violence, particularly on Black Friday.

**Edith Garrud** – Expert in martial art of jujitsu who trained Suffragettes to defend themselves from the police.

History

# Year 9 Knowledge Organiser – Women's fight for the vote

## Key Dates

| | |
|---|---|
| **1905** | **Christabel Pankhurst** & **Annie Kenney** disrupt political meeting of the Liberal party by shouting over them. |
| **1907** | **Alice Hawkins** joins Leicester Suffragettes. |
| **1910** | Suffragettes use violent tactics to win publicity. **Black Friday** sees Suffragettes assaulted and arrested by police. Suffragettes start hunger-strikes in prison. Government starts force-feeding. |
| **1913** | **Emily Davison** bombs **Lloyd George's** house. **Cat and Mouse Act** passed. **Emily Davison** is killed at the Derby. |
| **1914** | **First World War** breaks out. |
| **1915** | Women are encouraged to start war work such as working in **munitions**. |
| **1918** | **First World War** ends. **Representation of the People Act** is passed, giving all women over 30 with £5 property the vote. |
| **1928** | **Equal Franchise** Act - Women over 21 with no property could now vote (same as men). |

## Key Words

**Anti-suffrage** – some people (including women) campaigned against women getting the vote.

**Force-feeding** – In order to keep them alive, the prison guards would feed Suffragettes by putting a tube down their throat and tipping liquid like soup down it.

**Hunger strike** – Suffragettes would stop eating while in prison, in protest against being treated as criminals.

**Munitions** – Ammunition and weapons.

**Pacifist** – someone who does not support war.

**Petitions** – List of signatures from the public saying that they support an issue. It is designed to influence MPs by showing how popular an idea is.

**Poor Law Guardians** – People who had to check the poor law was being followed, including the treatment of the poor in the workhouses.

**Workhouses** – Like prisons for poor people. They had to do hard work, wore prison uniforms, and were separated from their families.

## Key Facts: Women in the 19th Century

- Women were not allowed to vote or become **MPs**
- Some women took positions of responsibility as **Poor Law Guardians** to show that they were responsible.
- In **1865 Elizabeth Garrett Anderson** became the first female doctor in Britain. Many other women went on to train in other professions such as lawyers, but many were also stopped by universities who refused to give them their qualifications.
- Before the **1857 Divorce and Matrimonial Causes Act** women could not divorce their husbands even if they were abused by them.
- Before the **1872 Infant Custody Act** children belonged to their father who could stop their mother from seeing them.
- Before the **1882 Married Woman's Property Act** women had to give up their property when they got married.
- Women were believed to be mentally and physically inferior. They were seen as too emotional to be able to vote. Many women tried to challenge this.
- Women were expected to focus on getting married and having children if they were Middle Class. Working Class women had to do this and find paid work to support their families – but women's work was always paid lower than men's.

## Early Campaign

- In **1865, Barbara Leigh Bodichon** formed the **Women's Suffrage Committee**. She campaigned for women's rights by publishing pamphlets and signing petitions. She helped influence the government to pass the **1882 Married Woman's Property Act**.
- **Lydia Becker** set up the **Manchester Suffrage Committee**. She campaigned for improvements in education which led to the **1870 Education Act** which created better education for girls.
- **Agnes Archer Evans** set up the **Leicester Women's Suffrage Society in 1887**.
- Although early campaigns helped get some laws passed, they still did not manage to get the law changed so that women could vote.

# History

## The Suffragists (NUWSS)

- Formed in 1897
- Led by Lydia Becker and Millicent Fawcett
- Colours were red (dignity), white (purity), green (hope)
- Only used peaceful methods such as petitions, marches, speeches, letter-writing etc.
- In 1897 they published a petition which got 230,000 signatures – a large number at the time.
- Historians debate how much influence they had. Many Suffragists continued to campaign during the First World War and helped to draft the Representation of the People Act which gave women the vote.
- Peaceful tactics often won them a lot of support, in contrast to the Suffragettes who were often seen as terrorists.
- Peaceful tactics also showed that women were responsible and not emotional and irrational as some people argued.
- Many Suffragists also continued to campaign after 1918 for women to get equal voting rights. This was won in 1928.

## The Suffragettes (WSPU)

- Formed in 1903
- Led by Emmeline Pankhurst and her daughters Sylvia and Christabel
- Had been Suffragists but became frustrated with the slowness of change and so turned to violent tactics. From 1910 they were becoming most famous for violent tactics, although they continued to use peaceful ones.
- Slogan "Deeds not words".
- Colours white (purity), purple (freedom and dignity), green (hope).
- 1905 Annie Kenney and Christabel Pankhurst disrupted a meeting of the Liberal Party by shouting slogans.
- 1909 Edith Garrud started teaching Suffragettes jujitsu.
- Black Friday in 1910 saw 300 Suffragettes on a peaceful march being assaulted by police officers. One woman in a wheelchair was beaten and kicked. Sophia Duleep Singh used her status to protect a number of women. Many women were arrested.
- 1910 violent tactics included throwing stones at politicians, rocks through shop windows, setting fire to post boxes, using bleach to write slogans on golf courses.
- 1913 Elsie Duval and Olive Beamish set fire to the house of Lady White (an anti-suffrage campaigner), causing £3,000 worth of damage (£400,000 today).
- 1913 Emily Davison planted two bombs at Lloyd George's house, causing £500 worth of damage (£55,000 today).
- 1913 the Liberal government passed the Cat and Mouse Act which allowed them to release Suffragettes who were on hunger strike, only to rearrest them when they got better. This stopped women dying while in prison.
- 1913 Emily Davison was killed trying to pin a Suffragette scarf on the King's horse at the Derby. 6,000 Suffragettes led a peaceful funeral march.
- 1914 the Suffragettes dissolved in order to support the war effort. Sylvia refused to get involved as she was a pacifist.

## World War One

- When war broke out in 1914 the government thought women's role was to encourage men to sign up to fight and to look after their homes and children.
- By 1915 there was a shortage of munitions and women were encouraged to work in war industries. Around 1 million women worked in munitions which was very dangerous.
- Women also joined nursing organisations such as Queen Alexandra's Royal Army Nursing Corps. Others were ambulance drivers on the front line or doctors either in the trenches or in hospitals in Britain.
- Flora Sandes was the only British woman to fight on the frontline in World War One. Women were not allowed to fight in the British army so she joined the Serbian army. She became Serjeant-Major.
- 1917 the Women's Land Army was set up to provide food to Britain. Around 23,000 women joined.
- Women were also ticket collectors, bus drivers, police officers, firefighters, post office workers, telephone operators, delivery drivers etc.
- Some women were pacifists and campaigned for an end to the First World War.
- At the end of the war, most women were expected to give up their jobs, but many fought to keep them.

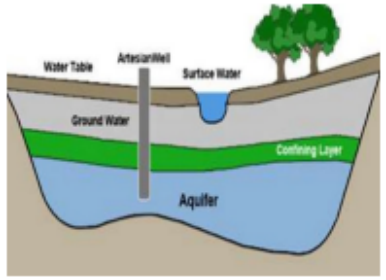
## The Vote

- Women over 30 with £5 of property won the vote in 1918.
- The government wanted only Middle and Upper Class women to vote and hoped that over 30 years old they might have a husband to tell them what to do.
- Women campaigned to have equal voting rights, which they won in 1928.

# Geography

**Year 9**
The Middle East knowledge organiser

C) Maths
1- Range – take the lowest number away from the highest number
2- Mean – add up all of the numbers and divide by how many numbers there are
3- Median – place the numbers in numerical order and select the middle number




D) Causes of war/conflict
- Economic gain (to take control of another country's wealth)
- Territorial gain (to take control of land)
- Nationalism (to prove your country is superior/better than another country)
- Civil war (fighting between different groups of people within the same country)
- Revolutionary war (when large numbers of people in a country tries to topple the government or leader of a country)

A) Middle East's physical geography
- The Middle East is a transcontinental region, located where Asia, Africa and Europe meet.
- This region is rich in oil
- There are two seasons. Winter and summer. Even winters are hot.
- The climate can be described as arid. There is little rainfall in the region.
- The northern countries receive the most rainfall including Turkey and Syria.

B) Water stress and drought

- Many countries are facing water stress including Saudi Arabia, Yemen and Oman.
- **Water stress** is where the demand for water **exceeds** the availability
- **Exceeds** means to go above
- Population growth and falling rainfall is causing an increase in water stress
- The level of water in underground **aquifers** is falling. In some places this decreasing by 6 metres per year
- An **aquifer** is an ancient supply of water deep beneath the ground
- Water stress will impact on the **social** and **economic** development of countries in the Middle East
- Farmers will not be able to grow crops or rear animals. This could lead to a rise in food prices and eventually food shortages.
- In the future water shortages could lead to conflict in the region.

E) Causes of the civil war in Syria

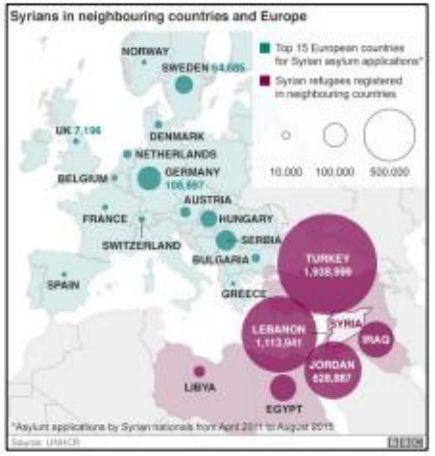
1- Many people in Syria had been unhappy with President Assad for a long time. There was high unemployment and corruption.
2- In 2011 15 school children were arrested for writing anti-government graffiti on a wall. People were unhappy with this and so started to protest.
3- The government responded angrily opening fire and killing 4 protesters.
4- People demanded that the president resign. Fighting broke out between the president's supporters and those against the president (called rebels)
5- Russia and Iran became involved. Carrying out air strikes against cities held by rebel groups
6- The USA has shipped weapons to support the rebels
7- The UK and France carried out air strikes against government forces after they reportedly used chemical weapons against civilians (people not involved in the fighting)

F) Key terms
- Refugee – a person fleeing from war, persecution or natural disasters. They are protected by law. People have to prove they are a refugee if they want a safe country to accept them
- Asylum seeker – someone who claims to be a refugee, looking for a safe place to live. But whose case has not yet been proven.
- Migrant – A migrant is a person who moves from one place to another. Refugees are a type of migrant. Another type is an economic migrant. Someone who moves to another country for a job there. Refugees are very different to economic migrants.

G) Refugee movements from Syria
- Around 6 million refugees have now left Syria. 2.7 million are in Turkey and 1 million are in Jordan.
- Germany, Bulgaria and Sweden are the European countries that have accepted the most refugees from Syria.
- Only 3000 Syrian refugees have applied for asylum (safety) in the UK in comparison to 160,000 in Germany.

**Areas of control in Yemen**


I) Taking action
There are a number of things people in the UK can do to support people in Yemen and Syria
1. Write a letter to your local MP asking them to urge the government to support a ceasefire
2. Email the foreign secretary Jeremy Hunt through Oxfam's website asking him to ensure peace talks are successful
3. You can donate to charities like Oxfam that are busy providing lifesaving supplies to people in Yemen and Syria




H) Conflict in Yemen

The conflict in Yemen has caused a **humanitarian crisis**. It is threatening people's health, safety and well-being on a large scale.

It has a number of social and economic consequences for the people of Yemen
1. At least 10,000 people have died in the 3 and a half years since the conflict begun. This is an estimate figure and it is expected to be more
2. Around 20 million people are **food insecure**
3. **Food security** is having reliable access to food at an affordable price
4. Hospitals and schools have been destroyed by air strikes
5. Transport infrastructure has been destroyed by air strikes making it difficult for aid to get to the places it is needed most.
6. 50% of the population struggle daily to get enough water to drink and grow food

Geography

# Climate Change and the Earth's Future

Knowledge Organiser

## *Introduction to climate change: key words*

**Greenhouse effect**: the trapping of the Sun's outgoing radiation by a layer of greenhouse gases in the atmosphere. These gases include carbon dioxide and methane.

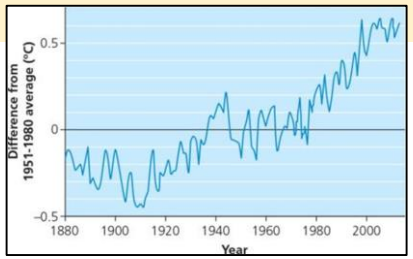
**Global warming**: an increase in the temperature of the Earth due to more heat being trapped by greenhouse gases.

**Climate change**: significant changes in global temperature, precipitation (rainfall) and winds.

Climate change is a ***controversial issue*** as people have different opinions as to whether it is a natural process or if it is caused by human activity.

## *Evidence for climate change*

- Temperature increase is key evidence that climate is changing.
- Significant reduction in Arctic sea ice cover.
- These indicators will all **increase**; air temperature, humidity, temperature over oceans and ocean heat content.
- These indicators will all **decrease**; glacier cover, snow cover and sea ice cover.



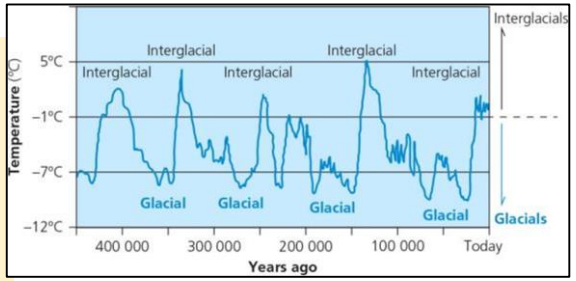

## *Causes of climate change*

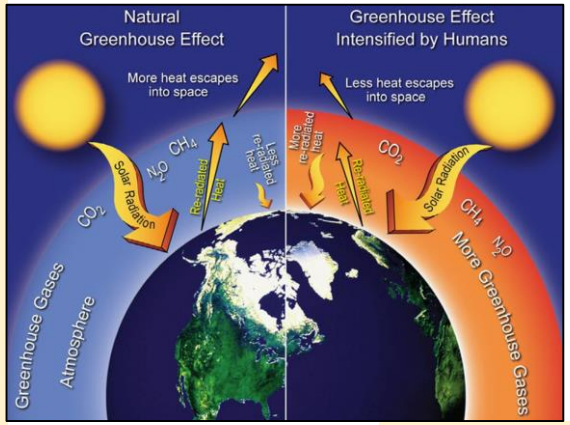
Earth's temperature has fluctuated (changed) over time during **glacials** – cold periods when much of the Earth was covered in ice, and **interglacials** – warmer periods such as today.

Since the Industrial Revolution the concentration of greenhouse gases in the atmosphere has increased which has led to global warming.

The main differences between the natural and human enhanced greenhouse effects are:

1. Human enhanced has a thicker layer of greenhouse gases.
2. Human enhanced has more heat reflected back down to Earth.
3. Human enhanced has less heat escaping to space.




## *Global impacts of climate change*

**Social impacts**

- Sea level rise will affect 80 million people – causing homes to flood and people to relocate.
- Tropical storms will increase in magnitude (strength) – destroying houses and making people homeless.
- Some areas will receive less rainfall so there will be more water shortages.
- Some crops will not be able to be grown leading to hunger.
- Diseases such as malaria increase, an additional 280 million people may be affected

## *Global impacts continued*

**Environmental impacts**

- Species in affected areas (e.g. Arctic) may become extinct
- Some animals may not be able to adapt to changes in climate and their habitats could be destroyed.

**Economic impacts**

- Increased cost of flood defences for low lying cities e.g. Venice, and repairing damage caused by natural disasters.
- Some countries may not be able to sell food and have to import more food.
- Cost of relocating people who have had to leave their homes.

## *Impacts of climate change in the UK*

**Social impacts**

- Droughts and floods could be more common, especially droughts in London and the south east.
- Flooding of coastal areas and rivers will increase.
- Summers will be warmer so more people may stay in the UK and not go overseas.

**Environmental impacts**

- Bird migration patterns may change.
- Trees and plants will flower earlier.

**Economic impacts**

- New crops can be grown e.g. oranges meaning less food needs to be imported.
- Cost of protecting against flooding will increase.
- More money may need to be spent on ensuring sufficient water supplies in some areas.

## *Impacts of climate change in Antarctica*

- Temperatures have increased by 3 degrees Celsius.
- Large chunks of ice shelves are breaking away each summer and since 1950s, 25 000 kilometer squared has melted.
- Adelie penguin numbers have declined, as have Emperor penguin numbers in the south.
- Krill numbers have decreased by 80% since the 1970s. These creatures are an important source of food for whales, seals and penguins.
- Ice melting in Antarctica can cause sea level in other parts of the world to increase at a rate of 3mm per year.

## *Climate change adaptation and mitigation*

**Adaptation:** These strategies aim to respond to climate change by limiting negative impacts, e.g. barriers against sea level rise.

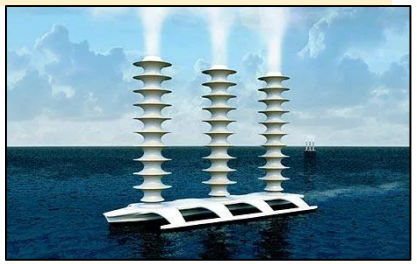
**Mitigation**: Actions to reduce climate change. E.g. planting trees and international agreements.

**The Paris Climate Agreement:**

- Signed in 2015 by 189 countries.
- Agreed to keep global warming below 2 degrees Celsius.
- Wealthier countries would help support countries with less money to meet their target.

**Geo-engineering:**

- Deliberate manipulation (changing) of the Earth's climate.
- E.g. covering roofs and roads to reflect sunlight.
- Spraying sea water into clouds to make it rain.

## *Plastic pollution in the oceans*

- Plastic pollution has increased dramatically in recent years as more and more products are made of plastic as it is cheap and strong. However, plastic is often thrown away and not recycled.
- Plastic is transported by spiralling ocean currents or gyres and it breaks down into tiny particles which are eaten by fish and sea creatures who think they are food.
- Solutions to the problem; boycott (avoid) single-use plastic, use re-usable bottles and coffee cups, buy products made form recycled materials.

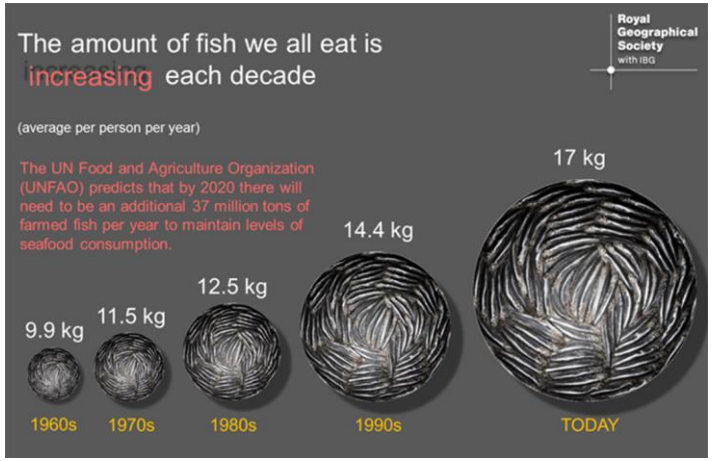
## *Plastic pollution in the oceans*

- In recent years deforestation has significantly increased in Malaysia to clear land to grow palm oil which is widely used in food and beauty products, for logging, mining and hydro-electric power.
- This deforestation has had many impacts; reduced biodiversity as species have lost habitats, forest fires as trees can be burned to clear them and these get out of control, disruptions to the water cycle, soil erosion and an increase in greenhouse gas emissions.
- Solutions to deforestation include buying products with sustainable palm oil or using alternatives to palm oil, paying people to protect the forest e.g. through eco-tourism.

## *Climate change and the Earth's future summary*

This topic has focused on climate change and some of the other challenges facing our planet.

A key theme for this topic is the idea of sustainability; **Using resources responsibly so that the needs of the present generation are met without compromising the ability of future generations to meet their needs.**




## *Overfishing*

- As world population has increased there is increasing demand for fish which is the main source of protein for 3 billion people.
- As a result of this demand, 70% fish stocks are being overfished or exploited.
- **Overfishing - the process of depleting (significantly reducing) the amount of fish available by fishing too much.**
- Solutions - creating marine reserves (these currently only make up 1% of Earth's oceans) where fish are protected, setting quotas or limits on number of fish that can be caught or marking tins of fish with whether they have been sustainably caught or not – pole and line tuna is most sustainable.

French

# Lionheart Modern Languages Year 7-9 High Frequency Words – FRENCH CORE

**CORE**

## Time phrases/Sequencers

| | |
|---|---|
| normally | **normalement** |
| often | **souvent** |
| usually | **d'habitude** |
| from time to time | **de temps en temps** |
| sometimes | **quelquefois/parfois** |
| tomorrow | **demain** |
| next week | **la semaine prochaine** |
| Summer / Autumn | **en été / en automne** |
| Winter / Spring | **en hiver / au printemps** |
| morning/afternoon/evening | **le matin/l'après-midi/le soir** |
| then | **puis** |
| always/still | **toujours** |
| at the moment | **en ce moment** |
| later | **plus tard** |
| in the future | **a l'avenir** |
| yesterday | **hier** |
| last night | **hier soir** |
| last week | **la semaine dernière** |
| last year | **l'année dernière** |
| next | **ensuite** |
| firstly | **d'abord** |
| after | **après ça** |
| before | **avant** |
| lastly | **enfin / finalement** |

## Key verb phrases

| | |
|---|---|
| I have | **j'ai** |
| I have not | **je n'ai pas de** |
| I am | **je suis** |
| I am not | **je ne suis pas** |
| I would like | **je voudrais** |
| it is | **c'est** |
| it is not | **ce n'est pas** |
| there is | **il y a** |
| there is not | **il n'y a pas de** |
| it will be | **ce sera** |
| I'm going to…. | **je vais** *+infinitive* |
| you must | **on doit** *+infinitive* |
| you must not | **on ne doit pas** *+infinitive* |
| you can | **on peut** *+infinitive* |
| you cannot | **on ne peut pas** *+infinitive* |
| it was | **c'était** |
| it wasn't | **ce n'était pas** |
| there was | **il y avait** |
| there wasn't | **il n'y avait pas de** |
| it would be | **ce serait** |
| it would not be | **ce ne serait pas** |
| if I was rich | **si j'étais riche** |
| in an ideal world | **dans un monde idéal** |
| in my dreams | **dans mes rêves** |

## Connectives

| | |
|---|---|
| but | **mais** |
| and | **et** |
| because | **car/ parce que** |
| also | **aussi** |
| however | **cependant** |
| therefore | **donc** |
| as | **comme** |
| or | **ou** |
| however | **pourtant** |
| on the other hand | **par contre** |
| fortunately | **heureusement** |
| unfortunately | **malheureusement** |
| in addition | **en plus** |

## Negatives

| | |
|---|---|
| not | **ne….jamais** |
| never | **ne…pas** |

## Comparisons

| | |
|---|---|
| more… than | **plus … que** |
| less… than | **moins … que** |

## Quantifiers/ Intensifiers

| | |
|---|---|
| very | **très** |
| too | **trop** |
| quite | **assez** |
| a bit | **un peu** |
| really | **vraiment** |
| a lot | **beaucoup** |

## Opinions

| | |
|---|---|
| In my opinion | **à mon avis / selon moi** |
| I think that | **je pense que** |
| I Like | **j'aime** |
| I love | **j'adore** |
| I don't like | **je n'aime pas** |
| I hate | **je déteste** |
| I prefer | **je préfère** |
| My favourite … is | **ma/mon…. préféré(e) est** |
| I find that | **je trouve que** |

## Idioms

| | |
|---|---|
| How awful ! | **Quelle horreur !** |
| What luck ! | **Quelle chance !** |
| What a surprise ! | **Quelle surprise !** |
| What an idiot! | **Quel imbécile !** |
| It's brilliant ! | **C'est le pied !** |
| It's not my thing ! | **Ce n'est pas mon truc !** |
| It's a waste of time! | **C'est une perte de temps !** |
| It's a waste of money! | **C'est une perte d'argent !** |

French

# Lionheart Modern Languages Year 7-9 High Frequency Words – FRENCH CORE

## CHALLENGE

### Time phrases/ Sequencers

| | |
|---|---|
| today | **aujourd'hui** |
| each/every | **chaque** |
| currently | **actuellement** |
| the next day | **le lendemain** |
| in my dreams | **dans mes rêves** |
| in an ideal world | **dans un monde idéal** |
| when I was little | **quand j'étais petit ( e )** |
| when I'm older | **quand je serai plus âgé ( e )** |
| for 5 years | **depuis 5 ans** |
| since I was 5 years old | **depuis l'âge de 5 ans** |

### Quantifiers/ Intensifiers

| | |
|---|---|
| so | **si** |
| rather | **plutôt** |
| extremely | **extrêmement** |
| frankly | **franchement** |
| hugely | **énormément** |
| incredibly | **incroyablement** |

### Connectives

| | |
|---|---|
| nevertheless | néanmoins |
| whereas | tandis que |
| even if | même si |
| furthermore | de plus |
| since | puisque |
| not at all | pas du tout |

### Key verb phrases

| | |
|---|---|
| you can see | **on peut voir** |
| if it is | **si c'est** |
| there would be | **il y aurait** |
| there would not be | **il n'y aurait pas de** |
| you could | **on pourrait** *+infinitive* |
| you couldn't | **on ne pourrait pas** |
| you should | **on devrait** *+infinitive* |
| you shouldn't | **on ne devrait pas** |
| you must | **il faut** *+infinitive* |
| you must not | **il ne faut pas** |

### Negatives

| | |
|---|---|
| no…more/longer | **ne… plus** |
| nothing | **ne… rien** |
| no one/nobody | **ne… personne** |
| neither …nor | **ne… ni… ni** |

### Comparisons/ Superlatives

| | |
|---|---|
| best | **meilleur (e )** |
| worst | **pire** |
| the best thing is | **la meilleure chose est** |
| the most important thing is | **la chose la plus importante est** |
| what I like the most is | **ce que j'aime le plus est** |

### Opinions

| | |
|---|---|
| for me | **d'après moi** |
| I believe that | **je crois que** |
| according to… | **selon…** |
| I really hate | **j'ai horreur de** |
| I really love | **j'apprécie** |
| I can't stand | **je ne supporte pas** |
| my friends say that | **mes copains disent que** |
| my parents say that | **mes parents disent que** |
| my teachers say that | **mes profs disent que** |
| my mum tells me that | **ma mère me dit que** |
| my dad tells me that | **mon père me dit que** |
| I would say | **je dirais que** |
| I like /love it / them | **j'aime/j'adore ça** |
| I am for | **je suis pour** |
| I am against | **je suis contre** |
| I agree with | **je suis d'accord avec** |
| I disagree with | **je ne suis pas accord avec** |
| what I like is | **ce que j'aime c'est** |
| it seems that | **il semble que** |
| as far as… is concerned | **en ce qui concerne…** |

### Idioms

| | |
|---|---|
| Although it is… | **Bien que ce soit…** |
| That's life ! | **C'est la vie !** |
| What a shame ! | **Quel dommage !** |
| What a disaster ! | **Quelle catastrophe !** |
| What a pain ! | **Quel ennui !** |
| It was so boring ! | **C'était la barbe !** |
| I was over the moon! | **J'étais aux anges !** |
| I was bored to death! | **Je m'ennuyais à mourir !** |
| I've had enough! | **J'ai le cafard !** |
| I was so fed up! | **J'en avais marre !** |

# Spanish

## Lionheart Modern Languages Year 7-9 High Frequency Words – SPANISH CHALLENGE

**CORE**

### Time phrases / Sequencers

| | |
|---|---|
| normally | **normalmente** |
| often | **a menudo** |
| usually | **generalmente** |
| from time to time | **de vez en cuando** |
| sometimes | **a veces** |
| tomorrow | **mañana** |
| next week | **la semana próxima** |
| summer / autumn | **en verano / otoño** |
| winter / spring | **en invierno / primavera** |
| morning/afternoon/evening | **por la mañana/ tarde/ noche** |
| then | **luego / después** |
| always/still | **siempre / aún** |
| at the moment | **en este momento / ahora** |
| later | **más tarde / después** |
| in the future | **en el futuro** |
| yesterday | **ayer** |
| last night | **anoche** |
| last week | **la semana pasada** |
| last year | **el año pasado** |
| two years ago | **hace dos años** |
| next | **luego** |
| firstly | **primero** |
| after | **después (de)** |
| before | **antes (de)** |
| lastly | **finalmente** |

### Key verb phrases

| | |
|---|---|
| I have | **tengo** |
| I have not | **no tengo** |
| I am | **soy / estoy** |
| I am not | **no soy / estoy** |
| I would like | **me gustaría** |
| it is | **es / está** |
| it is not | **no es / está** |
| there is | **hay** |
| there is not | **no hay** |
| it will be | **será** |
| I'm going to | **voy a** + *infinitive* |
| you must | **se debe** + *infinitive* |
| you must not | **no se debe** + *infinitive* |
| you can | **se puede** + *infinitive* |
| you cannot | **no se puede** + *infinitive* |
| it was | **fue** |
| it wasn't | **no fue** |
| there was | **había** |
| there wasn't | **no había** |
| it would be | **sería** |
| it would not be | **no sería** |
| if i was rich | **si fuera rico/a** |
| in an ideal world | **en un mundo ideal** |
| in my dreams | **en mis sueños** |

### Connectives

| | |
|---|---|
| but | **pero** |
| and | **y** |
| because | **porque / ya que** |
| also | **también** |
| however | **sin embargo** |
| therefore | **por lo tanto / por eso** |
| as | **como** |
| or | **o** |
| however / although | **aunque** |
| on the other hand | **por otro lado** |
| fortunately | **por suerte** |
| unfortunately | **por desgracia** |
| in addition | **además** |

### Negatives

| | |
|---|---|
| not | **no...** |
| never | **no... nunca** |

### Comparisons

| | |
|---|---|
| more... than | **más... que** |
| less... than | **menos... que** |

### Quantifiers / Intensifiers

| | |
|---|---|
| Very | muy |
| Too | demasiado |
| Quite | bastante |
| A bit | un poco |
| so | tan |
| Really | *adjective ending* -ísimo/a(s) |
| A lot | mucho |

### Opinions

| | |
|---|---|
| In my opinion | en mi opinión |
| I think that | pienso que |
| I like | me gusta(n) |
| I love | me encanta(n) |
| I don't like | no me gusta(n) |
| I hate | odio |
| I prefer | prefiero |
| My favourite is | mi... favorito/a es... |
| I find it | me parece |

### Idioms

| | |
|---|---|
| How great ! | **¡ Qué bien !** |
| How bad ! | **¡ Qué mal !** |
| How funny ! | **¡ Qué divertido !** |
| How cool ! | **¡ Qué guay !** |
| How boring / annoying ! | **¡ Qué aburrido! ¡Qué rollo !** |
| How dreadful ! | **¡ Qué horror !** |
| It's crazy ! | **¡ Es una locura !** |
| It's a waste of time! | **¡ Es una pérdida de tiempo !** |
| It's a waste of money! | **¡ Es una pérdida de dinero !** |

# Spanish

## Lionheart Modern Languages Year 7-9 High Frequency Words – SPANISH CHALLENGE

**CHALLENGE**

### Time phrases / Sequencers

| | |
|---|---|
| today | **hoy** |
| each/every | **cada** |
| currently | **actualmente** |
| the next day | **al día siguiente** |
| in my dreams | **en mis sueños** |
| in an ideal world | **en un mundo ideal** |
| when i was little | **cuando era pequeño/a** |
| when i'm older | **cuando sea mayor** |
| for 5 years (now) | **desde hace 5 años** |
| since i was 5 years old | **desde que tenía 5 años** |

### Quantifiers / Intensifiers

| | |
|---|---|
| so | **tan** |
| rather | **bastante** |
| extremely | **extremadamente** |
| frankly | **francamente** |
| entirely/ totally | **totalmente** |
| incredibly | **increíblemente** |

### Connectives

| | |
|---|---|
| nevertheless | **aun así** |
| whereas | **mientras que** |
| even if | **aunque** |
| additionally | **asimismo** |
| since | **dado que / ya que** |
| not at all | **en absoluto** |

### Key verb phrases

| | |
|---|---|
| you can see | **se puede(n) ver** |
| if it is | **si es** |
| there would be | **habría** |
| there would not be | **no habría** |
| you could | **podría** + *infinitive* |
| you couldn't | **no podría** + *infinitive* |
| you should | **debería** + *infinitive* |
| you shouldn't | **no debería** + *infinitive* |
| you must | **hay que** + *infinitive* |
| you must not | **no hay que** + *infinitive* |

### Negatives

| | |
|---|---|
| no...more/longer | **ya no...** |
| nothing | **no... nada** |
| no one/nobody | **no... nadie** |
| neither... nor | **no... ni...** |

### Comparisons / Superlatives

| | |
|---|---|
| best | **mejor** |
| worst | **peor** |
| the best thing is | **lo mejor es** |
| the most important is | **lo más importante es** |
| what I like the most is | **lo que más me gusta es** |

### Opinions

| | |
|---|---|
| for me | **para mí** |
| as I see it | **a mi modo de ver / a mi juicio...** |
| I believe that | **creo que** |
| according to... | **según / para...** |
| I really hate | **detesto** |
| I really love | **me chifla/ me mola** |
| I can't stand | **no aguanto / no soporto** |
| my friends say that | **mis amigos dicen que** |
| my parents say that | **mis padres dicen que** |
| my teachers say that | **mis profesores dicen que** |
| my mum/dad tell me that | **mi madre /mi padre me dice que** |
| i would say | **diría que** |
| I like/love it / them | **me gusta(n) / me encanta(n)** |
| I am for | **estoy a favor de** |
| I am against | **estoy en contra de** |
| I agree with | **estoy de acuerdo con** |
| I disagree with | **no estoy de acuerdo con** |
| what I like... | **lo que me gusta..** |
| it seems that | **me parece que** |
| as for me | **por mi parte / en cuanto a mí** |

### Idioms

| | |
|---|---|
| No more excuses ! | **¡ Basta de excusas !** |
| I am fed up ! | **¡ Estoy harto/a !** |
| What a shame ! | **¡ Qué lástima !** |
| What a disaster ! | **¡ Qué desastre !** |
| It sounds funny /curious ! | **¡ Suena muy gracioso / curioso !** |
| A dream come true ! | **¡ Es un sueño hecho realidad !** |
| It is the most exciting thing I have ever seen! | **¡ Es lo más emocionante que he visto jamás !** |
| It has been the most important / unforgettable experience of my life! | **¡ Ha sido la experiencia más importante / inolvidable de mi vida !** |
| I have enjoyed it a lot | **¡ Lo he disfrutado muchísimo !** |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