

# 100% book - Year 10 Mainstream

Aim to memorise 100% of the knowledge on these Knowledge Organisers.

## Term 1



Swindon Academy 2024-25	
Name:	
Tutor Group:	
Tutor & Room:	

*"If you are not willing to learn, no one can help you.  
If you are determined to learn, no one can stop you."*

# How to use your 100% book of Knowledge Organisers and Quizzable Organisers

## Knowledge Organisers

Knowledge Organisers contain the essential knowledge that you **MUST** know in order to be successful this year and in all subsequent years.

They will help you learn, revise and retain what you have learnt in lessons in order to move the knowledge from your short-term memory to long-term memory.

## Quizzable Knowledge Organisers

These are designed to help you quiz yourself on the essential Knowledge.

Use them to test yourself or get someone else to test you, until you are confident you can recall the information from memory.

### Top Tip

Don't write on your Quizzable Knowledge Organisers! Quiz yourself by writing the missing words in your prep book. That way you can quiz yourself again and again!

## Expectations for Prep and for using your Knowledge Organisers

1. Complete all prep work set in your subject prep book.
2. Bring your prep book to every lesson and ensure that you have completed all work by the deadline.
3. Take pride in your prep book – keep it neat and tidy.
4. Present work in your prep book to the same standard you are expected to do in class.
5. Ensure that your use of SPAG is accurate.
6. Write in blue or black pen and sketch in pencil.
7. Ensure every piece of work has a title and date.
8. Use a ruler for straight lines.
9. If you are unsure about the prep, speak to your teacher.
10. Review your prep work in green pen using the mark scheme.

# How do I complete Knowledge Organiser Prep?

## Step 1

Check Epraise and identify what words /definitions/facts you have been asked to learn. Find the Knowledge Organiser you need to use.

The screenshot shows the Epraise website interface. On the left is a weekly planner for May 2020. On the right is a knowledge organiser for 'Particle Theory' with sections for 'What is particle theory?', 'What is the law of conservation of mass?', 'What are the different states of matter?', and 'What are the differences between the states of matter?'. It includes diagrams of particle arrangements for solid, liquid, and gas.

## Step 2

Write today's date and the title from your Knowledge Organiser in your Prep Book.

This screenshot shows the knowledge organiser from Step 1 with handwritten notes. The date '29th May 2020' is written at the top. The title 'Particle theory' is underlined. The sections for 'What is particle theory?' and 'What are the different states of matter?' are filled with text from the original document. A diagram of particle arrangements is also present.

## Step 3

Write out the keywords/definitions/facts from your Knowledge Organiser in FULL.

Handwritten notes on lined paper. At the top, the date '29th May 2020' is written. Below it, the title 'Properties of the states of matter' is underlined. The notes define 'Particle theory = all matter is made of particles'. It then lists the three states of matter with their characteristics: Solid = regular pattern, particles vibrate in fixed position; Liquid = particles are arranged randomly but are still touching each other, particles can slide past each other and move around; Gas = Particles are far apart and are arranged randomly, particles carry a lot of energy.

## Step 4

Read the keywords/definitions/facts out loud to yourself again and again and write the keywords/definitions/facts at least 3 times.

Handwritten notes on lined paper showing the definition of 'Solid' repeated three times: 'Solid = regular pattern, particles vibrate in fixed position'.

## Step 5

Open your quizzable Knowledge Organiser. Write the missing words from your quizzable Knowledge organiser in your prep book.

This screenshot shows the quizzable version of the knowledge organiser. It has a 'Self quizzing' section where the user has written 'Arrangement/Movement of matter' for the question 'What are the different...'. Other sections are partially filled with handwritten notes.

## Step 6

Check your answers using your Knowledge Organiser. Repeat Steps 3 to 5 with any questions you got wrong until you are confident.

Handwritten notes on lined paper showing corrections to the definitions from Step 3. The definition for 'Solid' is corrected to 'particles vibrate in fixed position'. The definition for 'Liquid' is corrected to 'particles are arranged randomly but are still touching each other'. The definition for 'Gas' is corrected to 'Particles are far apart and are arranged randomly, particles carry a lot of energy'.

Make sure you bring in your completed Prep notes to demonstrate that you have completed your prep.

# ENGLISH –Poetry cluster 1: The Romantics- Traditional

## Romanticism:

- A movement in literature and the arts
- From around 1800-1890
- During this time, major transitions took place in society, as dissatisfied intellectuals and artists challenged the Establishment (the church and the monarchy).
- The Romantics valued freedom, imagination, emotion and nature
- They were critical of power that institutions (such as the church and monarchy) had as they believed that they exploited the poor and restricted people's freedoms

## Key Vocabulary

<b>Tyrant</b>	A cruel and unfair ruler
<b>Transient</b>	Lasting for only a short time
<b>Hubris</b>	Having extreme pride or self-confidence
<b>Oppression</b>	When leaders treat people in a cruel or unfair way over a long period of time.
<b>Patriarchy</b>	A society where men have the most power and control
<b>Egocentric</b>	Thinking only of oneself
<b>Awe</b>	A feeling of deep respect mixed with fear or wonder
<b>Radical</b>	Wanting to see extreme changes in politics and society
<b>Ephemeral</b>	Lasting a very short time
<b>Autocratic</b>	A ruler who has complete power and makes decisions without asking anyone else's advice
<b>Sinister</b>	Something that seems evil or harmful
<b>Revolution</b>	A large group of people using force to change the political system of their country
<b>Exploit</b>	Treating someone unfairly in order to benefit from them.
<b>Anti-establishment</b>	Disagreeing with the people who have power and make decisions

Poem	Context	Events in the poem	Message	Form/ structure
<b>The Prelude- William Wordsworth</b> 	<ul style="list-style-type: none"> <li>Born in 1770, Wordsworth was orphaned at 13 and sent to a grammar school.</li> <li>Whilst he was there, he was influenced by the countryside surrounding him.</li> <li>The poem you study is just a section of an epic poem and was originally going to be called 'The Recluse'.</li> <li>The poem is mostly autobiographical.</li> </ul>	<ul style="list-style-type: none"> <li>An autobiographical account of Wordsworth as a boy.</li> <li>The poem focusses on a boy stealing a boat and rowing it into the middle of a lake.</li> <li>Whilst there he feels as though nature is judging him and feels guilt for his theft.</li> <li>He returns the boat, but the memory stays with him</li> </ul>	<ul style="list-style-type: none"> <li>Nature has the power to inspire and destroy and so should be respected.</li> <li>Nature can be overwhelming and render us feeling small and insignificant. It can remind us of our flaws and inspire us to do better.</li> <li>Imagination and memories are powerful. They can cause us to permanently change our outlook.</li> </ul>	<p>The poem is written in blank verse and uses iambic pentameter to mimic the conversational flow of speech. It is not split into separate stanzas but flows continuously- much like the power of nature over us.</p>
<b>My Last Duchess- Robert Browning</b> 	<ul style="list-style-type: none"> <li>Browning was inspired by the writing of radical poets such as Shelley</li> <li>Written in 1834, it is inspired by the actions of an Italian duke who married a young girl, who died in suspicious circumstances.</li> <li>Browning moved to Italy to marry his wife because of her overprotective father. As a result, he was familiar with over-controlling patriarchs.</li> </ul>	<ul style="list-style-type: none"> <li>The speaker of the poem (the Duke) shows a visitor through his palace. He stops before a portrait of the late Duchess who has died.</li> <li>The Duke reminisces about the portrait sessions and about the Duchess. His musings give way to a rant about her disgraceful behaviour: he claims she flirted with everyone and did not appreciate his "gift of a nine-hundred-years- old name."</li> <li>As his monologue continues, the reader realises that the Duke caused the Duchess's early death: when her behaviour escalated, "[he] gave commands; / Then all smiles stopped together."</li> <li>Having made this admission, the Duke returns to the business at hand: arranging another marriage, with another young girl.</li> </ul>	<ul style="list-style-type: none"> <li>Browning makes us question whether the expectations of society are too oppressive, especially for women; strict rules should not be imposed on others and there should be equality of power in society.</li> <li>The power of humans is exposed as having potential dangers and Browning warns us that evil can take many forms – we should not be deceived by the outward appearance of someone; anyone can be cruel.</li> <li>Furthermore, Browning shows how unattractive arrogance is; it can lead to the abuse of power. He warns us of the consuming nature of pride and jealousy: they can take over</li> </ul>	<p>Dramatic monologue- reflective of the Duke's egocentricity</p> <p>The regular meter and rhyme scheme (rhyming couplets) demonstrate the Duke's control over the narrative and how he has carefully constructed his argument.</p> <p>However, some of the rhyming couplets are subdued by enjambment so are hidden when listening to the poem. This is reflective of the Duke's true nature. Beneath his wealth and status, he is no more than a murderous villain.</p> <p>There are no breaks in the poem to split it into stanzas. This could symbolize the lack of gaps in his fortress. In a patriarchal society, a man of such a high status is protected from the repercussions of his actions.</p>
<b>Ozymandias- Percy Shelley</b> 	<ul style="list-style-type: none"> <li>Shelley was considered to be a radical due to his atheism and his opposition of the church and monarchy</li> <li>The poem is inspired by an Egyptian pharaoh, Ramesses II.</li> <li>Rameses II was remembered for leading armies into many battles and building a huge empire. However, to do this he used slave labour and allowed his people to struggle whilst he invested huge sums of money into expanding his kingdom.</li> </ul>	<ul style="list-style-type: none"> <li>The poem imagines a traveler describing the broken statue of Ozymandias in the vast expanse of the empty desert.</li> <li>In the poem, the tyrannical Ramesses II believed himself to be 'king of kings' and that his power would be eternal.</li> <li>However, where a great empire once stood, now only sand and ruins remain.</li> <li>Shelley uses the poem to demonstrate the transient nature of political power and as a metaphor for his opposition of the Establishment's power.</li> </ul>	<ul style="list-style-type: none"> <li>Shelley wanted to communicate how all power is transient – even powerful individuals are no match against nature and time.</li> <li>Shelley warns tyrants that they are vulnerable; they should not be arrogant, but instead be humble and accept their own limitations and the ephemeral nature of their power.</li> <li>The poem offers hope to ordinary people as they are reminded that no one's power can last forever. Shelley reminds us that the power of art and artists endures over the power of kings – particularly tyrants.</li> </ul>	<p>Sonnet- Sonnets are typically love poems written in iambic pentameter. They are 14 lines long and have a strict rhyme scheme. The use of the sonnet form is reflective of Ramesses' love of power whilst the rigid structure is symbolic of both Ozymandias' oppressive rulership. It could also reflect the poet's lasting power and control over the way we remember Ozymandias – far outlasting the power of Ramesses II.</p> <p>Shelley also breaks the conventional sonnet form which could symbolise how the power of tyrants is ephemeral.</p>
<b>London- William Blake</b> 	<ul style="list-style-type: none"> <li>Born in London in 1757, Blake was anti-establishment and opposed many of the things he saw in London. He believed that the government, the church and the monarchy were to blame for the widespread suffering he saw on London's streets.</li> <li>During this era, life was difficult for the poor. There was much sickness, disease and the children of poor parents would have had to work hard and dangerous jobs, such as chimney sweeping.</li> </ul>	<ul style="list-style-type: none"> <li>Walking through through London's streets, the speaker notices how the course of the Thames seems to be dictated as it flows through the city.</li> <li>The speaker sees sadness in the faces of every person he passes and hears pain in every voice in the city. Every law and restriction oppresses the people of London.</li> <li>He hears the cry of young chimney-sweeps, whose misery brings shame on the Church authorities. Thinking of British soldiers dying in vain, the speaker imagines their blood running down the walls of a palace.</li> <li>He also hears the cries of young prostitutes, who curse at their situation. This miserable sound brings misery to their tearful new-born children. The speaker also imagines this sound plaguing what the speaker calls "the Marriage hearse"—a surreal imagined vehicle that carries love and death together.</li> </ul>	<ul style="list-style-type: none"> <li>Blake wanted to highlight the desperate suffering of the poor in 19<sup>th</sup> century Britain.</li> <li>Blake believed people should be supported and cared for by institutions of power such as the church, the government and the education system.</li> <li>Blake was appalled that people endured such difficulties and wanted them to break free from the oppressive control.</li> <li>It could be said to be his call to revolution as he subtly hints at the French revolution in which people stood up against oppressive rulership.</li> </ul>	<p>Blake uses regular stanzas and a regular rhyme scheme which reflects the monotony of the pain and suffering that the people of London face. The controlled structure is also symbolic of the control that the Establishment has over society.</p>

# ENGLISH –Poetry cluster 1: The Romantics- Traditional

Romanticism:
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Key Vocabulary	
Tyrant	
Transient	
Hubris	
Oppression	
Patriarchy	
Egocentric	
Awe	
Radical	
Ephemeral	
Autocratic	
Sinister	
Revolution	
Exploit	
Anti-establishment	

Poem	Context	Events in the poem	Message	Form/ structure
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The Prelude- William Wordsworth



My Last Duchess- Robert Browning



Ozymandias- Percy Shelley



London- William Blake



# Year 10 Term 1 Science / Physics P1 Energy

## Energy Stores

There are 8 energy stores:

Store	Stored in...
Kinetic	moving objects
Gravitational potential	objects raised above ground
Elastic potential	Stretched or compressed objects
Thermal	All objects due to particle movement
Chemical	Substances (foods, fuels) that can release energy in a chemical reaction
Nuclear	The nucleus of atoms
Magnetic	Magnets attracting or repelling
Electrostatic	Separation of charges

### Conservation of energy law:

Energy is **NEVER** created or destroyed

Energy is transferred by different pathways – by heating or when work is done

When energy is transferred, some is often transferred to the environment – this is wasted or dissipated energy

### Efficiency

Tells us how much of the energy is transferred usefully.

$$\text{Efficiency} = \frac{\text{Useful output energy transferred by the device}}{\text{Total input energy supplied to the device}}$$

$$\text{Efficiency} = \frac{\text{Useful power out}}{\text{Total power in}}$$

Wasted energy always ends up in the **thermal store** of the surroundings

## Calculating energy stores

The energy stored in a raised object can be calculated using:

$$\text{GPE} = \text{mass} \times \text{height} \times \text{gravitational field strength}$$

$$\text{GPE} = mgh$$

The energy stored in a moving object can be calculated using:

$$\text{KE} = \frac{1}{2} \text{mass} \times \text{velocity}^2$$

$$\text{KE} = \frac{1}{2} m v^2$$

Energy stored in a stretched or compressed object can be calculated using :

$$E = \frac{1}{2} \text{spring constant} \times \text{extension}^2$$

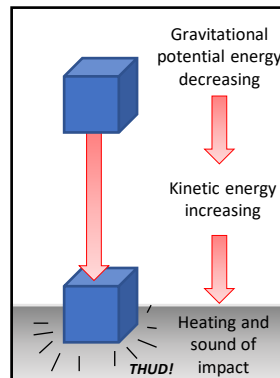
$$E = \frac{1}{2} k e^2$$

Transfers of energy:

E.g. An object above ground has GPE.

If that object falls:

1. Decreases its GPE store
2. Increases its KE store as it falls
3. Waste energy transferred to the environment by heating and sound



## Specific heat capacity

The amount of energy needed to change the temperature of 1Kg of a substance by 1°C

It is calculated by:

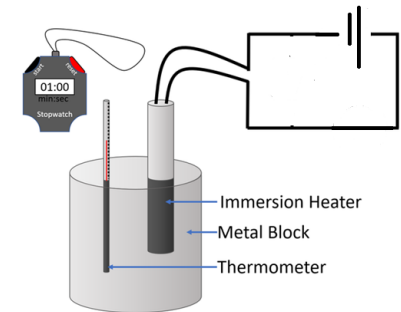
$$E = \text{specific heat capacity} \times \text{mass} \times \text{temp change}$$

$$E = \text{SHC} \times m \times \theta$$

### Units for SHC are J/Kg/°C

Different materials have different specific heat capacity values.

This can be investigated using the equipment below:



- Energy is supplied to the block by the immersion heater over a fixed time period (e.g 5 mins)
- The thermometer measures the temperature of the block at the start and the end of the experiment
- The stopwatch measures the time
- If the power of the heater is known (e.g 50W) the energy transferred to the block can be found using the equation:

$$\text{Energy (J)} = \text{Power (W)} \times \text{time (s)}$$

The specific heat capacity of different materials can be investigated by:

- changing the metal (**independent variable**)
- measuring the temperature increase (**dependent variable**)
- Keeping the energy supplied, mass and insulation the same (**control variables**)

**Insulating the block** reduces energy transferred to the thermal store of the environment, improving accuracy



### Energy Stores

Complete the table:

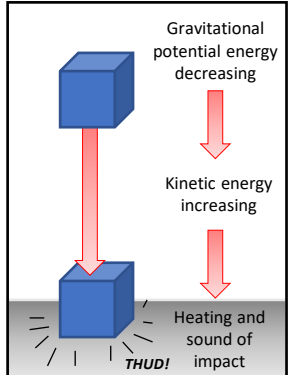
Store	Stored in...
kinetic	
	objects raised above ground
Elastic potential	
	All objects due to particle movement
Chemical	
	The nucleus of atoms
Magnetic	
	Separation of charges

1. What is the conservation of energy law?
2. In what two general ways is energy transferred?
3. What is wasted energy?

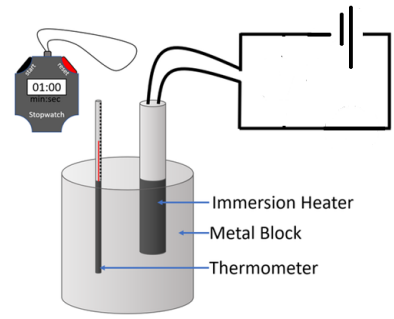
### Efficiency

1. What is the equation to calculate efficiency?
2. Where does wasted energy end up?

1. What is the equation linking gravitational field strength, GPE, height and mass?
2. What is the equation linking kinetic energy, mass and velocity?
3. What quantity is found in both equations?
4. What happens to the GPE store when a raised object falls?
5. What happens to the KE store of a raised object when it begins to fall?
6. By which two pathways is energy transferred to the environment when an object falls?



1. What is the specific heat capacity of a substance?
2. In the hypothesis 'different metals have different specific heat capacity values' what is the independent variable?



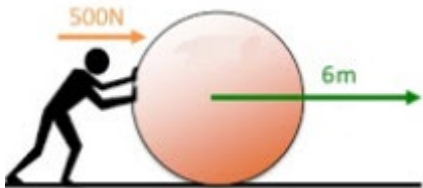
3. What does the immersion heater do?
4. What two readings are taken using the thermometer?
5. What is a sensible time period to use for transferring energy to the block?
6. What should be put round the block?

**Power and work done**

**Work done = energy transferred**

Energy transferred mechanically is calculated:

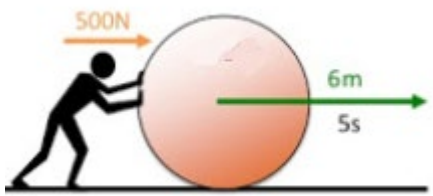
**Work done = force x distance**  
 $W (J) = F (N) \times s (m)$



**Work done = 500N x 6m**  
**= 3000 J**

**Power = energy transferred per second**  
**1 Watt = 1 Joule per second**

**Power = energy transferred ÷ time**  
 $P (W) = e (J) \div t (s)$



**Power = Energy ÷ time**  
**= 3000 J ÷ 5 s**  
**= 600W**

A more powerful appliance transfers more energy per second, eg:



**Reducing unwanted energy transfers**

Reducing wasted energy means lower costs

Materials that conduct heat well have a high **thermal conductivity**.

**WHERE DOES THE HEAT GO?**



**Reducing energy transfers in homes**

- Double glazing
- Thick walls
- Walls made of materials with low thermal conductivity
- Insulation – wall and loft

**Reducing energy transfers in appliances:**

- Lubrication – reduces friction



- Streamlining – reduces air resistance



**Energy resources**

We use energy resources for electricity generation, transport and heating

**Non-renewable** – ones that are being used faster than they can be replaced and will run out.

Example	+	-
Coal, oil, natural gas	Reliable method of generating electricity	Release CO <sub>2</sub> which contributes to global warming
nuclear	No CO <sub>2</sub> released	Produces radioactive nuclear waste

**Renewable resources:**

Ones that will not run out , they are being replenished as they are used

Example	+	-
Solar	No CO <sub>2</sub> released	Don't work at night or well on cloudy days
wind	No CO <sub>2</sub> released	Doesn't work if it isn't windy
Hydro	No CO <sub>2</sub> released	Damage to habitats
Geothermal	No CO <sub>2</sub> released	Only found in specific places
waves	No CO <sub>2</sub> released	Damage to habitats
Biofuel	Carbon neutral	Uses crop land to grow new forests

1. What are the units for work done?
2. What are the units for force?
3. What is the equation to calculate work done during mechanical work?
4. What is the equation to calculate power?
5. What is the unit for power?
6. What is the unit for time in the power equation?
7. What is 1 Watt equivalent to?
8. How would you recognise a more powerful lightbulb?
9. What is meant by a more powerful appliance?

1. Why is reducing unwanted energy transfers from the home important?
2. What is meant by 'high thermal conductivity'?

#### WHERE DOES THE HEAT GO?



3. Where is most of the heat lost through in a house?
4. Give two ways to reduce the heat lost through the walls of a house.
5. What does lubrication reduce?
6. What does streamlining reduce?



1. Give the three main uses for energy resources
2. What is a non-renewable energy resource?
3. Give 2 examples of non-renewable energy resources
4. Give two disadvantages of using coal and oil
5. Give one advantage to using nuclear resources to generate electricity.
6. What is a renewable energy resource?
7. Give 4 examples of renewable resources
8. Give 2 advantages of using renewable resources to generate electricity
9. Give two disadvantages of using renewable resources to generate electricity

# Year 10 Term 1 Science/Chemistry C2 – Bonding, structure, and the properties of matter

## Formation of Ions

- **Ions** = a charged particle made when atoms lose or gain electrons
- **Positive ion** = atom has lost electrons
- **Negative ion** = atom has gained electrons.

Metals form **positive ions**

Non-metals form **negative ions**

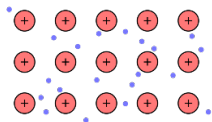
Group	Ions	Example
1	+1	$\text{Li} \rightarrow \text{Li}^+ + \text{e}^-$
2	+2	$\text{Ca} \rightarrow \text{Ca}^{2+} + 2\text{e}^-$
6	-2	$\text{O} + 2\text{e}^- \rightarrow \text{O}^{2-}$
7	-1	$\text{Br} + \text{e}^- \rightarrow \text{Br}^-$

Lost electrons

Gained electrons

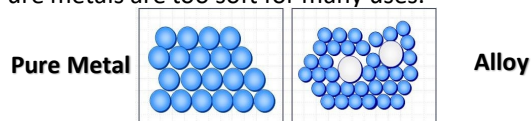
## Metallic Bonding

- Happens in **metals only**.
- Positive metal ions surrounded by **sea of delocalised electrons (can move)**.
- Ions tightly packed in rows.
- Strong **electrostatic forces of attraction** between positive ions and negative electrons.



## Alloys

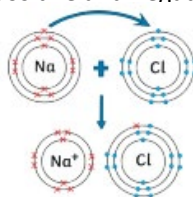
- **Alloys** = mixture of two or more metal atoms
- Pure metals are too soft for many uses.



- |                   |                         |
|-------------------|-------------------------|
| • Atoms same size | • Different sized atoms |
| • Layers slide    | • Layers cannot slide   |
| • Softer          | • Stronger              |

## Ionic Bonding

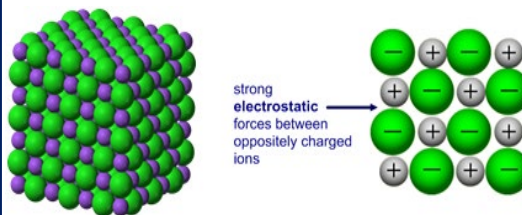
- Between a metal and non-metal.
- Metals give electrons to non-metals so both have a full outer shell.
- **Electrostatic force of attraction** between positive and negative ions.



E.g. Sodium loses one electron to become  $\text{Na}^+$ . Chlorine gains one electron to become  $\text{Cl}^-$ . The two ions attract to form sodium chloride.

## Ionic compounds

- Form **giant lattices, as the attraction between ions acts in all directions**



## Properties of Ionic Compounds

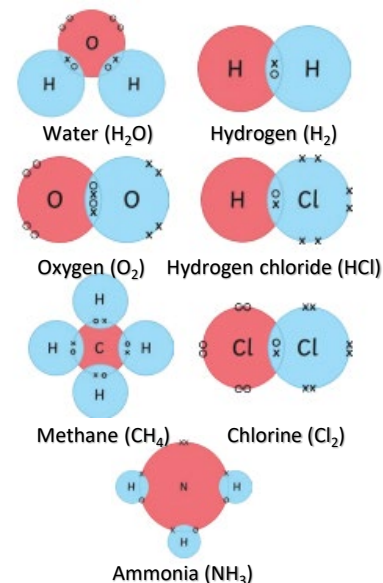
- **High melting point** – lots of energy needed to overcome electrostatic forces.
- **High boiling point**
- **Cannot conduct electricity as solid** – ions cannot move
- **Conducts electricity when molten or dissolved** – ions are free to move.

## Covalent Bonding

- **Covalent bonding** = sharing a pair or pairs of electrons for a full outer shell.
- Between **non-metals only**.

## Dot and cross diagrams

- Show the bonding in simple molecules.
- Uses the outer shell of the atoms
- Crosses and dots used to show electrons
- You should be able to draw the following:



## Simple Covalent Molecules

- Form when all atoms have full outer shells so bonding stops
- Examples are the molecules shown above.
- Have **low melting and boiling points**
- Due to **weak intermolecular forces**
- Do not conduct electricity

## Year 10 Term 1 Science/Chemistry C2 – Bonding, structure, and the properties of matter

1. What is an ion?
2. What happens to form a positive ion?
3. What happens to form a negative ion?
4. What type of ions are formed by:
  1. metals
  2. non-metals

1. What are metal ions surrounded by?
2. Name the type of attraction between the electrons and ions.
3. Why do metals conduct electricity?
4. What is an alloy?
5. Why are pure metals too soft for some uses?
6. Why are alloys stronger than pure metals?

1. Ionic bonding happens between..
2. What do metals give to non-metals?
3. What type of attraction is between the positive and negative ions?
4. What structure do ionic compounds form?
5. What are the melting points of ionic compounds like?
6. Why can solid ionic compounds **not** conduct electricity?
7. When can ionic compounds conduct electricity?

1. What is covalent bonding?
2. What type of atoms does covalent bonding happen between?
3. Draw dot and cross diagrams for the following:

Water (H<sub>2</sub>O)

Methane (CH<sub>4</sub>)

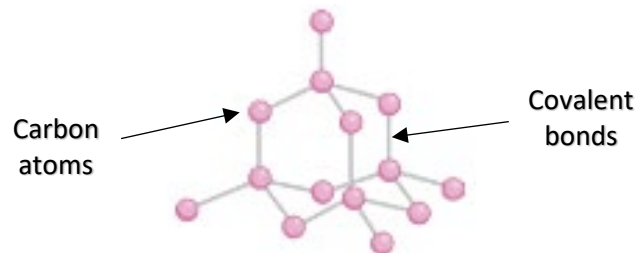
Oxygen (O<sub>2</sub>)

5. Do simple covalent molecules have a high/low melting point?
6. Why is this?

# Year 10 Term 1 Science/Chemistry C2 – Bonding, structure, and the properties of matter

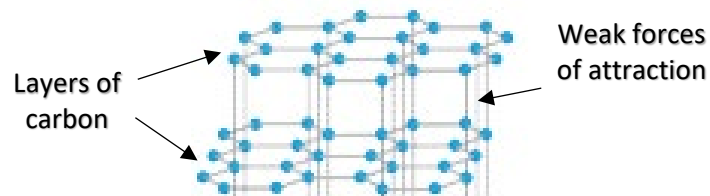
## Giant Covalent Structure – Diamond

- Each carbon atom **covalently** bonded to **four** others.
- Forms a giant structure
- This makes diamond **strong** → a lot of **energy** needed to break lots of strong covalent bonds.
- **Does not conduct electricity** – has no free electrons.



## Giant Covalent Structure – Graphite

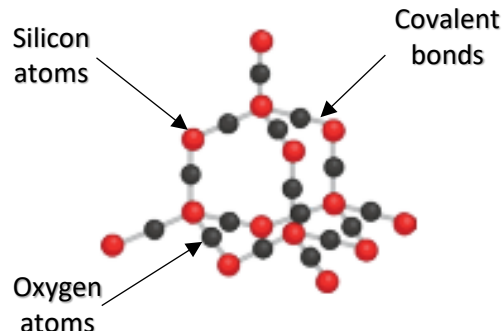
- Layers of **carbon** arranged in **hexagons**.
- Each carbon bonded to **three** other carbons.
- Leaves **one delocalised electron** → moves to carry electrical charge **throughout structure**.



- Layers held together by **weak forces**
- Layers can **slide** over each other easily
- Makes graphite **soft/slippery** → good lubricant.
- Has **high melting point** as has many strong covalent bonds.

## Silicon Dioxide

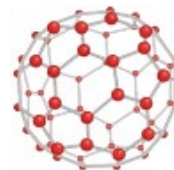
- Similar structure to diamond
- Giant covalent structure.
- Lots of **strong covalent bonds**.
- These require lots of **energy** to break.
- High melting and boiling points.



## Fullerenes and Nanotubes

- Molecules of carbon shaped into hollow tubes or balls.
- Used to **deliver drugs into body**

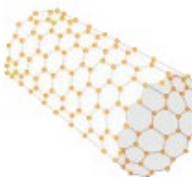
Buckminsterfullerene  
Formula =  $C_{60}$



- **Carbon nanotubes** = long narrow tubes
- Can conduct electricity

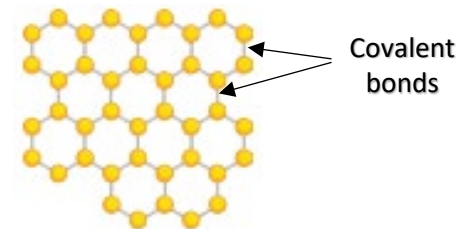
- Can strengthen materials without adding weight.

- Used in electronics and nanotechnology.



## Graphene

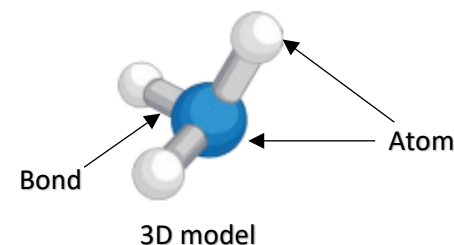
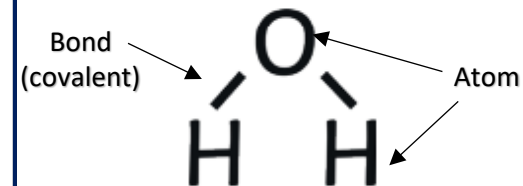
- Graphene = one layer of graphite.
- Very strong → lots of strong covalent bonds.



- Each carbon bonded to three others.
- One **free delocalised electron** → can move to **carry electrical current** throughout the structure.

## Molecular models

- There are different ways to show a molecule other than dot and cross diagrams.



## Year 10 Term 1 Science/Chemistry C2 – Bonding, structure, and the properties of matter

1. How many bonds do each carbon atom have in diamond?
2. What type of bonds are in diamond?
3. Why is diamond hard?
4. Why does diamond not conduct electricity?

1. What structure does silicon dioxide have?
2. Why does this structure have a high melting and boiling point?

1. What is graphene?
2. State a property of graphene.
3. How many bonds does each carbon have?
4. What does this allow graphene to do?

1. What element is graphite made from?
2. How many bonds does each carbon have?
3. Why can graphite conduct electricity?
4. What holds together the layers of graphite?
5. Why is graphite soft/slippery?
6. Does graphite have a high/low melting point?
7. Why?

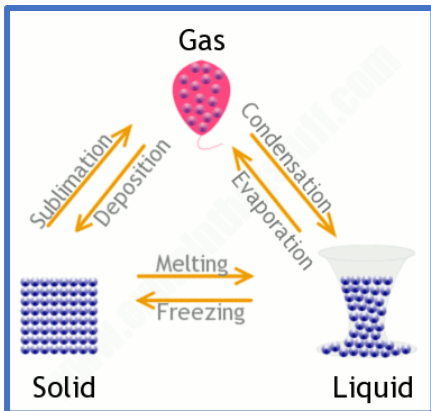
1. What can fullerenes be used for?
2. What is the formula of buckminsterfullerene?
3. State two uses of carbon nanotubes.

1. What are three ways that H<sub>2</sub>O could be drawn?

# Year 10 Term 1 Science/Chemistry C2 – Bonding, structure, and the properties of matter

## States of Matter

- Three states of matter: **solid, liquid & gas.**
- To change state, **energy** must be **transferred.**



- When heated, particles **gain energy.**
- **Attractive forces** between particles begin breaking when melting or boiling points are reached
- **Amount of energy** needed to change state depends on how strong forces are.

## Gas

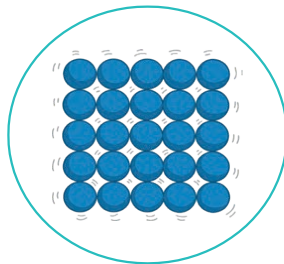
- Randomly arranged.
- Particles **move quickly** – all directions.
- Highest **amount of kinetic energy.**



- Gases **are able to flow** – fill containers
- **Can be compressed** as there is **space between particles**

## Solid

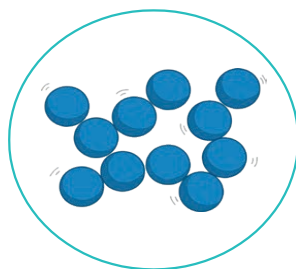
- **Regular pattern** (rows and columns)
- Particles **vibrate** in a **fixed position.**
- Particles have **low amount of kinetic energy.**



- Have a **fixed shape** – cannot flow because of strong forces of attraction between particles
- **Cannot be compressed** – particles close together.

## Liquid

- Particles **randomly** arranged and touching.
- Particles can **move around.**
- **Greater amount of kinetic energy** than solid



- Liquids **able to flow** – take shape of containers.
- **Cannot be compressed** – particles are close together and cannot be pushed closer

## State symbols

- States of matter shown in chemical equations:
- Solid (**s**)
- Liquid (**l**)
- Gas (**g**)
- Aqueous (**aq**)
- **Aqueous solutions** = substance dissolved in water.

## Identifying Physical State of Substances

- If the temperature is **lower** than a substance's melting point – substance is **solid.**
- If the temperature is **between** the melting point and boiling point – substance is **liquid.**
- If the temperature is **higher** than the boiling point – substance is a **gas.**

## Limitations of Particle Model (HT)

- No chemical bonds are shown.
- Particles shown as solid spheres – not the case, particles are mostly empty space like atoms.
- The diagrams don't show any of the forces between particles
- The diagrams are unable to show the movement of the particles.



## Year 10 Term 1 Science/Chemistry C2 – Bonding, structure, and the properties of matter

1. What are the three states of matter?
2. What happens to particles when they are heated?
3. What happens to attractive forces when particles are heated?
4. What does the amount of energy needed to change state depend on?

1. How are gas particles arranged?
2. How do gas particles move?
3. Do particles in a gas have more or less kinetic energy than those in solids and liquids?
4. Can gases be compressed? Why?

1. How are solid particles arranged?
2. Do solid particles move?
3. Do particles in a solid have a high or low amount of kinetic energy?
4. Can solid particles flow?
5. Can solids be compressed?

1. How are liquid particles arranged?
2. Do particles in a liquid move?
3. Do the particles in a liquid have more or less kinetic energy than solids?
4. Can liquid particles flow?
5. Can liquids be compressed?

1. Where are state symbols used?
2. Write the symbols for solid, liquid, gas and aqueous.
3. What does aqueous mean?

1. If the temperature is lower than melting point, the substance is..
2. If the temperature is between melting and boiling point, the substance is..
3. When would a substance be gas?

1. State two limitations of the particle model.



### 1. Global pattern of urban change

The world's population is growing rapidly; currently 50% of us live in urban areas.

Urbanisation	An increasing percentage of a country's population living in towns and cities.
HICs	Very slow rate of urbanisation. Already have high urban populations. Urbanisation happened earlier (during the industrial revolution).
NEEs	Fast rate of urbanisation due to industrialisation. Urban population is increasing rapidly.
LICs	Fast rate of urbanisation. Urban population is low as many still work in farming.

### 2. Factors affecting urbanisation

Rural-Urban migration	The movement of people from a rural area (countryside) to an urban area (towns and cities).
Push factors	Negative factors that make people leave an area e.g. drought, famine, war, few services.
Pull factors	Positive factors that attract people to an area e.g. better access to services, better paid jobs, access to electricity.
Natural Increase	When the birth rate is higher than death rate; the population grows. High in NEE cities as migrants are often young and health care is improving.

### 3. Megacities

Megacity	A city of more than 10 million people living there.
How many?	There are now 34. Rapidly increasing.
Where?	Most are in Africa and Asia.

### 4. Key terms

Social deprivation	The extent an individual or an area lacks services, decent housing, adequate income and employment.
Dereliction	Abandoned buildings and wasteland.
Urban Greening	Process of increasing and preserving open space in urban areas i.e. parks.
Urban sprawl	Unplanned growth of urban areas into surrounding rural areas.
Integrated Transport System	Different forms of transport are linked together to make it easy to transfer from one to another.
Brownfield	Land that has been used, abandoned and now awaits reuse; they are often found in urban areas.
Greenfield	A plot of land, often in rural areas or on the edges of urban areas that has not been built on before.
Commuter settlements	A place where people live but travel elsewhere for work e.g. Yate → Bristol.

### 5. Sustainable urban living

Sustainable urban living	Where people living, now, have the things they need, without reducing the ability of people in future to meet their needs.
Water conservation	Recycling grey water. ½ flush toilets. Rainwater harvesting on roofs. Permeable pavements- filters pollutants.
Energy conservation	Energy efficient appliances. Energy saving (south facing windows). Use of renewable energy sources.
Waste recycling	Recycling boxes in houses. Recycling facilities nearby. Encourage websites like 'Freecycle'.
Creating green space	Maintain green spaces around towns- Cools area, encourage exercise, happy.

### 6. Urban transport strategies used to reduce traffic congestion

Problems with congestion	↗ air pollution (global warming). Late for work, deliveries delayed. ↗ accidents, stress, asthma. In Bristol, 200 people die as a result of air pollution each year.
Beryl Bikes	Shared bikes in Bournemouth + Poole.
Oyster Cards	Quick and easy to pay for more than one type of public transport (London).
Park and ride	Car parks on the outskirts of a town, with buses into the city centre.
Congestion charge	Charge for entering the city centre at peak times.
Bus lanes	Stop buses being held in traffic.



### 1. Global pattern of urban change

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Urbanisation	
HICs	
NEEs	
LICs	

### 2. Factors affecting urbanisation

Rural-Urban migration	
Push factors	
Pull factors	
Natural Increase	

### 3. Megacities

Megacity	
How many?	
Where?	

### 4. Key terms

Social deprivation	
Dereliction	
Urban Greening	
Urban sprawl	
Integrated Transport System	
Brownfield	
Greenfield	
Commuter settlements	

### 5. Sustainable urban living

Sustainable urban living	
Water conservation	
Energy conservation	
Waste recycling	
Creating green space	

### 6. Urban transport strategies used to reduce traffic congestion

Problems with congestion	
Beryl Bikes	
Oyster Cards	
Park and ride	
Congestion charge	
Bus lanes	

**8. Introduction to Nigeria**

Located just north of the equator, in west Africa.

**Importance of Nigeria**

Global importance	<ul style="list-style-type: none"> <li>🌐 NEE in 2014 &gt; 21<sup>st</sup> largest economy.</li> <li>🌐 5<sup>th</sup> largest contributor to UN peace keeping.</li> </ul>
Local importance	<ul style="list-style-type: none"> <li>🌐 Fastest growing economy in Africa.</li> <li>🌐 In 2014 they had the highest GDP.</li> </ul>
<b>Nigeria's context</b>	
Political	🌐 Boko Haram have killed 17,000 people since 2002.
Environment	🌐 Rainforest- south > savanna- north.
Social	<ul style="list-style-type: none"> <li>👤 500 ethnic groups</li> <li>👤 Literacy 61%, life expectancy 52 years</li> </ul>
Cultural	🎬 Nollywood (2 <sup>nd</sup> largest film industry).

**9. Nigeria's changing industrial structure**

Term	Definition
Industrial structure	The relative proportion of the workforce employed in different sectors of the economy (p, s, t, q).
Primary sector	Jobs that extract/collect natural resources. ↓ Decreasing due to mechanisation and industrialisation. This started rural to urban migration.
Secondary sector	Jobs making things. ↑ Increasing (industrialisation).
Tertiary	Jobs that provide a service. ↑ Increasing as people start to have more disposable income.

**How does manufacturing stimulate economic development?**

- Factories provide jobs > people have more disposable income > home market enlarges.
- Companies pay tax > government invests in infrastructure like roads > attracts more companies to invest. **Positive multiplier effect.**

**10. Transnational corporations**

Term	Definition
Transnational Corporation	Companies that operate in more than one country. (40 TNCs in Nigeria)
Host country	Country the TNC places its factories.
Footloose	Industries not tied to a certain location
<b>Shell in Nigeria</b>	
Advantages	+ 65,000 jobs = > disposable income. + 91% contracts to Nigerian companies (reduces economic leakage)
Dis-advantages	- Bodo oil spill 08/09. 11 million gallons of oil spilled over 20km <sup>2</sup> .
Summary	National economic benefits vs local environmental costs in Bodo.

**12. Impacts of economic development**

Impact on the environment	<ul style="list-style-type: none"> <li>🌳 70-80% forests destroyed.</li> <li>🌳 Bodo Oil spill (Shell 08/09).</li> <li>🌳 10,000 illegal industries = air pollution.</li> <li>🌳 Loss of species (giraffes, 500 plants).</li> </ul>
Impact on quality of life	<ul style="list-style-type: none"> <li>👤 ↓ Life expectancy ↑ from 46-52 years</li> <li>👤 ↓ HDI from 0.47 to 0.53.</li> <li>👤 ↓ BUT inequality has widened due to oil wealth and corruption.</li> </ul>

**13. Unilever in Nigeria**

Advantages:	Disadvantages:
Unilever employs around 1500 people in Nigeria	Unilever is a British-Dutch company so some of the profit leaves Nigeria
40% of Unilever's profits go to Nigeria in Tax	Workers in factories earn very low wages and have poor working conditions
Unilever works with local communities to improve education and healthcare	.Manufacturing cause environmental problems such as water and air pollution

**11. Nigeria's changing relationships**

Political relationships	<ul style="list-style-type: none"> <li>- Gained independence (UK in 1960).</li> <li>- Member of British Commonwealth.</li> </ul>
Trading relationships	<ul style="list-style-type: none"> <li>- Member of OPEC (oil).</li> <li>- Member of ECOWAS (Western Africa trading group).</li> <li>- Has strong links with China and USA.</li> </ul>

**International aid in Nigeria**

Term	Definition
International aid	Money, goods and services given to help the QoL of <b>another</b> country.
Emergency aid	Usually follows a natural disaster or war. e.g. Food, water, shelter.
Developmental aid	Long term support by charities or governments to improve QoL. E.g. infrastructure, education, clean water
<b>Aid in Nigeria</b>	
What?	4% of aid given to Africa. UK gave £360 million in 2014.
Nets for life	Nets to prevent malaria. 82,500 given out in Abuja. ✓ Successful as community based.
Problems with aid	<ul style="list-style-type: none"> <li>- Sometimes it isn't sustainable.</li> <li>- Corruption.</li> <li>- Can be tied (strings attached).</li> </ul>

**13. Shell in Nigeria**

Advantages:	Disadvantages:
Employs 65,000 people in Nigeria	260,000 barrels of oil spilled a year in the Niger Delta
Social investment programs (e.g., 10 postgraduate scholarship)	Bodo oil spills in 2008 and 2009, 600,000 barrels of oil spilled
Brought in \$17 billion in taxes	Oil bandits: 4.5 trillion barrels of oil lost

9. Introduction to Nigeria	
<b>Importance of Nigeria</b>	
Global importance	
Local importance	
Political Environment	
Social	
Cultural	

10. Nigeria's changing industrial structure	
Term	Definition
Industrial structure	
Primary sector	
Secondary sector	
Tertiary	
<b>How does manufacturing stimulate economic development?</b>	

10. Transnational corporations	
Term	Definition
Transnational Corporation	
Host country	
Footloose	
<b>Shell in Nigeria</b>	
Advantages	
Dis-advantages	-
Summary	

12. Impacts of economic development	
Impact on the environment	
Impact on quality of life	

13. Unilever in Nigeria	
Advantages:	Disadvantages:

11. Nigeria's changing relationships	
Political relationships	-
Trading relationships	-
International aid in Nigeria	
Term	Definition
International aid	
Emergency aid	
Developmental aid	
<b>Aid in Nigeria</b>	
What?	
Nets for life	
Problems with aid	

13. Shell in Nigeria	
Advantages:	Disadvantages:



What we are learning this term:
1.1 Ideas about the cause of disease and illness 1.2 Approaches to treatment and prevention 1.3 Dealing with the Black Death 1348-49

D.	Dealing with the Black Death
What is the Black Death?	<ul style="list-style-type: none"> <li>Bubonic plague – outbreak in 1348-9 – 1/3<sup>rd</sup> to 1/2 of the population died in England. Caused by bacteria <i>Yersinia pestis</i> that was thought to have originated in China and came to Britain on fleas, on rats on ships.</li> </ul>
Causes	Miasma – bad air from the filthy conditions making you ill. Astrology – there was a weird alignment of Jupiter, mars and Saturn the previous year which was blamed for the plague Punishment from God- = People thought that society had become wicked so God had sent the plague to punish them.
Treatments	Confesses sins and pray, bleeding and purging (but seemed to make worse), sweet herbs or fire to clean air.
Prevention	Pray and fast, leave the area, carry sweet herbs, quarantine (new people stay away for 40 days), clean streets (or don't, maybe bad smell will drive out miasma)

A.	Can you define these key words?
Miasma	Bad air that was believed to be filled with harmful fumes.
Quarantine	Separating the sick from the healthy to stop the spread of a disease.
Humours	The humours were four fluids that were thought to spread throughout the body and influence its health.
Purging	To get rid of anything unwanted.
Phlebotomy	The drawing of blood by opening a vein.
Leprosy	a painful skin disease
Prevention	To stop something from happening
Treatment	giving medicine or using other means to help a person get better when sick or hurt
Apothecary	A person who mixes herbal remedies and treated patients as an alternative to a doctor as they were cheaper.
Barber surgeon	barbers and surgeons who also performed minor operations such as removal of warts .

C. Key People			
Hippocrates	Galen	Physicians, apothecaries and surgeons	Hospitals
'Father of Medicine' – 4 humours, clinical observation (watch and record details, use this to help with future cases), importance of exercise, Hippocratic Oath for doctors (to preserve life)	Built on Hippocrates' ideas – theory of opposites (if cold, give something hot), also dissected animals to find out about anatomy (structure of body). Proved brain, not the heart, controls the body	<ul style="list-style-type: none"> <li><b>Physicians</b> – diagnosed + recommended treatment, trained at university for around 7 years. Did not get to see dissections so new little about body. Learned everything from Galen's books. Only for super rich</li> <li><b>Apothecaries</b> – mixed herbal remedies (joined a guild, worked for master to train).</li> <li><b>Surgeons</b> – least qualified, also cut hair. Learned on job and only performed minor, on-invasive surgeries</li> <li><b>Monks and nuns</b> – worked in hospitals mostly prayed for patients and gave comfort. Not allowed to cut or bleed patients so could not do surgery</li> <li><b>Housewives and mothers</b> – treated most people. Mixed herbal remedies and treated minor wounds</li> </ul>	<ul style="list-style-type: none"> <li>Ran by monks and nuns</li> <li>Offered patients shelter, beds, food and very limited treatment.</li> <li>Treatments mostly religious based – praying</li> <li>Patients would offer share beds which led to all of diseases spreading around the hospitals</li> </ul>

B. What were the causes of disease in Medieval England?		
Causes	Prevention	Treatments
<b>Religious – Punishment from God</b> God has sent an illness as punishment for sins. Especially true at times of panic such as the Black Death.	<b>Religious - Church</b> – Lead a life free of sin. Regular prayers and confessions. Offering tithes to the church to make sure sins were forgiven quickly.	<b>Religious – Healing prayers and incantations</b> Paying for a special mass to be said Fasting Pilgrimages
<b>Rational - Miasma</b> – You had breathed in bad air. This was thought to come from swamps or rubbish. During this period there was a lot of animal manure in towns and often open sewers in the streets meaning the whole place stank. In these filthy places disease was more common seemingly proving this theory	<b>Rational and religious - Regimen Sanitatis</b> – A set of instructions provided by physicians to maintain good health. Bathing was also used to prevent miasma.	<b>Supernatural - Astrology</b> – Treatments varied according to the horoscope of the patient. The alignment of the planets was checked at every stage of the treatment prescribed eg herb gathering.
<b>Rational - The Theory of the Four Humors</b> – The 4 liquids in your body (blood, yellow bile, black bile, phlegm) were seen to be out of balance making you ill. Recovery came from getting them back in to balance through the theory of opposites Created in ancient Greece by Hippocrates.	<b>Rational - Diet</b> – Eating too much was strongly discouraged. What and when you ate were considered to be important in preventing a humoral imbalance.	<b>Rational - Humoral Treatments</b> – Blood letting – Bad humours could be removed from the body by removing some of the blood. Purging – Purging the digestive system to remove any leftover food. Eg using a laxative.
<b>Supernatural - Astrology</b> – Impact of the stars and planets on health. Physicians would use star charts to examine a patient and work out what was wrong with them.	<b>Rational - Purifying the air</b> – This was achieved by spreading sweet herbs.	<b>Rational - Herbal remedies</b> – Using herbal infusions to drink, sniff or bathe in.



# Year 10 Spanish Knowledge Organiser Term 1



## Mis Pasatiempos

This is all of the vocabulary that you will learn / come across in Term 1. Use this knowledge organiser to revise / go over vocabulary. These words have been added in by the exam board (Edexcel) so the more you learn, the better your grade!

Spare copies of this kept in class. Just ask your teacher if you need one.

### Techniques for learning vocab:

- Look / cover / write / check – ask your teacher for a sheet and to show you how.
- Mind maps
- Post it notes / flash cards
- Record yourself saying them
- Get a family member to quiz you – they say the English, you say the Spanish
- Write the word in a sentence – put it into context





# Year 10 Spanish Knowledge Organiser Term 1



• andar *	to walk almost
• casi *	to buy
• comprar	to see, watch
• ver	to touch; play (instrument)
• tocar	to paint
• pintar	to ride
• montar	to read
• leer	to play
• jugar (a)	to speak
• hablar	to listen
• escuchar	to write
• escribir	to rest
• descansar	to run
• correr	to cook
• cocinar	• bicicleta (f) bicycle
• bicicleta (f)	• cine (m) cinema
• cine (m)	• fin de semana (m) weekend
• fin de semana (m)	• instrumento (m) instrument
• instrumento (m)	• pasatiempo (m) leisure activity, hobby
• pasatiempo (m)	• película (f) film
• película (f)	• ropa (f) clothes
• ropa (f)	• a menudo often
• a menudo	• a veces sometimes
• a veces	• generalmente generally
• generalmente	• mientras que whilst
• mientras que	• siempre always
• siempre	

• crear*	to create
• gritar*	to shout
• saltar*	to jump
• abrir	to open
• bajar	to download
• bailar	to dance
• caer(se)	to fall
• caminar	to walk
• cantar	to sing
• entrar	to enter, go in
• enviar	to send
• mirar	to look, watch
• oír	to hear
• segu	to follow
• ver	to see, watch
• hay	there is /are
• se puede(n) ver	one can see
• chico/a (m/f)	boy / girl
• joven	young person
• en primer plano	in the foreground
• al fondo	in the background
• a la derecha	on the right
• a la izquierda	on the left

• coger	to take, catch
• ir de compras	to go shopping
• me/te/le gustaría	I, you, she, he would like
• quedar, quedarse	to meet up; to stay
• querer	to want, love
• tener, tener que	to have; to have to
• venir	to come
• lunes (m)	monday
• martes (m)	tuesday
• miércoles (m)	wednesday
• jueves (m)	thursday
• viernes (m)	friday
• sábado (m)	saturday
• domingo (m)	sunday
• centro comercial (m)	shopping centre
• hora (f)	hour
• claro	of course
• vale	ok, ok?
• ¿cómo?	how?
• ¿cuándo?	when?
• ¿dónde?	where?
• ¿quién (es)?	Who (is)?
• ¿qué?	what?
• y / menos cuarto	quarter past / to
• y media	half past
• en punto	o'clock

• empezar *	to begin, start
• ir (FT); irse (de)*	to go (FT); to leave*
• tardar *	to delay, to take long
• alegría(f)*	joy, happiness
• contrario*	contrary, opposite
• decepcionante*	disappointing
• lleno*	full, filled
• después, después de *	afterwards; after (+ing)
• primero*	firstly
• alegría (f)	start, beginning
• final (m)	end, ending, final
• comenzar	to start, begin
• llegar	to arrive
• fui	I went, was
• fuiste	you (sing) went; were
• fue	she, he, it, went; were
• fuimos	we went; were
• fuisteis	you (pl) went; were
• fueron	they went; were
• molestar	to annoy
• pensar	to think
• primero	first
• terrible	terrible
• aburrido	boring
• entonces	then, so
• luego	later
• ayer	yesterday

• cadena (f)*	chain, channel
• comedia (f)*	comedy
• drama (m)*	drama
• temporada (f)*	season (tv, series, food)
• cobrar*	to charge (money)
• parar(se); parar (+inf)*	to stop
• canal (m)	channel, canal
• ciencia ficción (f)	science fiction
• cine (m)	cinema
• dibujo (m)	drawing
• miedo (m)	fear
• moda (f); de moda	fashion; fashionable
• noticias (f pl)	news
• policía (mf)	police, police officer
• película (f)	film
• programa (m)	show (tv radio), programme (plan)
• público (m)	public, audience
• realidad (f)	reality
• serie (f)	series
• tele (vision) (f)	tv
• terror (m)	terror, horror
• entrada (f)	entrance, admission ticket
• cómodo	comfortable
• musical	musical
• pagar	to pay
• sentar(se)	to sit down

• colección (f) *	collection
• Soler *	to usually do
• Económico *	cheap
• Aunque *	Although
• dado (ques) *	Given (that)
• (a) mí *	(to) me (emphasis)
• (a) tí *	(to) you (emphasis)
• compra(s) (f)	shopping, purchase
• dinero (m)	money
• zapatillas de deporte (fpl)	trainers
• aprender	to learn   learning
• caminar	to walk   walking
• comprar	to buy   buying
• creer	to think, believe
• dar	to give   giving
• encantar	to love   loving
• gustar	to like, be pleasing to
• odiar	to hate   hating
• pasear	to go for a walk, ride
• practicar	to practise

• deportivo (adj)	sports
• atletismo (m)	athletics
• baloncesto (m)	basketball
• ciclismo (m)	cycling
• competición (f)	competition, contest
• discapacidad (f)	disability, disabled
• equipo (m)	team
• gimnasio (m)	gym
• fútbol (m)	football
• juego (m)	game
• jugador (m), jugadora (f)	player
• lucha (f)	fight
• natación (f)	swimming
• pasión (f)	passion
• piscina (f)	swimming pool
• playa (f)	beach
• silla de ruedas (f)	wheelchair
• tenis (m)	tennis
• voleibol (m)	volleyball
• hacer	to do
• ganar	to win, to earn
• emocionate	exciting, moving
• gran	big, great (m, f) (pre-noun)
• guay	cool
• a pesar de	despite, in spite of

• (no) ni... (ni)...*	nor, neither, or (after a negative verb)
• (no) tampoco*	neither, nor, either
• casi*	almost, nearly
• andar *	to walk
• tener, tener que	to have, to have to
• tener ganas de	to look forward to, to be keen
• salir	to leave, to go out, to depart
• querer	to want, love
• poder	to be able to, can
• actividad (f)	activity
• aficionado (m), -a (f)	fan
• Entrada (f)	entry ticket, entry
• equipo (m)	team, equipment
• plan (m)	plan
• revista (f)	magazine
• aburrido	bored, boring
• cansado	tired, tiring
• desafortunadamente	unfortunately
• nunca, (no) nunca	never
• ninguno	no, not... any (m)
• ya no	no longer, no more
• nada, (no) nada	nothing, anything (after negative verb)

• auriculares (m pl) *	headphones, earbuds
• búsqueda (f) *	search
• colgar *	to post (online), hang up
• conectarse (a internet)*	to connect (online)
• grabar*	to record, film
• molestar*	to annoy
• aplicación (f)	application, app
• cámara (f)	camera
• internet(m)	internet
• mensaje (m)	message
• móvil (m)	mobile
• ordenador (portátil) (m)	(laptop) computer
• página (f)	page
• publicación (f)	post, publication
• red (f)	network, net
• reloj (m)	watch
• tableta (f)	tablet
• tecnología (f)	technology
• video (m)	video
• web (f)	internet, web
• apagar	to turn off, shut down
• bajar	to download, to get off
• cargar	to charge
• subir	to upload, to turn up, to get on (transport)

• escenario (m) *	stage
• estrella (f) *	star
• orquesta(f) *	orchestra, dance band
• sonido (m) *	sound
• artista (m f)	artist
• baile (m)	dance
• banda (f)	band
• canción (f)	song
• cantante (m f)	singer
• concierto (m)	concert
• espectáculo (m)	show (e.g. theatre)
• evento (m)	event
• grupo (m)	group, band
• instrumento (m)	instrument
• letra (f)	letter, lyrics
• música (f)	music
• pop (m), música pop (f)	pop music
• radio (f)	radio
• ritmo (m)	rhythm
• rock (m)	rock music
• actuar	to act, perform
• disfrutar	to enjoy
• divertise	to enjoy oneself
• alto	tall, high, loud
• internacional	international

• lo bueno/ malo *	the good / bad thing
• lo mejor / peor *	the best / worst thing
• además *	also, besides, as well
• beneficio (m) *	benefit, profit
• comportamiento (m) *	behaviour
• debate (m) *	debate
• acabar; acabar de (+ inf.) *	to finish; have just + pp
• aprovechar *	to take advantage of, to make the most of
• atraer *	to attract
• atreverse *	to dare
• comunicar, comunicarse *	to communicate
• criticar	to criticise
• empezar *	to begin, start
• sufrir *	to suffer, be in pain
• tratar(se); tartar de + inf. *	to treat, be about
• blog (m)	blog
• comentario (m)	comment
• cuenta (f)	bill, account
• identidad (f)	identity
• respeto (m)	respect
• seguridad (f)	security, safety
• ayudar	to help
• dejar, dejar de + inf.	to leave, allow; to stop + verb (-ing)
• proteger	to protect
• sin embargo	however

• premio (m) *	prize, reward
• apoyar *	to support
• conseguir *	to acquire, obtain, get
• crecer *	to grow up
• mantener, mantenerse *	to maintain, keep, stay
• nacer *	to be born
• seguir; seguir * present participle *	to follow, continue, to still be +ing
• conocido *	known, well-known
• el mejor, la mejor, los mejores, las mejores *	the best (m, f, mpl, fpl)
• optimista *	optimistic
• aficionado, -a (m, f)	fan
• comunidad (f)	community
• joven (n)	young person
• modelo de conducta (m, f)	role model
• mundo (m)	world
• voz (f)	voice
• Resultado (m)	Result, outcome
• el cual, la cual, los cuales, las cuales	that, which, who
• el que, la que, los que, las que	that, which, who
• conocer, conocerse	to know, meet
• ganar	to win, earn
• participar	to participate
• recibir	to receive, welcome
• reconocer	to recognise, admit
• traer	to bring

# Year 10 Spanish Knowledge Organiser Term 1

- andar \*
- casi \*
- comprar
- ver
- tocar
- pintar
- montar
- leer
- jugar (a)
- hablar
- escuchar
- escribir
- descansar
- correr
- cocinar
- bicicleta (f)
- cine (m)
- fin de semana (m)
- instrumento (m)
- pasatiempo (m)
- película (f)
- ropa (f)
- a menudo
- a veces
- generalmente
- mientras que
- siempre

- crear\*
- gritar\*
- saltar\*
- abrir
- bajar
- bailar
- caer(se)
- caminar
- cantar
- entrar
- enviar
- mirar
- oír
- segu
- ver
- hay
- se puede(n) ver
- chico/a (m/f)
- joven
- en primer plano
- al fondo
- a la derecha
- a la izquierda

- coger
- ir de compras
- me/te/le gustaría
- quedar, quedarse
- querer
- tener; tener que
- venir
- lunes (m)
- martes (m)
- miércoles (m)
- jueves (m)
- viernes (m)
- sábado (m)
- domingo (m)
- centro comercial (m)
- hora (f)
- claro
- vale
- ¿cómo?
- ¿cuándo?
- ¿dónde?
- ¿quién (es)?
- ¿qué?
- y / menos cuarto
- y media
- en punto

- empezar \*
- ir (FT); irse (de)\*
- tardar \*
- alegría(f)\*
- contrario\*
- decepcionante\*
- lleno\*
- después, después de \*
- primero\*
- alegría (f)
- final (m)
- comenzar
- llegar
- fui
- fuiste
- fue
- fuimos
- fuisteis
- fueron
- molestar
- pensar
- primero
- terrible
- aburrido
- entonces
- luego
- ayer

- cadena (f)\*
- comedia (f)\*
- drama (m)\*
- temporada (f)\*
- cobrar\*
- parar(se); parar (+inf)\*
- canal (m)
- ciencia ficción (f)
- cine (m)
- dibujo (m)
- miedo (m)
- moda (f); de moda
- noticias (f pl)
- policía (mf)
- película (f)
- programa (m)
- público (m)
- realidad (f)
- serie (f)
- tele (vision) (f)
- terror (m)
- entrada (f)
- cómodo
- musical
- pagar
- sentar(se)

- colección (f) \*
- Soler \*
- Económico \*
- Aunque \*
- dado (que) \*
- (a) mí \*
- (a) tí \*
- compra(s) (f)
- dinero (m)
- zapatillas de deporte (fpl)
- aprender
- caminar
- comprar
- crear
- dar
- encantar
- gustar
- odiar
- pasear
- practicar

- deportivo (adj)
- atletismo (m)
- baloncesto (m)
- ciclismo (m)
- competición (f)
- discapacidad (f)
- equipo (m)
- gimnasio (m)
- fútbol (m)
- juego (m)
- jugador (m), jugadora (f)
- lucha (f)
- natación (f)
- pasión (f)
- piscina (f)
- playa (f)
- silla de ruedas (f)
- tenis (m)
- vóleibol (m)
- hacer
- ganar
- emocionate
- gran
- guay
- a pesar de

- (no) ni... (ni)...\*
- (no) tampoco\*
- casi\*
- andar \*
- tener, tener que
- tener ganas de
- salir
- querer
- poder
- actividad (f)
- aficionado (m), -a (f)
- Entrada (f)
- equipo (m)
- plan (m)
- revista (f)
- aburrido
- cansado
- desafortunadamente
- nunca, (no) nunca
- ninguno
- ya no
- nada, (no) nada

- auriculares (m pl) \*
- búsqueda (f) \*
- colgar \*
- conectarse (a internet)\*
- grabar\*
- molestar\*
- aplicación (f)
- cámara (f)
- internet(m)
- mensaje (m)
- móvil (m)
- odenador (portátil) (m)
- página (f)
- publicación (f)
- red (f)
- reloj (m)
- tableta (f)
- tecnología (f)
- video (m)
- web (f)
- apagar
- bajar
- cargar
- subir

- escenario (m) \*
- estrella (f) \*
- orquesta(f) \*
- sonido (m) \*
- artista (m f)
- baile (m)
- banda (f)
- canción (f)
- cantante (m f)
- concierto (m)
- espectáculo (m)
- evento (m)
- grupo (m)
- instrumento (m)
- letra (f)
- música (f)
- pop (m), música pop (f)
- radio (f)
- ritmo (m)
- rock (m)
- actuar
- disfrutar
- divertirse
- alto
- internacional





- lo bueno/ malo \*
- lo mejor / peor \*
- además \*
- beneficio (m) \*
- comportamiento (m) \*
- debate (m) \*
- acabar; acabar de (+ inf.) \*
- aprovechar \*
- atraer \*
- atreverse \*
- comunicarse, comunicarse
- criticar
- empezar \*
- sufrir \*
- tratar(se); tartar de + inf. \*
- blog (m)
- comentario (m)
- cuenta (f)
- identidad (f)
- respeto (m)
- seguridad (f)
- ayudar
- dejar, dejar de + inf.
- proteger
- sin embargo

- premio (m) \*
- apoyar \*
- conseguir \*
- crecer \*
- mantener, mantenerse \*
- nacer \*
- seguir; seguir \* present participle \*
- conocido \*
- el mejor, la mejor, los mejores, las mejores \*
- optimista \*
- aficionado, -a (m, f)
- comunidad (f)
- joven (n)
- modelo de conducta (m, f)
- mundo (m)
- voz (f)
- Resultado (m)
- el cual, la cual, los cuales, las cuales
- el que, la que, los que, las que
- conocer, conocerse
- ganar
- participar
- recibir
- reconocer
- traer

# Year 10 Computer Science – Term 1 Answers

A.	Terms
<b>Abstraction</b>	The process of removing all unnecessary details from a problem.
<b>Algorithm</b>	The sequence of steps required to carry out a specific task.
<b>Assignment</b>	Setting the value of a variable in a computer program.
<b>Data</b>	Units of information which are acted upon by instructions.
<b>Decomposition</b>	Breaking down a problem into smaller steps that are easier to work with and solve.
<b>Flowchart</b>	A diagram which shows the step-by-step flow of an algorithm.
<b>Input</b>	Data which is inserted into a system to be processed or stored.
<b>Output</b>	Data which is sent out of a system.
<b>Process</b>	An action taken by the program without input from the user.
<b>Pseudocode</b>	A method of writing an algorithm using plain English.
<b>Variable</b>	A memory location within a computer where values are stored.

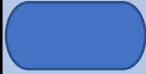



What we are learning this term:		
A. Terms B. Common Algorithms C. Flowcharts D. Data Types		
B.	Common Algorithms	Worked Example
<b>Binary Search</b>	Compares the search object to the middle point of a sorted list. If they are not equal, the half in which the target cannot lie is eliminated and the search continues on the remaining half, again taking the middle point to compare to the search object, and repeating this until the target value is found or the end is reached.	2,5,6 searching for 6 Midpoint 5 5 < 6, remove left side of list 2,5,6 Midpoint 6 6 == 6 Item found
<b>Bubble Sort</b>	Sorts a list by continuously stepping through a list, swapping items until they appear in the correct order.	5, 1, 3 1, 3, 5 1, 3, 5 1st pass complete 1, 3, 5 1, 3, 5 2nd pass complete - sorted
<b>Linear Search</b>	Compares the search object with each item in the list in order from the beginning until it is found or the end is reached.	2,6,5 searching for 6 2 != 6 2,6,5 6==6 Item found
<b>Merge Sort</b>	Sorts a list by repeatedly dividing a list into two until all the elements are separated individually. Pairs of elements are then compared, placed into order and combined. The process is then repeated until the list is recompiled in the correct order as a whole.	5, 1, 3 5, 1 3 Break list into sublists 5 1 3 Until sublists contain 1 # 1, 5 3 Merge pairs 1, 3, 5 Until all sublists merged

C.	Flowchart Symbol		
	Symbol	Usage	Symbol Name
		The start or end of the algorithm.	Terminator
		An action which occurs during the algorithm.	Process
		Data is either inputted to or outputted from the algorithm.	Input/ Output
		A Yes/No, True/False decision.	Decision
D.	Data Types		Example
	<b>Boolean</b>	TRUE/FALSE or 1/0	<b>TRUE or 1</b>
	<b>Character</b>	A single, alphanumeric character.	<b>1 or A or !</b>
	<b>Integer</b>	Whole numbers	<b>15</b>
	<b>String</b>	One or more alphanumeric characters.	<b>1A!</b>
	<b>Real/Float</b>	Decimal numbers	<b>15.5</b>

# Year 10 Computer Science – Term 1

A.	Terms
Abstraction	
Algorithm	
Assignment	
Data	
Decomposition	
Flowchart	
Input	
Output	
Process	
Pseudocode	
Variable	

What we are learning this term:		
B.	Common Algorithms	Worked Example
A. Terms B. Common Algorithms C. Flowcharts D. Data Types		
Binary Search		2,5,6 searching for 6
Bubble Sort		5,1,3
Linear Search		2,6,5 searching for 6
Merge Sort		5,1,3

C. Flowchart Symbol		
Symbol	Usage	Symbol Name
		
		
		
		
D.	Data Types	Example
Boolean		
Character		
Integer		
String		
Real/Float		



# GCSE Business. Paper 1 1. Enterprise and Entrepreneurship



## 1. The Dynamic Nature of Business

Term	Definition
Dynamic Nature of Business	The idea that Business is ever-changing because external factors such as technology and legislation are always changing.
Venture Capital	Capital provided by an investor willing to take a risk in return for profit in the future

## 2. Why start a Business?

Starting a Business	Explanation
Why?	<ul style="list-style-type: none"> <li>A desire to succeed</li> <li>Financial Reward</li> <li>Independence and a desire to be your own boss</li> </ul>
Who?	<p>A successful start-up requires a huge list of qualities and skills, especially if starting up on your own.</p> <p>Among these are:</p> <p><b>Personal Qualities:</b> Determination, resilience, enthusiasm, hard-working, decisive and willing to take risks</p> <p><b>Skills:</b> Can listen as well as speak, can plan and organise, can influence and manage others.</p> <p><b>Resources:</b> Can find help when needed, may have unique skills.</p>
How?	When people need to raise capital to help them start a business, they write a business plan. This sets out the aims, objectives, the strategies to be used, the financial forecasts and requirements.

## 3. Why new business ideas come about:

Why?	Explanation
Changes in what consumers want	Consumers desires and tastes change all the time. These changes create markets for entrepreneurs to invest in.
Products and services becoming obsolete	Products can become obsolete due to changes in technology and consumer wants.
Changes in Technology	Changes in technology can lead to improvements in existing products, the creation of new ones and help in making business more efficient.
Key Terms and Definitions	
<b>Demand</b>	The number of units that customers want and can afford to buy
<b>Entrepreneurs</b>	Businesspeople who see opportunities and are willing to take risks in making them happen.
<b>Obsolete</b>	A product or a service with sales that have declined or come to an end as customers find something new.

## 4. How new business ideas come about:

Term	Definition
<b>Adapting existing products</b>	Developing new products based on existing products.
<b>Competitive Advantage</b>	A feature of business that helps it to succeed against rivals.
<b>Original Ideas</b>	Ideas that have not been done before.

## 4. Risks and Rewards of starting a new Business

Risks	Rewards
<b>Business Failure</b> 50% of new Businesses fail within the first five years. One of the biggest risks of starting a new business is that may not be viable.	<b>Success</b> Success and a sense of achievement are an integral part of business. When a business is successful this comes with a huge sense of pride and satisfaction for the entrepreneur
<b>Financial Loss</b> If a business gets into financial trouble this can lead to bankruptcy and considerable debts that cannot be repaid.	<b>Profit and Wealth</b> If the business is successful it can generate huge returns. Income and wealth are a huge motivator for a potential entrepreneur.
<b>Lack of Security</b> When starting a new business there are many uncertainties. Will the Business be successful? Will the Business provide a income? The lack of certainty and financial security is a major risk when starting a business.	<b>Independence</b> By becoming independent, entrepreneurs make their own decisions and if necessary, their own compromises. Being your own boss and making decisions without external influence can be a powerful motivator when starting your own business.

## 5. Risk and Rewards of Business

Term	Definition
Business Failure	The collapse of a business, probably leading to its closure.
Independence	The need by many business owners to make their own decisions and be their own boss.
Lack of Financial Security	Uncertainty for the business owner about day to day family income and assets
Risk and Reward	The balance between the worst that can happen and the best that can happen

## 6. The Role of Business Enterprise - Definitions

Term	Definition
Customer Needs	The products or services people need in order to live.
Customer Wants	The products or services people need in order to make life more comfortable.
Goods	Products that may be fresh, such as apples, or manufactured, such as Heinz baked beans. Items you can actually touch.
Services	Providing useful ways to help people with their lives, for examples mechanics, hairdressers and hospitals. Intangible products.

## 7. Adding Value

Term	Definition
Branding	Giving a product or service 'personality' with a name and logo that makes it stand out.
Unique Selling Point	An original feature of a product that rivals aren't offering.
Value Added	The difference between the selling price and the cost of bought in goods and services (the difference that creates the possibility of profit).

## 8. Role of Entrepreneurship

Qualities needed	Explanation
Ability to take risks	Entrepreneurs are willing to take risks and seize new opportunities
Making decisions	Making the right decisions given the information is available is crucial to the success of any entrepreneur
Showing Leadership	Leadership is crucial displaying qualities such as decisiveness, initiative and the ability to think ahead
Organising Resources	Being able to organise resources such as human, physical or daily resources are crucial to the smooth running of any start-up



1. The Dynamic Nature of Business	
Term	Definition
Dynamic Nature of Business	
Venture	
Capital	

2. Why start a Business?	
Starting a Business	Explanation
Why?	
Who?	
How?	

3. Why new business ideas come about:	
Why?	Explanation
Changes in what consumers want	
Products and services becoming obsolete	
Changes in Technology	
Key Terms and Definitions	
Demand	
Entrepreneurs	
Obsolete	

4. How new business ideas come about:	
Term	Definition
Adapting existing products	
Competitive Advantage	
Original Ideas	

4. Risks and Rewards of starting a new Business	
Risks	Rewards
Business Failure	Success
Financial Loss	Profit and Wealth
Lack of Security	Independence

6. The Role of Business Enterprise - Definitions	
Term	Definition
Customer Needs	
Customer Wants	
Goods	
Services	

5. Risk and Rewards of Business	
Term	Definition
Business Failure	
Independence	
Lack of Financial Security	
Risk and Reward	

7. Adding Value	
Term	Definition
Branding	
Unique Selling Point	
Value Added	

8. Role of Entrepreneurship	
Qualities needed	Explanation
Ability to take risks	
Making decisions	
Showing Leadership	
Organising Resources	



**What we are learning this term:**

A. *How sport is covered across the media*

A. *Examples of how sport is broadcast across different media platforms*



**Main assessment objectives**

**Learning outcome: Know how sport is covered across the media**

C. **What are the different forms of social media?**

Facebook, Twitter, Snapchat and Instagram



A.	Key question from Assessment objectives?	Key definition
1.	Terrestrial TV	Free to air TV
2.	Satellite TV	Requires a monthly payment to watch
3.	Fanzines	Magazines written and published by fans
4.	Blog	An informal or discussion posted online
5.	Podcasts	A digital audio file available online for downloading
6.	P2P Sharing	The distribution and sharing of digital media
7.	Pay-per-view	One off paid for TV events
8.	Fan sites	Websites produced by sports fans

**What sports are shown on Pay-per-view channels?**

- Boxing
- UFC
- WWE



**What satellite channels show sport?**

- Sky
- BT
- Virgin



A. **What is the difference between terrestrial, satellite and pay-per-view TV?**

Terrestrial- This TV is free to air, and you must only pay your TV licence to watch this

Satellite- This type of TV requires a monthly subscription to watch

This type of TV requires a one off payment to watch a live event



A. **What is the difference between a tabloid and broadsheet newspapers?**

Tabloid- A paper that focus on celebrity gossip and news about famous people

Broadsheet- A paper that focus on more serious news such as politics and finance



G. **What sport information are radios likely to broadcast?**

**National radio (4)**

- Premier league
- FIFA World cup
- Wimbledon
- Cricket World cup

Examples of national radio

- Radio 1
- Radio 2
- Capital
- XFM



**Local radio (4)**

- STFC results
- Local rugby results
- Southern League
- Bristol football results

Examples of local radio

- BBC Wiltshire
- BBC Berkshire
- Heart Wiltshire
- STFC Radio



Key information	
Newspapers	The Sun The daily Mail The Guardian The Daily express
Satellite	BT Sky Virgin
Books	Autobiographies Tactics/Plays Sport history
Fanzines	Red issue- Man Utd The Gooner- Arsenal
Blogs	F1 Fanatic Caughtoffside The5runner
Video-sharing sites	Vimeo Twitch Dailymotion
Live streams	Youtube Facebook Instagram
Magazines	Total carp Runners world Cycling Plus
Terrestrial	BBC ITV Channel 4
Pay-per-view	ITV Box Office Sky Box Office
Dedicates sports radio	Talk sport Radio 5 live
Fan sites	Over the bar

A. **What sports are predominantly shown on TV?**

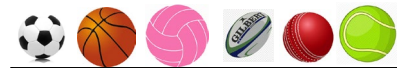
BBC- Wimbledon/Olympics/Snooker/International football

ITV- International football/Darts/Horse racing

Sky- Premier league football/Cricket/Golf

BT- Champions league football/NBA





**What we are learning this term:**

A. *How sport is covered across the media*

A. *Examples of how sport is broadcast across different media platforms*

**Main assessment objectives**

Learning outcome: Know how sport is covered across the media

C. **What are the different forms of social media?**

<b>What sports are shown on Pay-per-view channels?</b>	<b>What satellite channels show sport?</b>

A. **Key question from Assessment objectives?**

Key word	Key definition
1. Terrestrial TV	
2. Satellite TV	
3. Fanzines	
4. Blog	
5. Podcasts	
6. P2P Sharing	
7. Pay-per-view	
8. Fan sites	

A. **What is the difference between terrestrial, satellite and pay-per-view TV?**

G. **What sport information are radios likely to broadcast?**

National radio (4)

Local radio (4)

A. **What is the difference between a tabloid and broadsheet newspapers?**

A. **What sports are predominantly shown on TV?**

**Key information**

Newspapers	
Satellite	
Books	
Fanzines	
Blogs	
Video-sharing sites	
Live streams	
Magazines	
Terrestrial	
Pay-per-view	
Dedicates sports radio	
Fan sites	





# Year 10 Food & Nutrition Term 1



## What we are learning this term:

A. Proteins    B. Carbohydrates    C. Fibre & Water    D. Fats    E. Minerals    F. Vitamins

A. Proteins – contain amino acids	
	Used for growth, repair and maintenance of the body.
Source 	Seeds, meat, fish, dairy, nuts and beans. <b>Alternative:</b> soya, mycoprotein, TVP & tofu.
Excess 	Strain on liver and kidneys. These organs process the proteins consumed.
Deficiency 	Slows growth, weak immune system, oedema, kwashiorkor, poor hair /skin / nails.
High Biological Value Proteins 	<b>These contain ALL the essential amino acids.</b> These come from mainly animals sources (as well as soya and quinoa).
Low Biological Value Proteins 	<b>These are missing <u>one or more</u> of the essential amino acids.</b> These come from plant sources.
<b>Protein Completion:</b> when you combine LBV proteins to get all the essential amino acids.	

B. Carbohydrates – used for energy	
	<b>Sugars</b> – digested quickly & energy released quickly. Monosaccharides or Disaccharides
Source 	Fruit or added to food.
	<b>Starch</b> – digested slowly & slow released of energy. Polysaccharides.
Source 	Potatoes, cereals. Have a lot of nutrients & fibre.
Excess 	Gets converted into fat (may lead to obesity), tooth decay, type 2 diabetes.
Deficiency 	Low blood sugar (hunger, dizziness, tiredness), body starts to use up fat & protein (weight & muscle loss).
<b>Glycaemic Index (GI):</b> show how quickly carbohydrates affect blood sugar levels.	

D. Fats	
	Needed for energy, vitamins, insulation (warmth) and protecting your bones & organs, making cholesterol.
<b>Saturated Fats</b>	<b>Unsaturated Fats</b>
Usually come from animal sources	Mostly from vegetable sources.
Excess 	Obesity, Type 2 Diabetes, higher Cholesterol (increased risk Coronary Heart Disease).
Deficiency 	Vitamin deficiency, weight loss, less insulation / bone & organ protection.

E. Minerals	
<b>Calcium</b>	Strong bones & teeth, healthy nerves & muscles, blood clotting
<b>Iron</b>	Forms part of haemoglobin in red blood cells
<b>Sodium</b>	Controls body's water content, helps nerves / muscle function
<b>Phosphorus</b>	Healthy bones & teeth
<b>Fluoride</b>	Helps strengthen teeth & prevent tooth decay
<b>Iodine</b>	Helps make some hormones

F. Vitamins	
	Micronutrients which help the body to function.
Fat Soluble Vitamins	
Found in fatty food. Stored in fat tissue if not used up.	
<b>A</b>	For good eyesight, healthy immune system / skin
<b>D</b>	Helps absorb minerals (especially calcium)
<b>E</b>	For healthy skin, eyes & immune system
<b>K</b>	Helps heal wounds, keeps immune system / bones healthy

Water Soluble Vitamins	
Vitamins that dissolve in water & lost through urine – need to take daily! They are also lost when fruit and vegetables are exposed to air.	
<b>B</b>	Keep the nervous system healthy
<b>B1, B2 &amp; B3</b>	Help with energy release
<b>B9 &amp; B12</b>	Help make red bloody cells.
<b>C</b>	Protects body from infection, heals wounds
Antioxidants	
Vitamins A, C & E are antioxidants which may protect cells from <b>free radicals</b> - chemicals you encounter every day.	

C. Fibre & Water	
Fibre	Water
<ul style="list-style-type: none"> <li>Helps with digestion</li> <li>Prevents constipation</li> <li>Found in fruit, pulses, nuts, veg, wholegrain foods</li> </ul>	<ul style="list-style-type: none"> <li>Helps get rid of waste &amp; digest food</li> <li>Controls body temperature</li> <li>6-8 glasses of water a day</li> <li>More during a hot day or exercising</li> </ul>



# Year 10 Food & Nutrition Term 1



## What we are learning this term:

A. Proteins    B. Carbohydrates    C. Fibre & Water    D. Fats    E. Minerals    F. Vitamins

A. Proteins – contain amino acids	
Source	
Excess	
Deficiency	
High Biological Value Proteins	
Low Biological Value Proteins	
Protein Completion:	

B. Carbohydrates – used for energy	
	Sugars
Source	
	Starch
Source	
Excess	
Deficiency	
Glycaemic Index (GI):	

D. Fats	
Saturated Fats	Unsaturated Fats
Excess	
Deficiency	

E. Minerals	
Calcium	
Iron	
Sodium	
Phosphorus	
Fluoride	
Iodine	

F. Vitamins	
Fat Soluble Vitamins	
A	
D	
E	
K	
Water Soluble Vitamins	
B	
B1, B2 & B3	
B9 & B12	
C	
Antioxidants	

C. Fibre & Water	
Fibre	Water
• -	• -
• -	• -
• -	• -



## Year 10 PRODUCT DESIGN Term 1



### What we are learning this term:

- |                         |                         |                     |               |
|-------------------------|-------------------------|---------------------|---------------|
| A. Scales of Production | C. Impact on Enterprise | E. Impact on People | G. Ergonomics |
| B. Production Methods   | D. Anthropometric Data  | F. Impact on Design |               |

A. Scales of Production		
Type	How Many?	Examples
<b>One-off Production</b> 	1	<ul style="list-style-type: none"> <li>Towers /bridges</li> <li>Bespoke house</li> <li>Custom made clothes</li> </ul>
<b>Batch Production</b> 	10s-1000s	<ul style="list-style-type: none"> <li>Baked Foods</li> <li>Limited Edition</li> <li>Socks</li> <li>Chairs</li> </ul>
<b>Mass Production</b> 	10,000s – 100,000s	<ul style="list-style-type: none"> <li>Cars</li> <li>Bottles</li> <li>Microchips</li> <li>Plain shirts</li> </ul>
<b>Continuous Production</b> 	100,00s+	<ul style="list-style-type: none"> <li>Energy</li> <li>Water</li> <li>Paper</li> <li>Plastic</li> </ul>

B. Production Methods	
	<b>Flexible Manufacturing Systems (FMS)</b>
This is where <b>automated</b> machines are adaptable and can produce different products if needed.	
	<b>Lean Manufacturing</b>
This is where waste and energy is kept to a minimum. This saves money and resources in production, as well as helping minimise the <b>environmental impact</b> of producing products.	
	<b>Just-in-Time (JIT) Manufacturing</b>
This is where manufacturers only order materials, parts, etc, when needed. This can be used in any <b>scale of production</b> but its particularly useful for one-off production.	

C. Impact on Enterprise	
<b>Crowdfunding</b> 	A way of raising money from large numbers of people to launch a new product through websites.
<b>Virtual marketing and retail</b> 	Promotion of products online and sharing experiences, reviews and recommendations.
<b>Cooperatives</b> 	A business that is owned and managed by it's workers, all working towards a common goal.
<b>Fair trade</b> 	An organisation that helps workers have fair trading and working conditions in developing countries

D. Anthropometric Data	
The study of human measurements to ensure the products and environments are the correct size for the intended user.	

E. Impact on People	
<b>Technology Push</b> 	When technological discoveries are used to drive the development or creation of a product
<b>Market Pull</b> 	When products are developed or created to meet the needs of society or a gap in the market.
<b>Universal Design</b> 	When designs are focused on serving the broadest range of users possible, rather than trying to address individual accessibility or inclusion objectives.
<b>Inclusive Design</b> 	When the designer focuses on exploring ways of serving a full spectrum of people, regardless of age, gender, and disability.
<b>User Centred Design (USD)</b> 	When designers focus on the end-user's wants and needs in each phase of the design process.
F. Impact on Design	
<b>Planned obsolescence</b>	Designing products that will have a limited life and that will become obsolete and require to be replaced, such as disposable razors.
<b>Design for Maintenance</b>	Designing products that are more durable and have spare parts available to mend and maintain them, such as a push bike.
<b>Design for Disassembly</b>	When a product has reached the end of its life it can be taken apart and parts reused or recycled, such as a school seat.
<b>Environmental Design</b>	Designing products to be more sustainable and improving the overall environmental impact of a product, such as paper straws.
G. Ergonomics	
This is the consideration that leads to a product being designed in a way that makes it easy to use. Such as a person sitting at their computer desk or the type of water bottle they use.	



# Year 10 PRODUCT DESIGN Term 1



## What we are learning this term:

- A. Scales of Production
- B. Production Methods
- C. Impact on Enterprise
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A. Scales of Production		
Type	How Many?	Examples
One-off Production 		
Batch Production 		
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Continuous Production 		

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	Lean Manufacturing
	Just-in-Time (JIT) Manufacturing

C. Impact on Enterprise	
Crowdfunding 	
Virtual marketing and retail 	
Cooperatives 	
Fair trade 	

D. Anthropometric Data

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- |                         |                         |                     |               |
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Technology Push 	
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User Centred Design (USD) 	

F. Impact on Design	
Planned obsolescence	
Design for Maintenance	
Design for Disassembly	
Environmental Design	

G. Ergonomics	

# Music terms and signs

## Glossary - Eduqas GCSE Music

Dynamics					
<i>pp</i>	<i>p</i>	<i>mp</i>	<i>mf</i>	<i>f</i>	<i>ff</i>
PIANISSIMO	PIANO	MEZZO PIANO	MEZZO FORTE	FORTE	FORTISSIMO
very soft (v.quiet)	soft (quiet)	moderately soft	moderately loud	loud	very loud
<b>crescendo (cresc.)</b>			<b>diminuendo (dim.)</b>		
gradually getting louder			gradually getting quieter		

Tempo					
LARGO	LENTO/ ADAGIO	ANDANTE/ MODERATO	ALLGRETTO	ALLEGRO/ VIVACE	PRESTO
v.slow	slow	walking pace/ moderate	quite fast	quick/lively	very quick
<ul style="list-style-type: none"> <li>• <b>Accelerando</b>: gradually getting faster</li> <li>• <b>Rallentando/ritardando</b>: gradually getting slower</li> <li>• <b>A tempo</b>: return to the original speed</li> <li>• <b>Ritenuato</b>: in slower time</li> <li>• <b>Rubato</b>: rhythms are played in a more free/flexible way ('robbed time').</li> </ul>					

Time values			
NOTE	NAME	LENGTH (duration)	REST
	Semibreve	4 beats	
	Minim	2 beats	
	Crotchet	1 beats	
	Quaver	½ beats	
	Semiquaver	¼ beats	
A dot after the note increases its length by half:			
	Dotted minim		
	Dotted crotchet		
Groups of quavers/semiquavers are usually beamed together:			

Terms and signs		
	Sharp	Raises a note by a semitone.
	Flat	Lowers a note by a semitone.
	Natural	Cancels a previous sharp or flat for a note.
	Staccato	Detached.
	Slur	Play smoothly.
	Tie	Hold the notes for the full value of the tied notes.
	Accent	Emphasize the note (play forcefully).
	Pause	Hold the note longer.
	Sforzando	Sudden stress/ accent.

# Music terms and signs

## Glossary - Eduqas GCSE Music

Complete the missing key words and symbols

### Dynamics

<i>pp</i>	<input type="text"/>	<i>mp</i>	<i>mf</i>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	moderately soft	moderately loud	<input type="text"/>	<input type="text"/>
<input type="text"/>			<input type="text"/>		

### Tempo

<input type="text"/>	LENTO/ ADAGIO	<input type="text"/>	ALLGRETTO	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	quite fast	<input type="text"/>	<input type="text"/>
<ul style="list-style-type: none"> <li>• <input type="text"/></li> <li>• <input type="text"/></li> <li>• <input type="text"/></li> <li>• <input type="text"/></li> </ul>					

Complete the missing key words and symbols

Complete the missing key words and symbols

### Time values

NOTE	NAME	LENGTH (duration)	REST
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	

A dot after the note increases its length by half:

Groups of quavers/semiquavers are usually beamed together:







### Terms and signs

#	<input type="text"/>
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	<input type="text"/>
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	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
<i>sfz</i>	<input type="text"/>







What we are learning this term:	
A.	Key words
B.	What are the main life stages
C.	What are the 4 areas of growth and development (PIES)?
D.	How do Humans develop physically (P)?

A. Key words for this Unit	
Characteristics	Something that is typical of people at a particular life stage.
Life stages	Distinct phases of life that each person passes through.
Growth	Increased body size such as height, weight.
Development	Involves gaining new skills and abilities such as riding a bike.
Gross motor development (G)	Refers to the development of large muscles in the body e.g. Legs
Fine motor development (F)	Refers to the development of small muscles in the body e.g. Fingers
Language development	Think through and express ideas
Contentment	An emotional state when people feel happy in their environment, are cared for and well loved
Self-image	How individuals see themselves or how they think others see them
Self-esteem	How good or bad an individual feels about themselves and how much they value their abilities.
Informal relationships	Relationships formed between family members
Friendships	Relationships formed with people we meet in the home or in situations such as schools, work or clubs
Formal relationships	relationships formed with non-family/friends – such as teachers and doctors.
Intimate relationships	romantic relationships.






B	What are the main life stages?		C	What are the 4 areas of growth and development (PIES)?
Age Group	Life Stage	Developmental Characteristics and Progress	 Physical Development (P)  Intellectual Development (I)  Emotional Development (E)  Social Development (S)	P = growth patterns and changes in the mobility of the large and small muscles in the body that happen throughout life.  I = how people develop their thinking skills, memory and language.  E = how people develop their identity and cope with feelings.  S = describes how people develop friendships and relationships.
0-2 years	Infancy	Sill dependent on parents but growing quickly and developing physical skills.		
3-8 years	Early Childhood	Becoming increasingly independent, improving thought processes and learning how to develop friendships.		
9-18 years	Adolescence	Experiencing puberty, which bring physical and emotional changes.		
19-45 years	Early Adulthood	Leaving home, making own choices about a career and may start a family.		
46-65 years	Middle Adulthood	Having more time to travel and take up hobbies as children may be leaving home; beginning of the aging process.		
65+ years	Later Adulthood	The aging process continues, which may affect memory and mobility.		






D.	How do humans develop physically (P)?
<b>0-2</b>	<ul style="list-style-type: none"> <li>Gross Motor Development (G) = life head, roll over, sit unaided, walk holding onto something, walk unaided, climb stairs, kick and throw, walk upstairs, jump.</li> <li>Fine Motor Development (F) = hold a rattle for short time, reach for an item, pass item from one hand to other, hold between finger and thumb, scribble, build a tower, use a spoon, draw lines and circles, turn page of a book.</li> </ul>
<b>3-8</b>	<ul style="list-style-type: none"> <li>G = ride a tricycle, catch a ball with two hands, walk backwards and step to the side, bounce a ball, run on tiptoes, ride a bike, catch a ball with one hand, balance along a thin line.</li> <li>F = hold a crayon to make circles and lines, thread small beads, copy letters and shapes with a pencil, make detailed models with construction bricks, joined up writing, use a needle to sew.</li> </ul>
<b>9-18</b>	<ul style="list-style-type: none"> <li>Girls = puberty starts at 10-13 years, breasts grow, hips widen, menstruation begins, uterus and vagina grow.</li> <li>Boys = voice deepens, muscles and strength increase, erections, facial hair, produce sperm.</li> <li>Both = pubic and underarm hair, growth spurts.</li> </ul>
<b>19-45</b>	<ul style="list-style-type: none"> <li>Physically mature, sexual characteristics are fully formed, peak of physical fitness, full height, women at most fertile.</li> <li>Later in the life stage people may put on weight, hair turn grey and men may lose hair, women's menstrual cycle was slow down</li> </ul>
<b>46-65</b>	<ul style="list-style-type: none"> <li>People may put on weight, hair turn grey and men may lose hair, women's menstrual cycle was slow down.</li> <li>Women go through the menopause – when menstruation ends and they can no longer become pregnant.</li> <li>Men may continue to be fertile throughout life but decrease in sperm production in this life stage.</li> </ul>
<b>65+</b>	<ul style="list-style-type: none"> <li>Women's hair becomes thinner, men may lose most of their hair, skin loses elasticity and wrinkles appear, nails hard and brittle, bones weaken, higher risk of contracting infections disease and illness.</li> <li>Stamina, reaction time, muscle and senses (hearing, sight, taste) all reduce.</li> </ul>

What we are learning this term:	
A. Key words	
B. What are the main life stages	
C. What are the 4 areas of growth and development (PIES)?	
D. How do Humans develop physically (P)?	
A.	Key words for this Unit
Characteristics	
Life stages	
Growth	
Development	
Gross motor development (G)	
Fine motor development (F)	
Language development	
Contentment	
Self-image	
Self-esteem	
Informal relationships	
Friendships	
Formal relationships	
Intimate relationships	

B	What are the main life stages?		C	What are the 4 areas of growth and development (PIES)?
Age Group	Life Stage	Developmental Characteristics and Progress		
0-2 years	Infancy		Physical Development (P) 	
3-8 years	Early Childhood		Intellectual Development (I) 	
9-18 years	Adolescence		Emotional Development (E) 	
19-45 years	Early Adulthood		Social Development (S) 	
46-65 years	Middle Adulthood			
65+ years	Later Adulthood			

D.	How do humans develop physically (P)?
0-2	
3-8	
9-18	
19-45	
46-65	
65+	





What we are learning this term:		F. How do humans develop emotionally (E)?	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?			
<b>E. How do humans develop intellectually (I)?</b>			
Infancy  	At birth brains are already well developed. Infants use all of their senses to learn about the world around them. Infancy is a time of rapid intellectual development. At 3 months infants can remember routines. At 9-12 months infants are developing their memory. At 12 months to 2 years infants understand processes and how things work. Language begins to develop during this stage.	<b>Bonding and Attachment</b> Bonding and attachment describe the emotional ties an individual forms with others. It starts in the first year of life between infants and their main carer because that person fulfils the infants needs which makes them feel safe and secure.	<b>Adolescence and adulthood</b>  <b>Self-image and Self-esteem</b> Self-image is heightened during adolescence because of the physical changes we experience. Our self-esteem can change from day to day based on a variety of factors including employment and health status.
		<b>Security</b> For infants and young children, security is mainly the feeling of being cared for, being safe and loved – it is closely linked with attachment.	<b>Security</b> Adolescence may feel insecure because of puberty. Adults may feel insecure about relationships, job security of income. Later in life adults may feel insecure about staying in their own home or going into a care home. Feeling secure helps us cope better with everyday situations.
		<b>Contentment</b> Infants and young children are content if they have had enough food, love, are clean and dry and all other needs are met.	<b>Contentment</b> When people feel discontented with aspects of their life – for example, relationships or work – their emotions can be negatively affected.
Early childhood  	At 3-4 years of age children become more inquisitive and enjoy exploring objects and materials. They ask lots of questions and enjoy solving simple problems. At 5-6 years old children’s memory is becoming well developed. This helps them to talk about the past and anticipate the future.	<b>Independence</b> Independence is to care for yourself and make your own decisions. Infants are completely dependent on their carer. As children enter early childhood they develop more independence – feed self and get dressed. However, children still need a lot of help from their carer.	<b>Independence</b> Adolescence are dependent on their parents but are beginning to enjoy more independence and freedom to make their own choices. Adults enjoy living independently and controlling their own lifestyle and environment. Later in adulthood people become more dependent on others again.
<b>G. How do humans develop socially (S)?</b>			
<b>Life Stage</b>		Types of relationships and social development	
Adolescence  	During this time abstract thought is developed – thinking logically and solving complex problems are possible by the end of this life stage. Adolescents may find it difficult to understand the consequences of their actions but they are developing empathy – seeing things from another’s point of view.	Infancy	<ul style="list-style-type: none"> <li>• Solitary Play - From birth to 2 years, infants tend to play alone although they like to be close to their parent or carer; they may be aware of other children but not play with them.</li> </ul>
		Early childhood	<ul style="list-style-type: none"> <li>• Parallel Play - From 2 to 3 years, children enjoy playing next to other children but are absorbed in their own game; they are not socialising or playing with other children.</li> <li>• Cooperative or social play – from 3 years upwards, children start to play with other children; they have developed social skills that help them to share and talk together; they often make up games together, such as being a shopkeeper and customer.</li> </ul>
		Adolescence	<ul style="list-style-type: none"> <li>• People become more independent and build more informal and formal relationships.</li> <li>• Social development closely linked to emotions.</li> <li>• Often strongly influenced by peers – ‘peer group pressure’.</li> </ul>
Early and Middle Adulthood  	By these life stages most adults have a good range of general knowledge. They use this knowledge and experience to solve problems that they come across in their personal and work lives.	Early adulthood	<ul style="list-style-type: none"> <li>• Increased independence means greater control of decisions about informal relationships.</li> <li>• People may be developing emotional and social ties with partners and their own children.</li> <li>• Social life often centred on the family but social skills are required to build and maintain formal relationships.</li> </ul>
		Middle adulthood	<ul style="list-style-type: none"> <li>• Children have often left home, but there are likely to still be strong family relationships.</li> <li>• Social circles may expand through travel, spending more time on hobbies or joining new groups.</li> </ul>
Later adulthood  	During this life stage people continue to learn and develop intellectually, however, their speed of thinking and memory may decline. This may affect their ability to think through problems and make logical decisions.	Later adulthood	<ul style="list-style-type: none"> <li>• Retired by this stage and so may enjoy more social time with family and friends or join new groups.</li> <li>• However, later in the life stage people may begin to feel isolated if they struggle to get out or if partners and friends pass away.</li> </ul>

What we are learning this term:		F.	How do humans develop emotionally (E)?	
E. How do humans develop intellectually (I)? F. How do humans develop emotionally (E)? G. How do humans develop socially (S)?		<u>Infancy and Early Childhood</u>		<u>Adolescence and adulthood</u>
E. <i>How do humans develop intellectually (I)?</i>				
Infancy  				
Early childhood  				
		G.	How do humans develop socially (S)?	
		Life Stage	Types of relationships and social development	
Adolescence  		Infancy		
		Early childhood		
Early and Middle Adulthood  		Adolescence		
		Early adulthood		
Later adulthood  		Middle adulthood		
		Later adulthood		

What we are learning this term:	
H.	Key words
I.	How do physical factors affect development?
J.	How does lifestyle affect development?
K.	How do social and cultural factors affect development?
L.	How do relationships and isolation affect development?
M.	How do economic factors affect development?

H	Key words:
Genetic inheritance	Genes the person inherits from their parents
Genetic disorders	Health conditions that are passed on from parent to child through their genes. e.g. cystic fibrosis
Lifestyle Choices	Include the food you eat and how much exercise you do. They also include whether you smoke, drink alcohol or take illegal drugs.
Appearance	The way that someone or something looks
Factor	A circumstance, fact, or influence that contributes to a result
Gender role	The role and responsibilities determined by a person's gender.
Culture	ideas, customs, and social behaviour.
Role models	Someone a person admires and strives to be like.
Social Isolation	Lack of contact with other people
Material possessions	Things that are owned by an individual
Economic	To do with person's wealth and income.





I.	How do physical factors affect development?	
	Genetic Disorders	Disease and Illness
<b>Physical Development</b>	A person's physical build can affect physical abilities. Inherited diseases may affect strength and stamina needed to take part in exercise.	May affect the rate of growth in infancy and childhood. Could affect the process of puberty. Could cause tiredness and/or mobility problems. Could limit of prevent participation in physical activity.
<b>Intellectual Development</b>	Some genetically inherited diseases may result in missed schooling, or have a direct impact on learning – conditions such as Edward's syndrome impact learning.	School, college, university, work or training could be missed. Memory and concentration could be affected.
<b>Emotional Development</b>	Physical appearance affects how individuals see themselves (self-image), and how others respond to them impacts on their confidence and wellbeing.	May cause worry and/or stress. Individuals may develop negative self-esteem. Could lead to feelings of isolation.
<b>Social Development</b>	Physical characteristics or disease may affect opportunities or confidence in building friendships and becoming independent.	May cause difficulty in having opportunities to socialize with other and build wider relationships.

J.	How does lifestyle affect development?	
<b>Lifestyle choices</b> include; diet, exercise, alcohol, smoking, sexual relationships and illegal drugs, appearance.		
<b>Positive lifestyle choices lead to:</b> <ul style="list-style-type: none"> <li>• Healthy hair, skin, nails and teeth</li> <li>• Positive self-image</li> <li>• Energy and stamina</li> <li>• Good health</li> <li>• Emotional security</li> </ul> 		<b>Negative lifestyle choices lead to:</b> <ul style="list-style-type: none"> <li>• Being overweight or underweight</li> <li>• Lack of energy</li> <li>• Ill health</li> <li>• Negative self-image</li> <li>• Sexually transmitted diseases (STDs)</li> <li>• Unplanned pregnancy</li> </ul> 
Our <b>appearance</b> includes: body shape, facial features, hair and nails, personal hygiene and our clothing. Our appearance can affect the way we view ourselves- self-image		
<b>Positive self-image:</b> <ul style="list-style-type: none"> <li>• Feel good about yourself.</li> <li>• Healthy hair, skin, nails and teeth</li> <li>• Big social circle.</li> <li>• High self-esteem.</li> <li>• High self-confidence.</li> </ul> 		<b>Negative self-image</b> <ul style="list-style-type: none"> <li>• Low self-esteem</li> <li>• Low self-confidence</li> <li>• Can lead to eating disorders e.g. anorexia</li> <li>• Can lead to anxiety or depression</li> <li>• Can lead to self-harm</li> <li>• Negative impact on building relationships- social circle decreases.</li> </ul> 

What we are learning this term:	
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H	Key words:
Genetic inheritance	
Genetic disorders	
Lifestyle Choices	
Appearance	
Factor	
Gender role	
Culture	
Role models	
Social Isolation	
Material possessions	
Economic	

I.	How do physical factors affect development?	
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Physical Development		
Intellectual Development		
Emotional Development		
Social Development		

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<b>K</b>	<b>How do social and cultural factors affect development</b>
Development can be influenced by the persons <b>culture or religion</b> because it affected their: <ul style="list-style-type: none"> <li>• <b>Values</b>: how they behave</li> <li>• <b>Lifestyle choices</b>: diet, appearance</li> </ul>	
<u>Positive affects of a persons culture/religion:</u> <ul style="list-style-type: none"> <li>• A sense of security and belonging from sharing the same values and beliefs with others.</li> <li>• Good self-esteem through being accepted and valued by others</li> </ul>	<u>Negative affects of a persons culture/religion:</u> <ul style="list-style-type: none"> <li>• Feeling discriminated against by people who do not share their religion/culture which leads to low self-image</li> <li>• Feeling excluded and isolated because their needs like diet, are not catered for.</li> </ul>
<b>Community</b> refers to: local area where people live, school, religious group or hobby clubs. They have common values and goals.	
<u>Belonging to a community:</u> <ul style="list-style-type: none"> <li>• Brings sense of belonging essential for emotional development.</li> <li>• Building and maintaining relationships- social development</li> <li>• Feeling of security.</li> <li>• Increases self-image and self-confidence</li> </ul>	<u>Not belonging to a community:</u> <ul style="list-style-type: none"> <li>• Minimal contact with others- isolation</li> <li>• Anxiety leading to depression</li> <li>• Making negative lifestyle choices</li> <li>• Feeling less secure</li> <li>• Difficulty in building relationships</li> <li>• Slow self-image and self-confidence</li> </ul>
Traditionally, men and women had distinctive responsibilities and expectations which for their gender called <b>gender roles</b> . However, nowadays UK equality legislation stops people being discriminated against because of their gender.	
What happens when people face discrimination because of gender: <ul style="list-style-type: none"> <li>• They might be excluded from a group</li> <li>• They may be refused promotion at work</li> <li>• They may be expected to carry out a particular role</li> <li>• They may be paid less.</li> </ul>	

<b>What we are learning this term:</b>
K. How do social and cultural factors affect development?
L. How do relationships and isolation affect development?
M. How do economic factors affect development?

<b>L</b>	<b>How do relationships and isolation affect development?</b>
1	In adolescence, young people often argue with parents because they want more independence- negative affect on family relationships- can lead to isolation from them.
2	In later life, older people might need to rely on their children for support. This then has a positive affect on their development because all their need are catered for.
3	Relationships are important because they provide emotional security, contentment and positive self- esteem.
4	The breakdown of personal relationships can have a negative effect on persons PIES development: Low self-esteem, loss of confidence, stress.
5	Isolation can happen when individuals do not have the opportunity of regular contact with others. They have no one to share their feelings, thoughts and worries with resulting in feeling insecure and anxious.
6	Isolation can happen because they live alone, are unemployed or retired, are discriminated against or have an illness or a disability.
7	People have role models- infants learn by copying others, and adolescence base their identity on their role models. Role models can influence how people see themselves compared to others and their lifestyle choices can be positive or negative.

<b>M</b>	<b>How do economic factors affect development</b>	
	Having enough money gives individuals and their families feeling of content and security	Not having enough money causes stress and anxiety.
	Having enough money means that the whole family is eating healthy.	Not having enough money can mean that the family is not about to eat well balanced diet, and this has a negative effect on their physical development
	Elderly people rely on state pension to live which is not enough and have to cut down on travel, shopping, bills, therefore it speeds their aging process and lead to health decline.	
	<u>Living in good housing with open spaces:</u> <ul style="list-style-type: none"> <li>• Feeling good about themselves</li> <li>• Be more likely to stay healthy,</li> <li>• Space to take exercise</li> <li>• Feel safe ad secure</li> <li>• Warmth</li> </ul>	<u>Living in a poor housing with cramped and damp conditions:</u> <ul style="list-style-type: none"> <li>• Have low self-esteem and self-image</li> <li>• Be more likely to experience ill health</li> <li>• Be lessson likely to exercise</li> <li>• Anxious and stressed.</li> </ul>
	Material possession like a new phone or coat has a positive effect on the persons development because they might have more friends as they look nicer, high self-image.	Not having a phone or the newest trainers can have a negative affect in the persons self-image and self-esteem. They might feel isolated from others.



**K How do social and cultural factors affect development**

Development can be influenced by the persons **culture or religion** because it affected their:

- **Values**: how they behave
- **Lifestyle choices**: diet, appearance

**Community** refers to: local area where people live, school, religious group or hobby clubs. They have common values and goals.

Traditionally, men and women had distinctive responsibilities and expectations which for their gender called **gender roles**. However, nowadays UK equality legislation stops people being discriminated against because of their gender.

**What we are learning this term:**

- K. How do social and cultural factors affect development?
- L. How do relationships and isolation affect development?
- M. How do economic factors affect development?

**L How do relationships and isolation affect development?**

1	
2	
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**M How do economic factors affect development**




What we are learning this term:	
<p>N. What are life events?                  O. How do people deal with life events?                  P. How is dealing with life events supported?</p>	
N.	What are life events?
Life Events	Life events are expected or unexpected events that can affect development. Examples include starting nursery, getting married or becoming ill.
Expected Life Events	Expected life events are life events that are likely to happen. Examples include starting primary school aged four and secondary school aged 11.
Unexpected Life Events	Unexpected life events are events which are not predictable or likely to happen. Examples could include divorce and bereavement (the death of a loved one).
Physical Events	Physical events are events that make changes to your body, physical health and mobility. Examples include illnesses such as diabetes and injuries and accidents such as car accidents.
Relationship Changes	Relationship changes could be new relationships such as the birth of a sibling, a new friendship or romantic relationship. Relationship changes can also be changes to existing relationships such as divorce.
Life Circumstances	Life circumstances are different situations that arise in our life that we must deal with. Examples include redundancy (losing a job), moving house or retirement (finishing work in later adulthood).

O.	How do people deal with life events?
Individual	<ul style="list-style-type: none"> <li>The effects of life events vary from person to person based on how they deal with their new situation.</li> <li>Some people react to able to react to life events positively, others find it more difficult due to a range of factors.</li> </ul>
Factors	<ul style="list-style-type: none"> <li>Factors that may affect how people cope with life events: age, other life events happening at the same time, the support they have, their disposition (their mood, attitude and general nature), their self-esteem, their resilience (how quickly they recover).</li> </ul>
Adapting	<ul style="list-style-type: none"> <li>Adapt – to adjust to new conditions or circumstances.</li> <li>Expected on unexpected life events can often force people to make changes to their lives. Individuals must find their own way to adapt to the changes that life throws at them.</li> </ul>
Resilience	<ul style="list-style-type: none"> <li>Resilience – a person's ability to come to terms with, and adapt to, events that happen in life.</li> <li>Resilience is stronger in people who have a positive outlook on life, accept that change happens, has supportive family and friends and plans for expected life events.</li> </ul>
Time	<ul style="list-style-type: none"> <li>Sometimes people need a long time to adapt to unexpected life events.</li> <li>It can take time for people to move on from and accept difficult changes in their life.</li> </ul>

P.	How is dealing with life events supported?
Types of Support	How this helps individuals deal with life events
Emotional Support	Emotional support is needed to help individuals deal with all life events – expected and unexpected. Having someone to talk to helps people feel secure and adapt to change. Sometimes individuals can find this support in family and friends or professionals to process difficult life events – such as bereavement.
Information and Advice	Life events, particularly unexpected ones, can cause people to feel like they do not know what to do. Information and advice can help people to have a better understanding of their situation, which allows them to deal with it more successfully. Information and advice help them know where to go for help, the choices that are available to them and how to make healthy choices.
Practical Help	<ul style="list-style-type: none"> <li>Financial help – an individual may need money to help them adapt to a life change i.e. money to pay for a stair lift if their mobility has been effected.</li> <li>Childcare – an individual may need support looking after their children i.e. a lone parent after a divorce that needs to go to work.</li> <li>Transport – an individual may need support with transport if they have mobility problems i.e. a car could be adapted to support a person who has had an accident and can no longer walk.</li> </ul>
Informal Support	Informal support is the support an individual receives from partners, family and friends. It is usually the first form of support an individual experiences after and expected or unexpected life event. Informal support can provide reassurance, encouragement, advice, a sense of security, someone to talk through options with and practical help.
Professional Support	Formal support may be provided by statutory care services (the state), private care services and charitable organizations. Professional support may include counsellors, teachers, careers advisers, occupational therapists, social workers and health specialists. Professional support may be needed to help people with a health condition, regain mobility, deal with life changes and emotions, get advice and information or change their lifestyle.
Voluntary Support	Organizations offering voluntary support are charities, community groups and religious groups. At voluntary support services, many staff are volunteers ( they work for free), but they also employ qualified people who are paid by donations. Community groups work at a local level to meet the needs of people living in a specific neighbourhood i.e. foodbanks. Religious groups are formed by people who share the same religious or spiritual beliefs but they help all people in need regardless of their beliefs and background i.e. a church run soup kitchen for the homeless.

<b>What we are learning this term:</b>	
N. What are life events? O. How do people deal with life events? P. How is dealing with life events supported?	
<b>N.</b>	<b>What are life events?</b>
Life Events	
Expected Life Events	
Unexpected Life Events	
Physical Events	
Relationship Changes	
Life Circumstances	

<b>O.</b>	<b>How do people deal with life events?</b>
Individual	
Factors	
Adapting	
Resilience	
Time	
<b>P.</b>	<b>How is dealing with life events supported?</b>
<b>Types of Support</b>	<b>How this helps individuals deal with life events</b>
Emotional Support	
Information and Advice	
Practical Help	
Informal Support	
Professional Support	
Voluntary Support	

# Sentence Stems: Year 10 to Year 13



## Listen and Mark

Pay close attention to others and point out important moments.

- I notice you used the word / phrase \_\_\_\_, which implies \_\_\_\_ .
- When you said \_\_\_\_, it anchored the idea that \_\_\_\_ .
- Did anyone notice what \_\_\_\_ said about \_\_\_\_ ? This seems important because \_\_\_\_ .

## Defend and Unpack

Defend your perspective and explain your thought process.

- I understand your perspective on \_\_\_\_, but have you thought about \_\_\_\_ ?
- I actually think this because \_\_\_\_ . (Furthermore, finally).
- Actually, [evidence] suggests that \_\_\_\_ .

## Introduce and Invite

Begin your contribution and encourage others to participate.

- I suggest that \_\_\_\_ because \_\_\_\_ .
- \_\_\_\_, what is your perspective on \_\_\_\_, and why?
- We should discuss \_\_\_\_ because \_\_\_\_ .

## Build and Support

Add to others' ideas and bolster points by giving evidence.

- Your point about \_\_\_\_ implies \_\_\_\_, and I would like to further this by saying \_\_\_\_ .
- \_\_\_\_ supports the idea that \_\_\_\_ .
- Drawing upon points made by \_\_\_\_ and \_\_\_\_, we can conclude that \_\_\_\_ because \_\_\_\_ .

## Challenge and Verify

Disagree and ask others to prove or clarify information.

- You said \_\_\_\_ . How do you know?
- I think you said \_\_\_\_, which implies that you believe \_\_\_\_ . Is that right?
- I disagree with what you said about \_\_\_\_ because \_\_\_\_ .

## Summarise and Map

Draw together big themes and track the discussion.

- Our main findings were \_\_\_\_ .
- On the whole, we believe that \_\_\_\_ .
- Initially, we thought \_\_\_\_, but we eventually decided \_\_\_\_ .



# SWINDON ACADEMY READING CANON

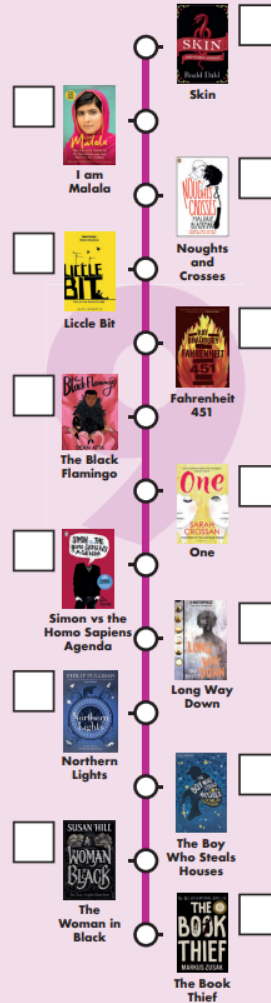
## Year 7



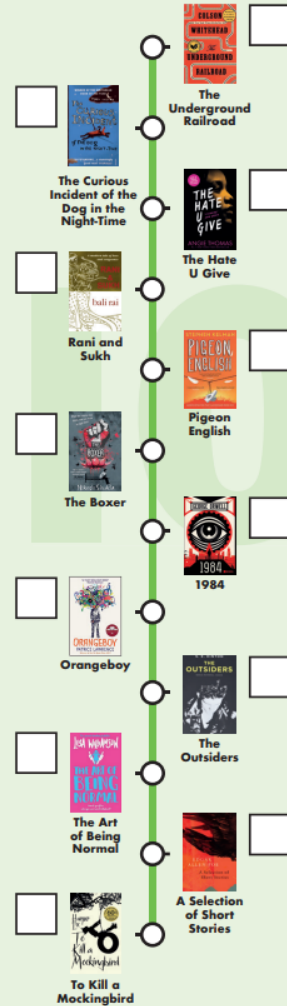
## Year 8



## Year 9



## Year 10



#ReadingisPower