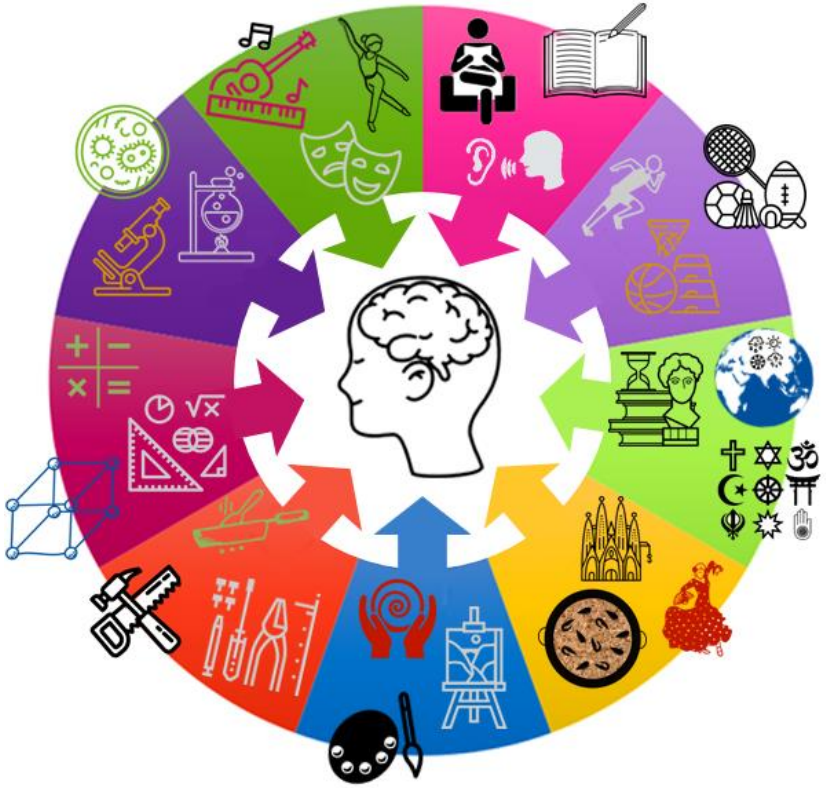
100% book - Year 10 Grammar

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



Term 5

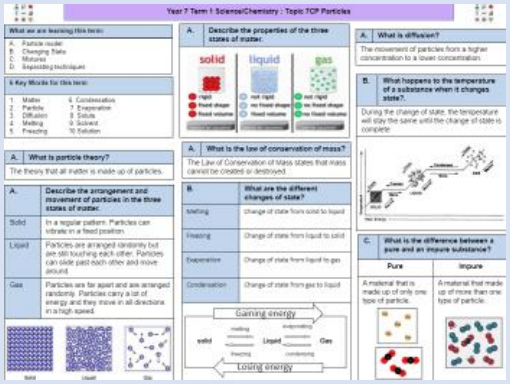
Swindon Academy 2022-23	
Name:	
Tutor Group:	
Tutor & Room:	

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

Swindon Academy The best in everyone™ Part of United Learning
Swindon Academy The best in everyone™ Part of United Learning
Swindon Academy The best in everyone™ Part of United Learning
Swindon Academy The best in everyone™ Part of United Learning

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

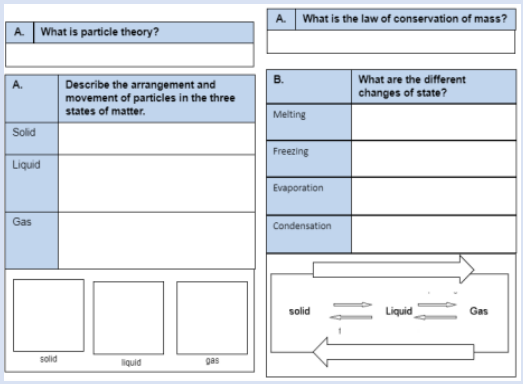
Knowledge Organisers



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!

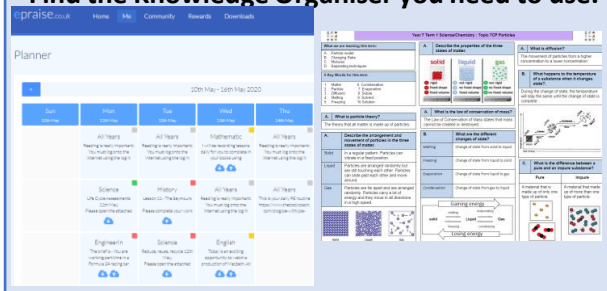
Expectations for Prep and for using your Knowledge Organisers

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?

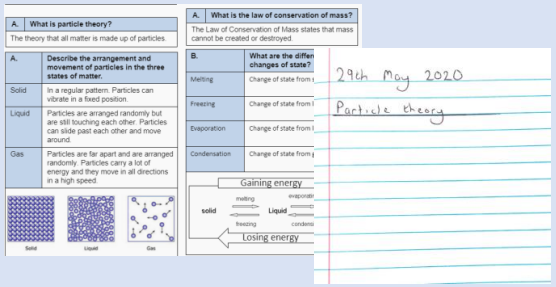
Step 1

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



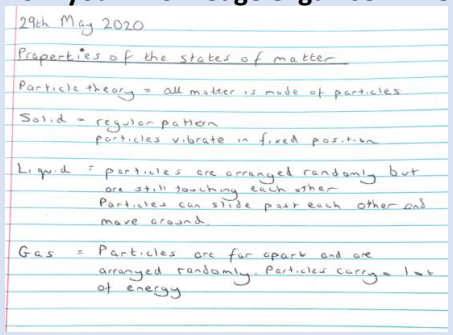
Step 2

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



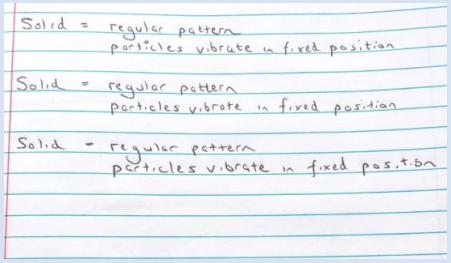
Step 3

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



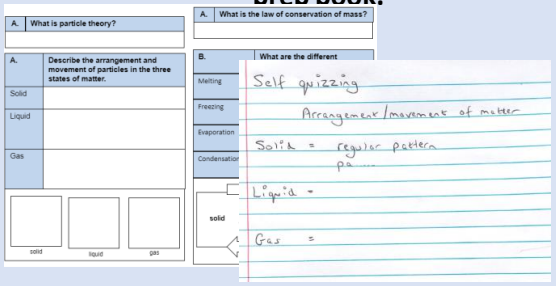
Step 4

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



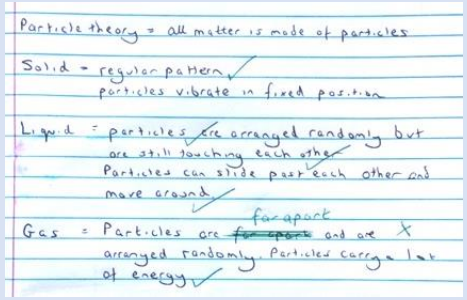
Step 5

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



Step 6

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



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

ENGLISH –Poetry cluster 3: The Problem with Power - Grammar

Poem	Context	Events in the poem	Message	Form/ structure
Kamikaze- Beatrice Garland	• During WW2, the term 'kamikaze' was used for Japanese fighter pilots who were sent on suicide missions. They were expected to crash their planes into enemy warships. The word 'kamikaze' literally translates as 'divine wind'. • Flying a kamikaze mission was portrayed as a great honour by the Japanese government. It was claimed that there were many volunteers, although some have argued that not every kamikaze soldier would have been willing. By the end of the war, nearly 4,000 kamikaze pilots had died.	• The narrator of this poem is a kamikaze pilot's daughter. Unlike many of his comrades, this pilot turns back from his target and returns home. The poem explores the moment that the pilot's decision is made and sketches out the consequences for him over the rest of his life. Not only is he shunned by his neighbours, but his wife refuses to speak to him or look him in the eye. His children gradually learn that he is not to be spoken to and begin to isolate and reject him.	• The poem explores the conflict between personal and national duty and suggests that individual desire and extreme patriotism cannot be achieved together. • Through the pilot, Garland may be expressing how it is not honour that gives life meaning, but rather being with loved ones. • The poem explores the impossible situation that the pilots were put in by those in power- dying in glory or being shamed and rejected by your family. It also deals with the lasting effects that war can inflict on people, families, and communities. This poem not only deals with the kamikaze pilot's own story, but the implications for those around him.	Kamikaze is a narrative poem. It begins as a report, summarising another conversation or story told by someone else. Sections of the poem are presented in italics as first-person narrative, where the storyteller speaks directly for herself. This has the effect of heightening the sense of sadness she feels.
Checking Out Me History- John Agard	• Since the early 17th century, the country of Guyana has been colonised and controlled by the Dutch, French and British. The indigenous population spoke Arawak, but the British introduced English as the language of the government, courts and education system. • For centuries, nations would repress the culture and identity of the countries that they colonised. They did this to control the population and get rid of any rebellion against the colonisers. • Born in Guyana in 1949, Agard moved to Britain in 1977 and so sees the culture as both an insider from living there and an outsider from moving to Britain	• The poem focuses on the omission of indigenous history and discusses how colonized people were forced to learn about *British* history—which had little to do with their actual lives. Not only does the poem call attention to the oppressive nature of colonial education, but it also praises important figures who were left out—figures such as Touissaint L'Ouverture, the leader of the Haitian revolution. • The poem suggests the curriculum deliberately blinded colonized people to their own histories, and argues that in order to understand their own identity they must learn their own history.	• Knowledge should not be denied to anyone. No one has the right to oppress others by denying them facts about their past. This can lead to feelings of inferiority and there should be more equality in the world. History is important and there is power in knowing your heritage and culture. People should never exclude this from you – especially if it is replaced with less relevant examples. • There is a sense of caution in this poem in relation to believing what you are told. We are reminded that we should always seek the truth for ourselves and question what others choose to teach us. The education system has power to mould our thinking and we should be aware of this. • There is a warning that, when people are denied knowledge, they can become bitter and angry, and this could lead to rebellion, protests and uprisings.	The open form highlights Agard's rebellion against the status quo and the restrictions of a colonial curriculum. His use of italics separates and celebrates the important historical figures from the history he was a taught. The sing-song rhyme scheme holds a bitterness and anger that he was taught trivial things whilst his own history was omitted.
The Émigrée- Carol Rumens	• Carol Rumens was born in South London in 1944 • Published her own poems and translations of Russian poems • She has a 'fascination with elsewhere' • The Émigrée is not autobiographical poem, but is inspired by living in London (a diverse society) • The poem sympathises with people who have been exiled • Emigrants are people who have left the country of their birth to settle elsewhere in the world.	• A displaced person pictures the country and the city where they were born. The city and country are never named in order to increase the relevancy to as many people who have left their homelands as possible. • The speaker's home country appears to be war-torn, or under the control of a dictatorial government that has banned the language the speaker once knew. • Despite this, the émigrée's childhood memories are filled with light and happiness. Though there is a clear sense of fondness for the place, there is also a more threatening tone in the poem, suggesting that not all of her memories are happy and that the country she has emigrated to is not always welcoming.	• Rumens presents the importance of empathy and sympathy. She reminds us of how traumatic conflict can be and that people are forced to make heart-breaking decisions when they live under cruel leadership. • The poem highlights the importance of belonging and is a celebration of diversity – we should make people feel welcome when they move to a new home. • Memories are shown to be powerful and to have a strong hold over us with the ability to bring both pain and comfort. The past can be difficult to escape and can restrict us from moving forward in life. • There is also a sense of the power of the media – their portrayal of immigrants can lead to a lack of sympathy in society; it is important we do not become insensitive to the pain that can lead to people moving to a new home.	The use of enjambment reflects the chaos and confusion of her situation. The poem consists of two stanzas with eight lines and a third stanza with nine lines. The added line in the final stanza could suggest she doesn't want to let her memories go, stop writing about her homeland or give up her past.
Storm on the Island- Seamus Heaney	• For many centuries, there has been conflict in Northern Ireland. • The majority of Northern Ireland's population were unionists, who wanted to remain within the United Kingdom. Most of these were Protestant Christians. • Seamus Heaney was a Catholic born in Northern Ireland in 1939. Catholics were seen as the underclass and were discriminated against by the government and police. This resulted in strong political and guerrilla warfare movements in an attempt to overthrow British rule and re-unite Ireland.	**There are two interpretations of this poem- literal and metaphorical.** **Literal:** The narrator describes how well prepared they are for the storm. The storm attacks the island. As the poem progresses, the narrator's confidence decreases, and they begin to worry. **Metaphorical:** Heaney uses the storm as a metaphor for the conflict in Northern Ireland. The 'Islanders' suffer under enemy occupation with quiet resignations.	• Heaney portrays nature as a powerful force that humans should fear and not attempt to control. • Heaney presents the idea that life under constant enemy occupation can leave people accepting this presence with sadness, but stop trying to do anything about it. • He warns that the enemy can appear reasonable, but can quickly turn in to a dangerous threat – this threat may not always be physical; the gradual erosion of human rights and liberties is just as perilous.	Heaney's use of iambic pentameter may appear strange given its use in traditional British poems. However he subverts the traditional structure by swapping the stressed and unstressed syllables on certain lines, resisting the regularity of British control.
Tissue- Imtiaz Dharker	• Imtiaz Dharker was born in Pakistan but grew up in Scotland. Her poetry often deals with themes of identity, the role of women in society and the search for meaning. • Tissue is from her poetry collection called 'The terrorist at my table'. Most of the poems in that collection relate to religion, terrorism and global politics.	• Tissue explores the varied uses of paper and how they relate to life. • It is written from the point of view of someone looking out at the conflict and troubles of the modern world; destruction, war and politics, money and wealth as well as issues like terrorism and identity. • The poem remarks how nothing is meant to last.	• Human power is ephemeral. No matter how much we try to build structures to display our power, nature will always outlast it. • Our relationship with paper is unhealthy. We rely on it too much to make records, document ownership and build debt. Instead, we should realise that the significance of human life will outlast the records we make of it on paper or in buildings. • Human life is fragile, and not everything can last. We must understand our fragility and should not try to build our lives through making recordings or building with blocks and bricks, we should focus on living.	The poem has an irregular structure and no rhyme scheme reflecting the irregularity of life and the lack of and predictability. The fragile structure Is symbolic of the fragile nature of our lives.

ENGLISH –Poetry cluster 3: The Problem with Power - Grammar

Key Vocabulary	
Patriotism	Being devoted to your country
Colonialism	When a powerful country takes control of a less powerful country
Dominate	To have power and influence over others
Defiance	Showing that you don't want to obey someone
Isolated	To be far away from other people or places.
Dictatorial	Telling people what to do in a forceful and cruel way
Nostalgia	A warm feeling for the past, particularly a very happy time
Fragility	being easily broken or damaged.

Key Vocabulary	
Patriotism	
Colonialism	
Dominate	
Defiance	
Isolated	
Dictatorial	
Nostalgia	
Fragility	

The Big Ideas	Notes
Garland questions the importance of honour and patriotism and demonstrates how we must have the individuality to learn for ourselves and not just to follow others.	.
Agard explores the importance of identity and the power of history and education.	
Rumens demonstrates impact of dictatorial governments and the power of memory. She highlights the need for compassion and empathy.	
Heaney warns of the dangers of enemy occupation and the emotional toll of silent resignation.	
Dharker emphasises the fragility of life through the extended metaphor of paper.	

Science T5 Y10 B3.12 Grammar Homeostasis in action

Controlling body temperature

- Body temperature is monitored and controlled by the thermoregulatory centre of the brain.
- The thermoregulatory centre contains receptors sensitive to the temperature of the blood.
- Human body temperature is 37°C
- The skin also contains temperature receptors that feedback to the thermoregulatory centre in the brain.

Response when body temperature too high

Energy transfer from the skin to the surroundings is increased by:
- Vasodilation (the blood vessels dilate – get wider).
- Sweat is produced.

Response when body temperature too low

Energy transfer from the skin to the surroundings is reduced by:
- Vasoconstriction (the blood vessels constrict – get narrower).
- Sweat production stopped.
- Muscles contract (shiver), this requires the exothermic reaction respiration which increases the temperature of the muscles.

The human kidney

- The kidneys are important for excretion and homeostasis.
- The kidneys produce urine by filtering the blood. It then reabsorbs all of the glucose and any mineral ions and water needed by the body by selective reabsorption.

- ADH

- The water balance of the blood is controlled by the hormone ADH.
- ADH changes the amount of water reabsorbed by the kidney tubules.
- ADH is secreted by the pituitary gland in the brain.

Low water concentration in the blood	High water concentration in the blood
More ADH released	Less ADH released
More water reabsorbed	Less water reabsorbed
Small amount of concentrated urine produced	Large amount of diluted urine produced

Removing waste

- carbon dioxide produced during respiration can produce an acidic solution.
- carbon dioxide is removed via the lungs.
- Urea is produced during the breakdown of proteins.
- Proteins are broken down to amino acids which cannot be stored by the body.
- The liver removes the amino group from amino acids via a process called deamination to produce ammonia which is very toxic.
- Ammonia is converted to urea.

- If cells lose or gain too much water by osmosis, they do not function efficiently.

Uncontrolled loss of water and mineral ions

- Water loss via the lungs during exhalation.
- Water, mineral ion and urea loss through sweat in the skin.

Controlled loss of water and mineral ions

- Water, mineral ion and urea loss via the kidneys in the urine.

Treating kidney failure

Dialysis

- A dialysis machine carries out the function of the kidneys.
- The level of useful substances in the blood are maintained while urea and excess mineral ions pass from the blood into the dialysis fluid.

Disadvantages:

- A strict diet needs to be followed.
- You need to send regular long sessions connected to the dialysis machine.
- The blood levels are in balance for only a short time so you can feel tired and unwell between treatments.
- It can become harder to balance substance in the blood if you have dialysis for a long period of time.

Transplant

- A kidneys from a donor replaces the diseased or damaged kidney.
- To prevent reject the tissue types of the recipient and donor are matched closely.

Disadvantages:

- Immunosuppressant drugs need to be taken to reduce the chance of rejection.
- There is a shortage of donor kidneys.

Science T5 Y10 B3.12 Grammar Homeostasis in action

1. Where are temperature receptors found in the human body?

2. What is human body temperature.

3. How does the body respond when the blood temperature is too high?

4. How does the body respond when the blood temperature is too low?

1. What substances are reabsorbed in the kidneys?

2. What does ADH do?

3. Which gland secretes ADH?

4. Complete the table below to show how water level in the blood is controlled.

Low water concentration in the blood	High water concentration in the blood

1. How is carbon dioxide removed from the body?

2. Why does carbon dioxide need to be removed from the body?

3. How is urea formed?

4. What methods are responsible for uncontrolled loss of water, mineral ions and urea from the body?

5. Which organ is responsible for the controlled loss of water , mineral ions and urine?

1. What are the two main ways of treating kidney failure?

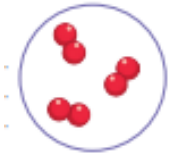
2. What are the disadvantages of dialysis?

3. What are the disadvantages of kidney transplants?

Science T5 Y10 C4.12 Grammar– Chemical Analysis

Vocabulary: Suspension, Formulation

Pure substances



Pure = single element or compound – not mixed with any other substance.

Testing to see if a substance is pure:

- Pure substances have specific melting and boiling points

- Compare your data to a library of known values.

E.g. Water has a boiling point of 100°C, if it is above or below this, it is not pure.

Formulations

Formulation = a mixture that is designed as a useful product.

- Components mixed carefully to get the required **properties**.

Examples of formulations:

- Fuels
- Cleaning agents
- Paints
- Medicines
- Alloys
- Fertilisers
- Food

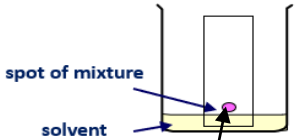
Chromatography

- Technique used to separate mixtures of **soluble substances**.
- How soluble a substance is determines how far it travels across paper.

More soluble = travels further (higher up paper)

Mobile phase

- **Solvent** is the mobile phase
- The substances dissolve in the solvent
- The solvent then moves through the stationary phase.

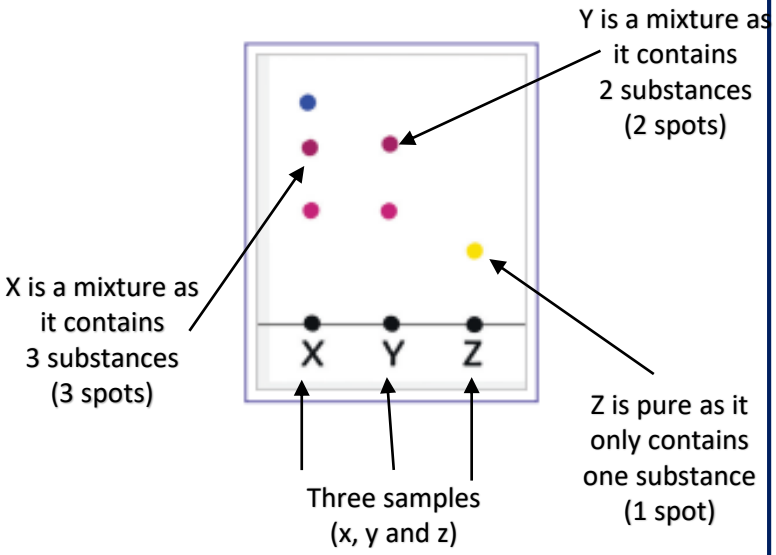


Stationary phase

- Does not move. The paper is the stationary phase.

Important – start line on paper must be drawn in **pencil** as pencil is **insoluble** and **will not run**

The spot and start line must be **above the solvent line** so the colours won't just wash into the solvent in the beaker.



Rf Values

This is the ratio of the distance moved by a substance to the distance moved by the compound

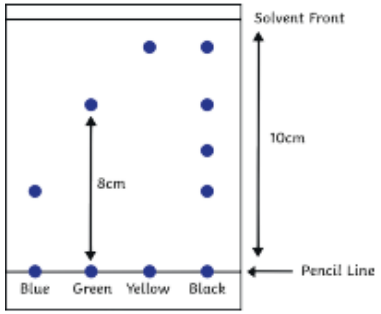
$$R_f = \frac{\text{distance travelled by substance}}{\text{distance travelled by solvent}}$$

- Should always be between 0 and 1.

- Each substance has a unique Rf value.

- Can compare Rf values to a library of known substances

- Can identify unknown substances.



Rf value of green:

8cm / 10cm = 0.8

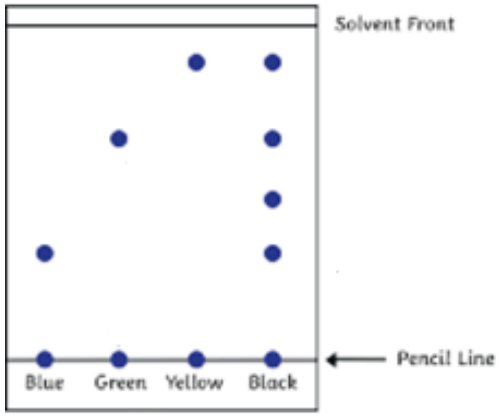
Science T5 Y10 C4.12 Grammar– Chemical Analysis

1. What is a pure substance?
2. How can you test that a substance is pure?

1. What is a formulation?
2. Give 3 examples of formulations.

1. What is chromatography used for?
2. What determines how far the substance travels?
3. What is the mobile phase in paper chromatography?
4. What is the stationary phase in paper chromatography?
5. How would you be able to identify a pure substance on a chromatogram?
6. Draw and label a diagram of the experiment to Investigate how many different colours there are in food colouring using paper chromatography.

1. How do you calculate the Rf value?
2. Rf values should always be between…
3. Use a ruler to measure the distance the solvent moved in the diagram below.
4. Use a ruler to measure how far the yellow spot moved
5. Calculate the Rf value for yellow



Science T5 Y10 C4.12 Grammar– Chemical Analysis

Required Practical – Paper Chromatography

Aim: Investigate how paper chromatography can be used to separate and distinguish between coloured substances.

Method

1) Using a ruler, measure 1cm from bottom of chromatography paper and draw a line across the paper with a **pencil**.

2) Using a pipette, drop small spots of each ink onto pencil line (leave a gap so do not merge).

3) Pour solvent into a beaker, do not fill solvent above the pencil line on the paper.

4) Place chromatograph paper into beaker and allow solvent to move up the paper.

5) Remove paper just before solvent reaches top of the paper and leave to dry.

6) Calculate R_f values of all the spots using the equation below:

$$R_f = \frac{\text{distance travelled by substance}}{\text{distance travelled by solvent}}$$

Common questions

Q1) Why is a pencil used instead of a pen?
A1) Ink in the pen would move up the paper with the substances.

Q2) Why do you not fill the solvent above the line?
A2) Substances would wash off into the solvent instead of rising up the paper

Q3) Why might water not work as a solvent?
A3) Some substances are **insoluble** in water.

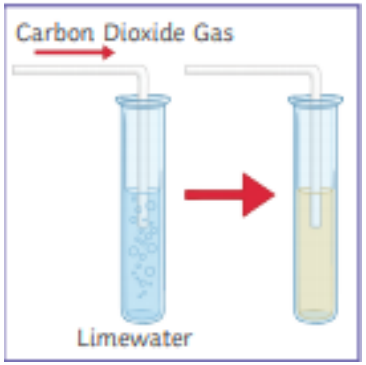
1. Describe how you would carry out paper chromatography to separate and identify the different colours in food dye.
2. Why is a pencil used instead of a pen?
3. Why do you not fill the solvent above the pencil line?
4. Why might water not work as a solvent?

Identification of the Common Gases

Test for hydrogen – Place a **burning** splint at the opening of a test tube. If hydrogen gas is present, it will burn with a **squeaky-pop sound.**

Test for Oxygen – Place a **glowing** splint inside a test tube. The splint will **relight** in the presence of oxygen.

Test for Carbon Dioxide –Bubble the gas through the lime water – if the gas is carbon dioxide, the limewater turns **cloudy**.



Test for Chlorine – **Damp litmus paper** is held over the of gas. If the tube contains chlorine, the litmus paper becomes **bleached** and **turns white**.

1. Describe the tests and the positive results for:

a) Hydrogen
b) Carbon dioxide
c) Oxygen
d) Chlorine

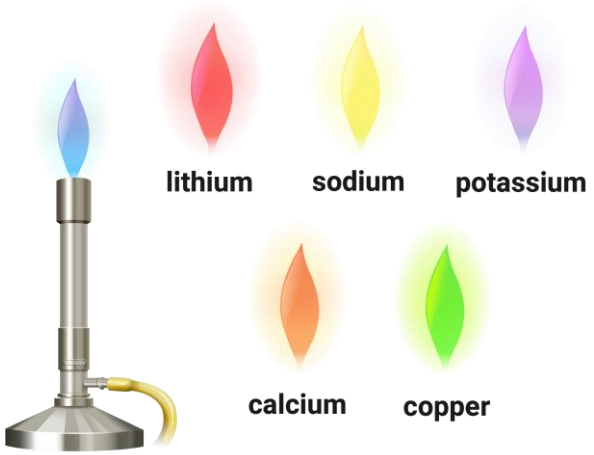
Science T5 Y10 C4.12 Grammar– Chemical Analysis

Flame test

Flame tests can be used to identify some metal ions (cations). Lithium, sodium, potassium, calcium and copper compounds produce distinctive colours in flame tests:

- lithium compounds result in a crimson flame
- sodium compounds result in a yellow flame
- potassium compounds result in a lilac flame
- calcium compounds result in an orange-red flame
- copper compounds result in a green flame.

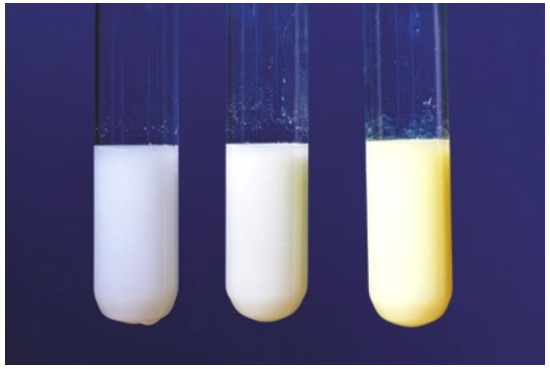
If a sample containing a mixture of ions is used some flame colours can be masked.



Halides

Halide ions in solution produce precipitates with silver nitrate solution in the presence of dilute nitric acid.

Silver chloride is white, silver bromide is cream and silver iodide is yellow.



Sulfate ions

Sulfate ions in solution produce a white precipitate with barium

1. Why do we do flame tests?
2. What colour does lithium go in a flame?
3. What colour does sodium go in a flame?
4. What colour does potassium go in a flame?
5. What colour does calcium go in a flame?
6. What copper does lithium go in a flame?

1. What do we reacts the halides with to test for them?
2. What colour does chlorine go?
3. What colour does bromine go?
4. What colour does iodine go?
5. What is the test for sulphate ions?
6. What is the result of a positive test?

Science T5 Y10 C4.12 Grammar– Chemical Analysis

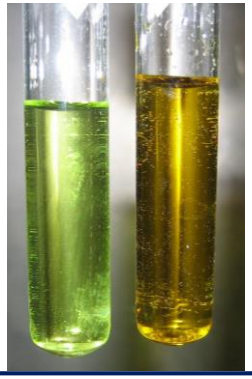
Metal hydroxides

Sodium hydroxide solution can be used to identify some metal ions (cations).
Solutions of aluminium, calcium and magnesium ions form white precipitates when sodium hydroxide solution is added but only the aluminium hydroxide precipitate dissolves in excess sodium hydroxide solution.

Solutions of copper(II), iron(II) and iron(III) ions form coloured precipitates when sodium hydroxide solution is added.

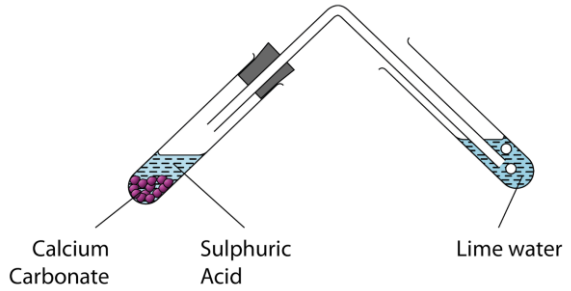
Copper(II) forms a blue precipitate, iron(II) a green precipitate and iron(III) a brown precipitate.

$CuSO_4 + 2NaOH \rightarrow Cu(OH)_2 + Na_2SO_4$



Carbonates

Carbonates react with dilute acids to form carbon dioxide gas.
Carbon dioxide can be identified with limewater, it will go cloudy.



1. What test do we do to test for some metal ions (cations)?
2. What is seen when this test reacts with these aluminium ions?
3. What is seen when this test reacts with these calcium ions?
4. What is seen when this test reacts with these magnesium ions?
5. What is seen when this test reacts with these copper (II) ions?
6. What is seen when this test reacts with these iron (II) ions?
7. What is seen when this test reacts with these iron (III) ions?

1. What is the test for carbonates?
2. How can you test that carbon dioxide has been produced?

Science T5 Y10 C4.12 Grammar– Chemical Analysis

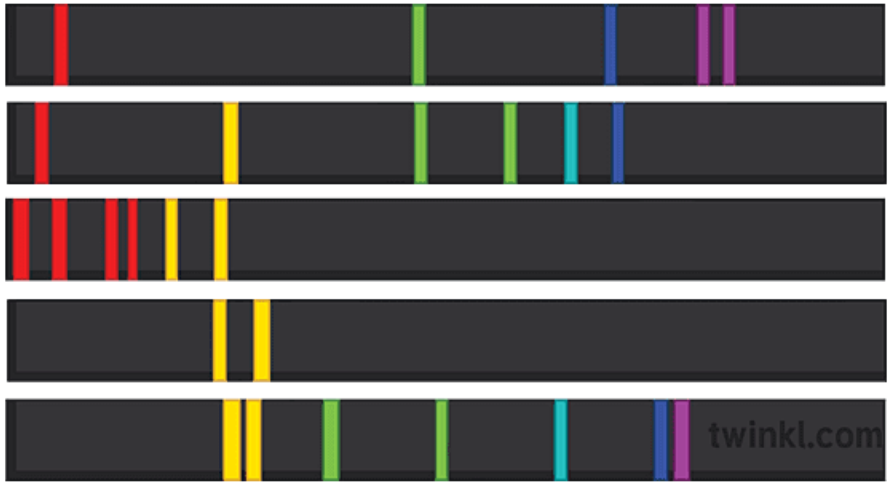
Instrumental methods

Elements and compounds can be detected and identified using instrumental methods. Instrumental methods are accurate, sensitive and rapid. Students should be able to state advantages of instrumental methods compared with the chemical tests in this specification.

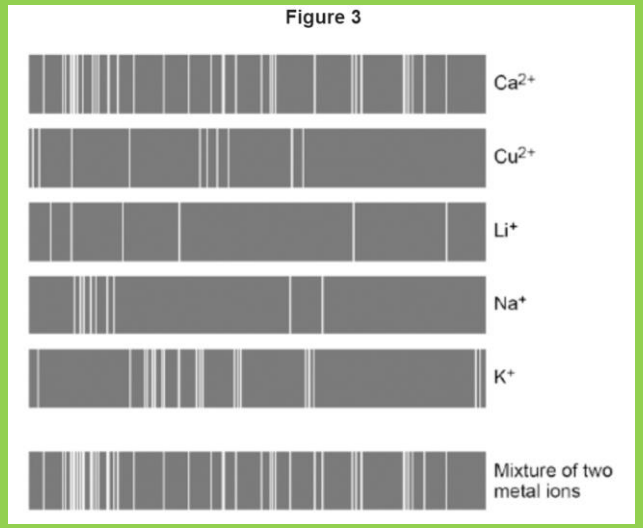
1. What are the 3 things that are advantageous about instrumental techniques?

Flame emission spectroscopy

Flame emission spectroscopy is an example of an instrumental method used to analyse metal ions in solutions. The sample is put into a flame and the light given out is passed through a spectroscope. The output is a line spectrum that can be analysed to identify the metal ions in the solution and measure their concentrations.



1. Name 3 metal ions that are in the sample from the picture
2. What is the reason to do flame emission spectroscopy?



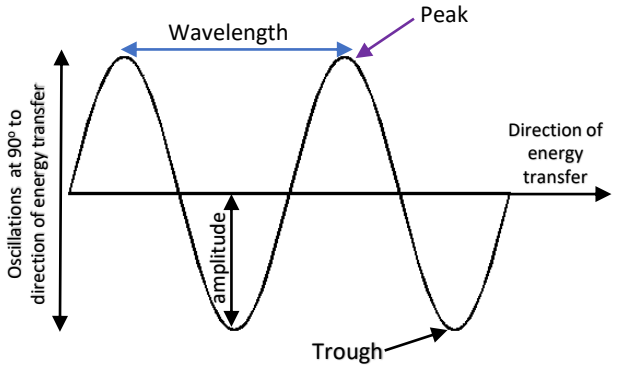
Science T5 Y10 P4.12 Grammar Wave Properties

Transverse Waves

- Oscillations (vibrations) **perpendicular** to direction of energy transfer.

Examples:

- Electromagnetic waves
- Ripples on water.

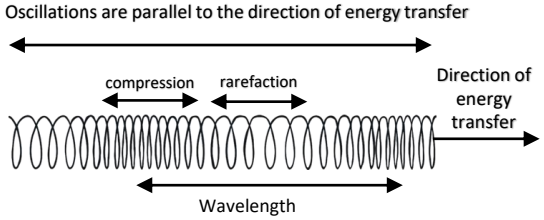


Longitudinal Waves

- Oscillations (vibrations) are **parallel** to direction of energy transfer.

Examples:

- Sound waves



Sound waves have areas of compression and rarefaction.

Compression = particles pushed closer together

Rarefaction = particles are further apart

Properties of Waves

Amplitude – maximum displacement from undisturbed position.

Wavelength – distance from a point on one wave to the equivalent point on the next wave.

Frequency – number of waves passing a point each second.

Frequency is measured in Hertz (Hz)

1Hz = 1 wave per second.

Wave speed – the speed at which energy is transferred through a medium.

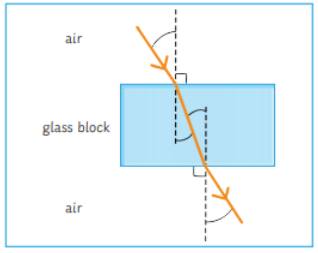
$v = f \times \lambda$ You need to memorise

wave speed (m/s) — frequency (Hz) — wavelength (m)

Refraction

Refraction occurs at the boundary between two mediums because the speed an wavelength of the wave changes at the boundary.

If wave hits medium at an angle of 90° then the ray will slow down but will not be refracted.



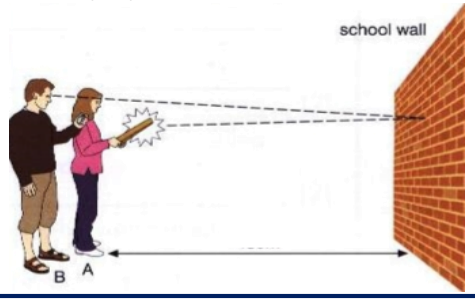
Measuring speed of sound waves in air

- Stand 50m from a large flat wall.
- One person claps/bangs bricks
- Measure time taken to hear the echo.
- Calculate speed of sound using:

Speed = distance x time

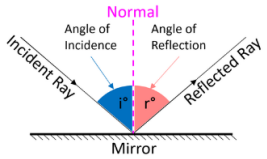
- Remember distance is double (in this case, 100m) as it travels to the wall and back.
- Take several measurements and calculate the mean to reduce error.

This is unlikely to produce an accurate value for sound in air (330 m/s) as the reaction time of the person operating the stopwatch is likely to be a significant proportion of the time measurement.



Reflection

Definition: The change of direction of a light ray or wave at a boundary when the incident ray stays within the medium.



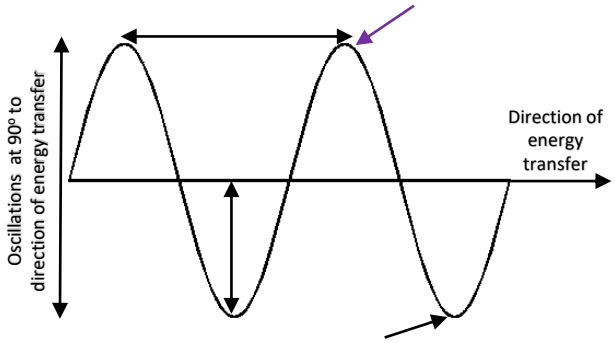
Law of reflection

The angle of incidence = angle of reflection

Science T5 Y10 P4.12 Grammar Wave Properties

1. How are transverse waves produced?

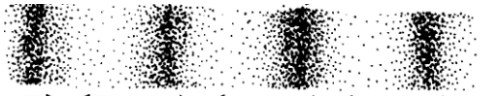
2. Label the wave features below.



1. Describe a longitudinal wave

2. Give an example of a longitudinal wave.

3. Label an area of compression and rarefaction in the diagram below



1. Define the following:

Amplitude

Wavelength

Frequency

2. What are the units for frequency?

3. What is the equation linking frequency, speed and wavelength?

1. When does refraction occur?

2. What happens to the speed, wavelength and frequency of a wave when it is refracted?

1. Describe a method to investigate the speed of sound waves in air.

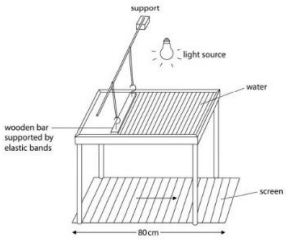
2. What is the biggest source of error in this investigation?

3. What is the speed of sound in air?

1. What is the law of reflection?

Science T5 Y10 P4.12 Grammar Wave Properties Required Practical – investigating wave in a solid and a ripple tank

Measuring waves in a liquid



Equipment

- Ripple tank
- Measuring ruler
- Stop watch

Method

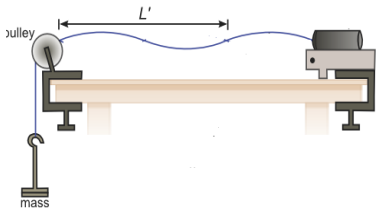
1. Set up the equipment as shown and turn on the motor to produce low frequency waves so that they are able to be counted.
2. Adjust the lamp until pattern is seen clearly on white screen underneath
3. Use a ruler to measure the length of a number of waves (e.g 10) and divide the length by the number of waves to give wavelength. This improves the accuracy of the measurement.
4. Record the waves using a camera or mobile phone. Count the number of waves passing a point in 10 seconds using a stopwatch and slowing the recording down.
5. Divide the number of waves counted by the time to give frequency.
6. Use $v = f \times \lambda$ to calculate the wave speed. Repeat for different frequencies of the motor.

Exp	Length of 10 waves (cm)	Wavelength of 1 wave (cm)	Number of waves in 10 s	Frequency (Hz)	Speed (cm/s)
1	65	0.65	121	12.1	7.9
2	50	0.5	155	15.5	7.9
3	42	0.42	187	18.7	7.9

Measuring waves in a solid

Equipment

- string, vibration generator, hanging mass set and pulley



Method

1. Set up the equipment as shown.
2. Turn on the vibration generator
3. Adjust the length of the string until a standing wave is achieved
4. The frequency can be read from the vibration generator
5. Measure as many complete waves as possible using a ruler
6. Divide the length by the number of waves to give wavelength
7. Calculate speed using $v = f \times \lambda$

Conclusion:

In both experiments, when you increase the frequency, the wavelength decreases – the speed remains the same in the same medium

Science T5 Y10 P4.12 Grammar Wave Properties Required Practical – investigating wave in a solid and a ripple tank

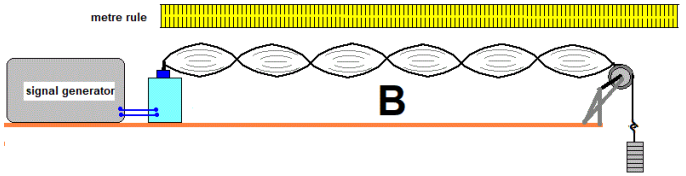
1. Complete the table below to explain the method in calculating the speed of waves in a ripple tank.

Step	Reason
Fill the ripple tank with water, switch on a lamp and place white card underneath the tank.	
Switch on the motor and adjust it to give low frequency waves	
Place a stopwatch next to the card and record the waves, with the stopwatch in view for 10 seconds	
Play the recording in slow motion, count the number of waves passing a certain point and divide this by 10	
Measure the length of 10 waves by taking a picture of the card with a ruler on it.	
Divide the length by 10	

2. If the length of 10 waves is 55cm, what is the wavelength of 1 wave?

3. If there are 210 waves in 10 seconds, what is the frequency?

1. When investigating waves produced by a vibration generator on a string, how do we know the frequency?



2. How many complete waves are shown in the image above?

3. If the length from the generator to the pulley was measured at 66 cm, what is the wavelength?

4. Why is it better to measure multiple waves and divide to find wavelength rather than measure one single wave?

5. What happens to wavelength when frequency increases?

6. What happens to wavelength when frequency decreases?

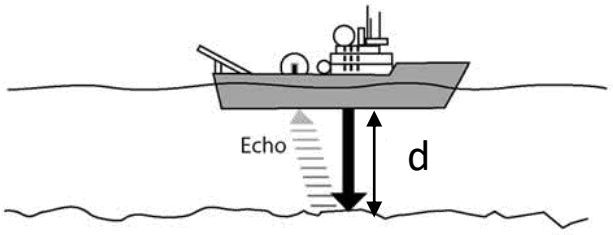
Science T5 Y10 P4.12 Grammar Wave Properties

Sound Waves

- The pitch of a note increases if the frequency of the sound wave increases.
- The loudness of a note increases if the amplitude of the sound wave increases.
- Sound waves cause the eardrum to vibrate, these vibrations send signals to the brain.
- The conversion of sound waves to vibrations of solids only works over a limited frequency rage, limiting the range of frequencies a human can hear. (20-20000 Hz)

Echo sounding

- Uses pulses of high frequency sound waves to measure the depth of objects in deep water.



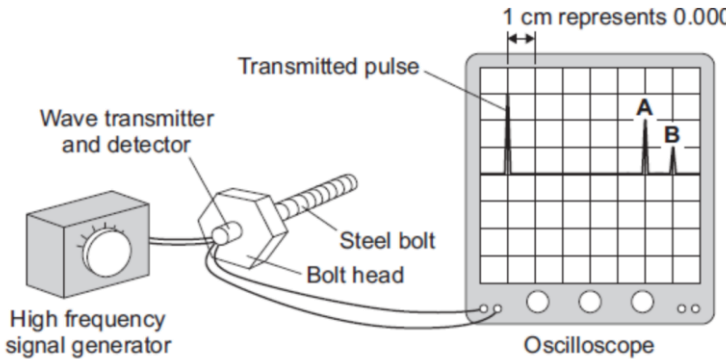
$$d = \frac{1}{2}vt$$

v = speed of the sound wave
t = time between transmitting the signal and receiving the echo.
d = distance to the object

Ultrasound

- Ultrasound waves are sound waves with a frequency above 20 00 Hz.
- Ultrasound waves are partly reflected at a boundary between two different types pf body tissue.
- Ultrasound waves reflected at boundaries are timed, and the timings are used to calculate distances.
- Ultrasound scans are non ionising so are safer than x-rays.

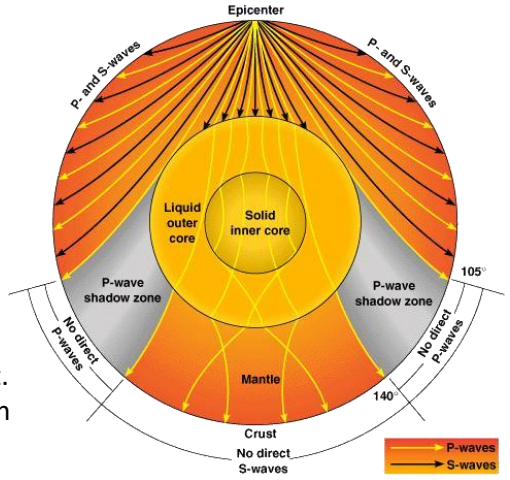
The diagram shows how a very high frequency sound wave can be used to check for internal cracks in a large steel bolt. The oscilloscope trace shows that the bolt does have an internal crack.



- Ultrasound is not only used in medicine, it can also be used to look for flaws or cracks in objects.

Seismic Waves

- Seismic waves are waves that travel through the Earth.
- Seismic waves are produced in an earthquake and spread out from the epicentre.
- Primary seismic waves (P-waves) are longitudinal
- Secondary waves (S-waves) are transverse waves.
- The movement of seismic waves through the Earth following an earthquake provide information on the inner structure of the Earth.
- P waves can movve through solids, but S waves cannot.
- Only P waves are detected opposite the epicentre of an earthquake, suggesting that the centre of the Earth is solid.



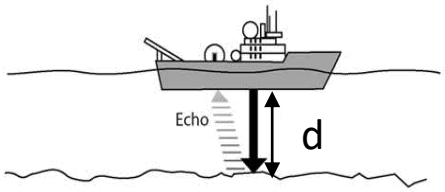
Science T5 Y10 P4.12 Grammar Wave Properties

Sound Waves

1. What part of a sound wave is related to the pitch of the note?
2. What part of a sound wave is related to the loudness of a note?
3. What is hearing range of a human?

Echo sounding

1. What is echo sounding?



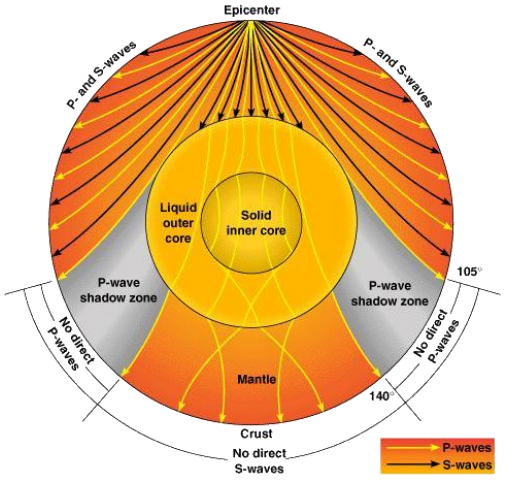
2. What is the equation used to find the depth of the ocean floor (d) under the boat?

Ultrasound

1. What frequency are ultrasound waves?Ultrasound waves are sound waves with a frequency above 20 00 Hz.
2. What happens to ultrasound waves when they hit a boundary between two mediums?
3. Why are ultrasound scans safer than x-rays?
4. Give a non-medical use of ultrasound waves.

Seismic Waves

1. What are seismic waves?
2. What is the difference between a P-wave and an S-wave?
3. What do seismic waves tell us about the structure of the Earth.



1. What is development?

Term	Definition
Development	The progress of a country in terms of economic growth, the use of technology and human welfare.
Uneven development	Development takes place at different rates in different places.
Development gap	The difference in standards of living and wellbeing between the world's richest and poorest countries.
Quality of life	General wellbeing (includes health, happiness, social belonging…)
Standard of living	Level of wealth and material goods available to people. $
Economic development	Progress in an economy. New technology can lead to a move from agriculture to industry.

Ways to classify the world

LIC	Low income countries. GNI per capita of under $1,045. (Poor) e.g. Haiti.
NEE	Newly Emerging Economies. Countries that have begun to experience high rates of economic development, with rapid industrialisation. e.g. Nigeria
HIC	High Income Countries. GNI per capita of over $12,746. (Rich) e.g. UK.
Brandt line	An outdated line from the 1980's that split the world into rich north and poor south.

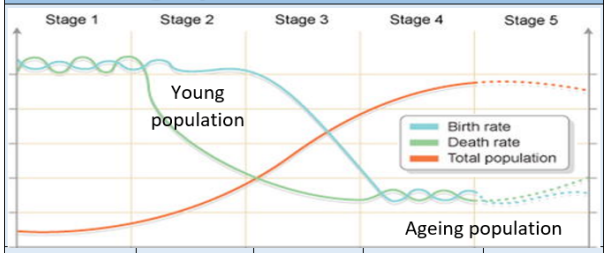
5. Consequences of uneven development

Disparities in wealth	Most developed countries> most wealth Africa owns just 1% of global wealth.
Disparities in health	Health care in LICs poor = ↓ life expect UK LE is 81 years. Nigeria LE is 52 years
International migration	Poor try to migrate to HICs. Mexico into USA. Syrians into Europe. Economic migration also occurs.

2. Measuring development

Term	Cat.	Definition
Arrows show how the indicator changes with development.		
GNI per capita	💰 ↗	Gross National Income per person. Total income divided by the size of the population. - Doesn't show inequality within a country. It's just an average.
Birth rate	🧍 ↘	The number of babies born in a year per 1000 of the population. +Reliable- infers female equality.
Death rate	🧍 ↘	The number of people that die in a year per 1000 of the population. - Less reliable. HICs now have an ageing population- > DR
Infant mortality rate	🧍 ↘	The average number of deaths of infants under the age of 1, per 1000 live births per year.
Life expectancy	🧍 ↗	The average number of years a person might be expected to live. - Less reliable for a LIC due to IMR making it look lower
People per doctor	🧍 ↘	The number of people who depend on a single doctor for their health care needs
Literacy rate	🧍 ↗	The percentage of people who have basic reading / writing skills.
Access to safe water	🧍 ↗	The percentage of people who have access to water that does not carry a health risk such as cholera
HDI	💰 🧍 ↗	Human Development Index. A combined measure that includes GNI per capita, life expectancy and adult literacy rate. Out of 1. + Best indicator as it includes 💰 and 🧍 data. Removes anomalies
Generic limitations		Data can be out of date or unreliable. Inequalities exist within countries.

3. Demographic Transition Model



-	LIC	NEE	HIC	HIC
High BR	High BR	Falling BR	Low BR	Low BR
High DR	Falling DR	Low DR	Low DR	Low DR
Lack of clean water and reliable food = ← DR High IMR = ← BR	Farming = ← BR Medical care improves = → DR	Rural / urban migration. Factories not farming = → BR	Women have careers, marry later, contraception = → BR Very good health care, healthy diets = → DR	

4. Causes of uneven development

Cat	Factor	Explanation
Physical	Natural disasters	Government has to spend money rebuilding rather than education. eg Haiti has had EQs and TS
	Land-locked	No coastline. This hindered trade keeping the GNI low. E.g. Nepal.
	Extreme climates	If it's too hot or cold agriculture is difficult. E.g. Thar Desert
Economic	Debt	A country's money will go to repaying debt rather than education.
	Selling primary products	These are low value goods so the government has restricted income to invest in health care.
Historical	Colon-ialism	European countries controlled much of Africa and Asia. After regaining power they were poor and civil wars often occurred. eg Nigeria- UK colony
	War	Money spent on arms. E.g. Sudan

1. What is development?

Term	Definition
Development	
Uneven development	
Development gap	
Quality of life	
Standard of living	
Economic development	

Ways to classify the world

LIC	
NEE	
HIC	
Brandt line	.

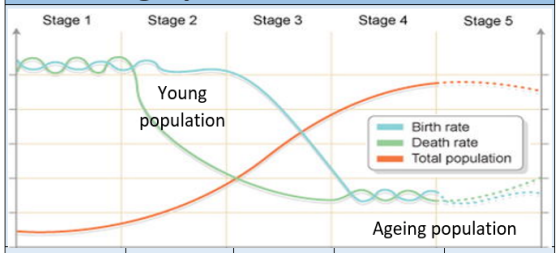
5. Consequences of uneven development

Disparities in wealth	
Disparities in health	
International migration	

2. Measuring development

Term	Cat.	Definition
Arrows show how the indicator changes with development.		
GNI per capita	💰 ↗	
Birth rate	👤 ↘	
Death rate	👤 ↘	
Infant mortality rate	👤 ↘	
Life expectancy	👤 ↗	
People per doctor	👤 ↘	
Literacy rate	👤 ↗	
Access to safe water	👤 ↗	
HDI	💰 👤 ↗	
Generic limitations		

3. Demographic Transition Model



-	LIC	NEE	HIC	HIC
High BR	High BR	Falling BR	Low BR	Low BR
High DR	Falling DR	Low DR	Low DR	Low DR
Lack of clean water and reliable food = ← DR High IMR = ← BR	Farming = ← BR Medical care improves = ↗ DR	Rural / urban migration. Factories not farming = ↗ BR	Women have careers, marry later, contraception = → BR	Very good health care, healthy diets = → DR

4. Causes of uneven development

Cat	Factor	Explanation
Physical	Natural disasters	
	Land-locked	.
	Extreme climates	
Economic	Debt	
	Selling primary products	
Historical	Colon-ialism	
	War	

6. Strategies to reduce uneven development — FAT MIDII

Strategy	Explanation	Evaluation
Fairtrade	When producers in LICs are guaranteed a fair price for the goods they produce ie cocoa, coffee. The better price improves income, aids community projects and protects the environment.	+ Improves quality of life - Poorest can't afford certification
Aid	When a country or non-governmental organisation donates resources or money to another country to improve people's lives. Short term emergency aid or long-term aid. Nigeria- NETS4Life.	+ Improves quality of life - Aid may be tied - Corruption of aid
Tourism	Visitors spend money in a country and infrastructure is improved.	- Can be unreliable
Microfinance loans	Very small loans which are given to people in the LICs to help them start a small business. Often to women.	+ Makes women more equal - Can lead to debt
Investment	Countries or TNCs can invest in a country. Might include the development of infrastructure, building dams or industry. Shell.	+ Triggers multiplier effect - Economic leakage can occur
Debt relief	36/39 of the poorest countries have had their debt cancelled if they could guarantee no corruption and they agreed to spend the money on education/ reducing poverty. Nigeria's cancelled 2005.	+ Improves quality of life - They may go into debt again - Corrupt governments…
Intermediate technology	Sustainable technology that is appropriate to the needs, skills, knowledge and wealth of local people. Small scale projects.	+ Affordable - Small scale
Industrial development	Developing the secondary sector. This brings jobs, higher income and infrastructure improvements.	+ Triggers multiplier effect - Environmental damage

7. Tourism to reduce uneven development

Nepal	LIC. GNI per capital of US$1,090. Suffered civil war and earthquakes. Trek (Mount Everest), jungles, culture.
Advantages	+ $445 million in 2015. + 8% GNI. + 500,000 jobs. 7% employment.
Dis-advantages	- Locals are poorly paid. - Economic leakage. - EQ in 2015 reduced tourism by 1/3. Some out of work for 7 months. - Environmental damage (ie O_2 tanks).
Summary	Has been successful but it is unreliable. Need to find a more sustainable method for the long run.

6. Strategies to reduce uneven development — FAT MIDII

Strategy	Explanation	Evaluation
Fairtrade		-
Aid		-
Tourism		-
Microfinance loans		-
Investment		-
Debt relief		-
Intermediate technology		-
Industrial development		-

7. Tourism to reduce uneven development

Nepal	
Advantages	
Dis-advantages	
Summary	

Year 10 History : 1. Spain reaches the New World, c1490-1512

Spain c1490: exploration, religion and ambition

- Most people knew the world was round
- Most of Europe was mapped
- The Spice Trade with the East Indies was well established
- Portugal and Spain were rivals – both wanted to find a sea route to the East Indies
- The Catholic Church had 2 concerns in the 2nd half of the 15th Century:
  - Defend Christendom
  - Spread Christianity to new lands

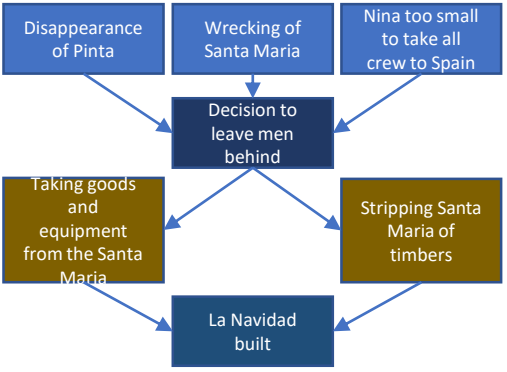
Why did Spain agree to sponsor Columbus?

Christianity	Isabella was keen to continue spreading Christianity to the East Indies.
Priest	Juan Perez, a priest and friend to Isabella, helped Columbus while he made his case.
Status	Finding the sea route to the East Indies before Portugal would give Spain international status.
Wealth	A successful voyage would bring riches to the Spanish treasure and wealth to Spanish merchants.

Columbus' First Voyage 1492

Finding ships and crew	Martin and Vicente Pinzon helped Columbus get ships and crew. 2 caravels – the Nina and the Pinta I carrack – the Santa Maria (flagship)
Rivalry at sea	Columbus had to change routes to avoid Portuguese caravels.
Sailors' fears	Columbus kept 2 different logs to stop sailors getting worried: -1 was accurate and he kept secret -The other log recorded shorter distances
Possible Mutiny	As the sailors had not spotted land for so long, they came close to mutiny. They allowed Columbus 2 more weeks.
Quarrels	Columbus and Martin Pinzon disagreed on the route.
Land	On the 10th October, after 6 weeks at sea, the crew spotted land.

Problems in the Bahamas and La Navidad



Columbus' return to Spain 1493

4th March 1493 Columbus lands in Portugal and meets King John. Columbus is sent congratulations letters and is cheered by crowds in his way to Barcelona.

The role of the pope
The Pope gives Isabella and Ferdinand his support for the new 'Spanish Indies'. He is excited by Columbus' discoveries and wanted Christianity to spread to these lands.

Rivalry with Portugal
King John believed he had claim to the lands Columbus had discovered. This led to talks with Spain to determine who had rights over what lands as Spain were getting ready to send Columbus back to govern.

Columbus' Rewards
Isabella and Ferdinand encouraged Columbus to carry out another voyage. Columbus was given new titles, a new coat of arms and issued a pension for life. He was also given powers to govern lands in the New World.

The Treaty of Tordesillas 1494
On 7th June an agreement was reached between Spain and Portugal. An imaginary line was drawn from the North to the South pole. All lands to the west were for Spain. Lands to the east were for Portugal.

Effects of Spanish Settlements

1	Gold mines set up in Haiti – most of the work done by natives.
2	Tainos and Carib societies destroyed in order to provide work for the Spanish.
3	Columbus had captured natives to sell as slaves – Isabella not pleased and sent slaves back to Haiti.
4	Encomienda system set up. Nicolas de Ovando set this up in 1502.
5	Diseases like smallpox killed many natives. 1492 around 500,000 natives. By 1507 only 60,000.

Impact of contact with the Natives

Gold, cotton and tobacco	Tainos and Caribs	Incident at Samana
Natives wore gold but would not tell the Spaniards where it came from. Kapock was used by the natives – it could be spin into thread and woven into cloth. Spaniards sailing with Columbus quickly picked up the habit of smoking tobacco.	Tainos – considered friendly and peaceful, allowed Columbus to build La Navidad, found at San Salvador. Caribs – mainly found east of the Bahamas, raided the Tainos taking women, rumours that they were cannibals.	On way back to Spain – Samana, Haiti. Men went ashore and found dried human heads and large canoes. An exchange went wrong and erupted in violence. They learnt that the natives could be hostile.

Columbus as governor

La Navidad and Isabela	Santo Domingo
La Navidad found burned to the ground on 28th Nov 1493. A new settlement was named Isabela. It failed as Spaniards wanted adventure and gold. Columbus went exploring and found Jamaica. He returned to Haiti in September 1494.	Bartholomew left in charge when Columbus returned to Spain. He built Santo Domingo. Columbus returned in 1498 to problems – Tainos and Spaniards not cooperating. Order restored by giving Spanish rebels land and providing native labourers to work the land. Rebellions kept breaking out so Columbus carried out executions on both natives and Spaniards. September 1500 – Bobadilla sent to take over from Columbus, Columbus arrested and sent back to Spain in chains.

Imperial Policy towards the Caribbean

Importance of Santo Domingo
It became the centre of Spanish administration in the Caribbean.
-Wide roads and squares surrounded impressive stone buildings
-The building housed administration offices were rules were issued and taxes collected.
-Courts were established to control the laws

Establishment of a monopoly
In 1503, the Casa de Contractacion (House of Trade) was established in Seville, Spain. The aim was to control all trade from the Caribbean. Powers included:
-Approve all voyages to the Caribbean.
-Collect up to date trade routes.
-Collect taxes.
-Control who travels to the Indies.
However, there was smuggling and people worked out ways to avoid paying the taxes.

Catholic Missionaries
In 1503, Ferdinand and Isabella issued a series of rules about educating the Indians:
-Indians were to live in towns and pay taxes.
-Taught about Christianity and expected to live as Christians.
-Taught how to read, write and dress.
Reports reached Spain about the abuses of Indians. Dominicans were sent to stop the mistreatment. Spaniards shocked at the mistreatment of natives.

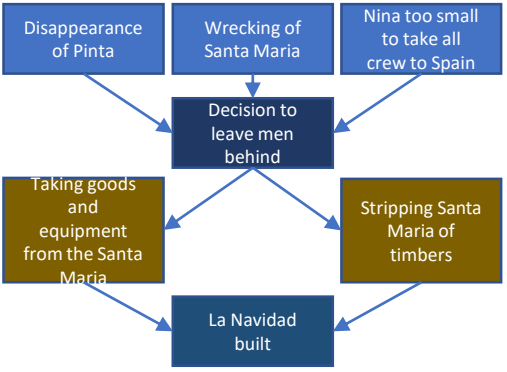
Regulation of Exploration
Ferdinand and Isabella needed to establish Spanish control over exploration and discovery in the New World.
-Every ship sailing to the Caribbean had to leave from Cadiz, Spain and had to register with the Spanish.
-Anyone could live in the Indies freely. If the discovered gold, 2/3 had to go to the Spanish government, 1/3 could be kept by the discoverer. 1/10 of all other products had to be sent to Spain.
-1/10 if all cargo carried by ship sailing to the New World had to be Spanish.

Year 10 History : 1. Spain reaches the New World, c1490-1512

Spain c1490: exploration, religion and ambition

- Most people knew the world was round
- Most of Europe was mapped
- The Spice Trade with the East Indies was well established
- Portugal and Spain were rivals – both wanted to find a sea route to the East Indies
- The Catholic Church had 2 concerns in the 2nd half of the 15th Century:
  - Defend Christendom
  - Spread Christianity to new lands

Problems in the Bahamas and La Navidad



Why did Spain agree to sponsor Columbus?

Christianity	
Priest	
Status	
Wealth	

Columbus' First Voyage 1492

Finding ships and crew	
Rivalry at sea	
Sailors' fears	
Possible Mutiny	
Quarrels	
Land	

Effects of Spanish Settlements

1	
2	
3	
4	
5	

Columbus' return to Spain 1493

4th March 1493 Columbus lands in Portugal and meets King John. Columbus is sent _____ _____.

The role of the pope
The Pope gives Isabella and Ferdinand his support for _____ _____.

Rivalry with Portugal
King John believed he had _____. This led to _____ ___.

Columbus' Rewards
Isabella and Ferdinand encouraged _____. Columbus was given _____ _____

The Treaty of Tordesillas 1494
On 7th June an agreement was reached between _____. An imaginary line was drawn from the _____ to the _____. All lands to the west were for Spain. Lands to the east were for Portugal.

Impact of contact with the Natives

Gold, cotton and tobacco	Tainos and Caribs	Incident at Samana
Natives wore _____ but would not tell the _____where it _____. _____ was used by the natives – it could be spun into _____. Spaniards sailing with Columbus quickly picked up the habit of _____ _____	Tainos – considered _____ _____, allowed Columbus to build La Navidad, found at San Salvador. Caribs – mainly found east of the Bahamas, r_____the Tainos _____ _____ _____	On way back to Spain – Samana, Haiti. Men went ashore and found _____ __heads and _____ __. An exchange went wrong and _____ __. They learnt that the natives _____ __.

Columbus as governor

La Navidad and Isabela	_____
La Navidad found burned to the ground on 28th Nov 1493. A new settlement was named Isabela. It failed as Spaniards wanted adventure and gold. Columbus went exploring and found Jamaica. He returned to Haiti in September 1494.	Bartholomew left in charge when Columbus returned to Spain. He built _____. Columbus returned in _____to problems – Tainos and Spaniards not cooperating. Order restored by giving Spanish _____and providing native labourers _____land. Rebellions kept breaking out so Columbus carried out _____ns on both nat_____s and _____s. September 1500 – Bobadilla sent to take over from Columbus, Columbus arrested and sent back to Spain in chains.

Imperial Policy towards the Caribbean

Importance of Santo Domingo
It became _____of Spanish administration in the C_____n.
-Wide roads and squares surrounded impressive stone buildings
-The building housed _____where rules were issued and taxes collected.
-Courts were established to _____ _____

Establishment of a monopoly
In 1503, the Casa de Contractacion (House of Trade) was established in Seville, Spain. The aim was to control all trade from the Caribbean. Powers included:
-Approve all voyages to the Caribbean.
-Collect up to date trade routes.
-Collect taxes.
-Control who travels to the Indies.
However, there was smuggling and people worked out ways to avoid paying the taxes.

Catholic Missionaries
In 1503, F_____ and I_____a issued a series of _____:
-Indians were to _____to live as Christians.
-Taught how to _____.
Reports reached Spain about the a_____s. Dominicans were sent to stop the _____. Spaniards shocked at the mistreatment of natives.

Regulation of Exploration
Ferdinand and Isabella needed to _____.
-Every ship sailing to the Caribbean had to leave from Cadiz, Spain and had to register with the Spanish.
-Anyone could live in the _____. If the discovered gold, 2/3 had to go to the Spanish government, 1/3 could be kept by the discoverer. 1/10 of all other products had to be sent to Spain.
-1/10 if all cargo carried by ship sailing to the New World had to be Spanish.

Year 10 Religious Studies: Religion and life Knowledge organiser


What we are learning this term:

A. Genesis story
B. Relationship between science and religion
C. Different Christians attitudes to the environment
D. Different Christian attitudes to the use of animals
E. Different Christian attitude to Abortion
F. Different Christian attitudes to Euthanasia

6 Key Words for this term

1 Ensoulement
2 Dominion
3 Stewardship
4 Euthanasia
5 Abortion
6 natural resources

A. *What are the messages from the creation story?*

1 Sacred earth	'God saw that it was good'
2 Dominion	'Rule over it'
3 Stewardship	'Till the earth and keep it'
4 Man is pinnacle	'Made in the image of God'
5 God is Creator	'God said let there be light and there was light'
6 God provides bounty=Love	''I give you all the plants and animals to use'

B. What is meant by natural resources ?

Minerals/ materials and fuels that are part of the world and are used by humans. For example non renewable energy supplies like coal and oil.

C. What 2 types of Christian interpretation are there?

1 Liberal – the story has messages and contains truths that can be understood from the story
2 Literal- The Bible is word for word actually a fact and it happened exactly in 6 days

D. Can Christians use animals anyway they want?

Yes	1 'man made in the image of God' 2 'every animal that creepth upon the ground shall fear you' 3 'the animals shall be food for you' 4 'love thy neighbour' 5 Jesus was a healer
No	1 'Does not God know every sparrow?' 2 Protect the weak and needy 4 'you shall not muzzle the ox whilst he treadeth the corn' 5 'the righteous has regard for the life of his animal' 6 'Love thy neighbour'

E. Should Christians support Euthanasia?

Yes	1 Love thy neighbour 2 Clothe yourself in compassion 3 Principle of double effect
No	1 Made in the image of god 2 Thou shall not kill 3 Protect the weak and needy 4 The body is the temple of the holy spirit 5 Jesus suffered on the cross 6 soul making 7 The Lord giveth and taketh away

F. Should Christians support abortion ?

Yes	1 Love thy neighbour 2 Clothe yourself in compassion 3 God breathed life into the unborn child 4 Principle of double effect 5 Protect the weak and needy
No	1 Made in the image of god 2 Thou shall not kill 3 The sons shall not bear the guilt of the fathers 4 The body is the temple of the holy spirit 6 Go forth and multiply 7 The Lord Giveth and the Lord taketh away

BOXES THAT CAN BE ADAPTED FOR KNOWELDGE ORAGNISER

What we are learning this term:
A. Topic 1
B. Topic 2
C. Topic 3
D. XXXX
E. XXXX
F. XXXX
G. XXXX

6 Key Words for this term	
1	4
2	5
3	6

C.	Key question from Assessment objectives?

Key question from Assessment objectives?	Key question from As
1 2 3 4	1 2 3 4

question from Assessment objectives?	
	Key definition

	Key question from Assessment objectives?
d diagram here	

G.	Key question from Assessment objectives?
Advantages *(3)*	1 2 3 4
Disadvantages *(3)*	1 2 3 4

E.	Keywords

GCSE Unit 11 SPANISH Knowledge organiser.
Topic Education Post - 16

What we are learning this term:

A. Talking about options at 16
B. Discussing choices at 18: work or university?
C. Talking about different jobs
D. Looking for and applying for jobs
E. Using a variety of tenses
F. Using 'quisiera'

6 Key Words for this term

1. porcentaje
2. por ciento
3. la ama de casa
4. la empresa
5. el/la jefe/a
6. cuidar a

11.1G ¿Qué voy a hacer?

a tiempo completo	full time
a tiempo parcial	part time
el/la alumno/a	pupil
aprender	to learn
el aprendizaje	apprenticeship
aprobar	to pass
la asignatura	subject
avanzado/a	advanced
el beneficio	benefit
buscar	to look for
la carrera (universitaria),(university) course, career	
carrera profesional	
conseguir	to get, to manage, to achieve
el consejo	advice
continuar	to continue
dejar	to leave
el dinero	money
encontrar	to find
esperar	to wait for, to hope, expect
los estudios	studies
el examen	exam
la experiencia	experience
la experiencia laboral	work experience
feo/a	ugly
la informática	information technology, IT
mejor	better, best
mientras	while
la nota	grade, mark, result
la opción	option
la oportunidad	opportunity
quedar	to stay
el resultado	result
sacar buenas / malas grades	to get good / to get bad
notas	
seguir + gerund	to carry on …ing

11.1H ¿Vale la pena ir a la universidad?

el mundo laboral	world of work
ofrecer	to offer
olvidarse	to forget
pedir prestado	to borrow
poco a poco	bit by bit
preocupar	to worry, to be concerned
recoger	to pick up, to collect
la residencia de estudiantes	student residence
el resultado	result
seguir	to follow
seguir + gerund	to carry on …ing
tan pronto como	as soon as
el título (university)	degree
tomar un año libre	to take a year out
la ventaja	advantage

11.1F ¿Trabajar o estudiar?

considerar	to consider
demostrar	to show, demonstrate
la desventaja	disadvantage
estar harto/a de	to be fed up with
estar obsesionado/a con	to be obsessed with
furioso/a	furious
ganar	to earn, to win, to gain
la habilidad	skill, ability
horroroso/a	dreadful
imaginar	to imagine
inútil	useless
mundo	world
necesitar	to need
pedir	to ask for
peor	worse, worst
por otra parte	on the other hand
la promoción	promotion
relacionarse con	to relate to, to get on with
repasar	to revise
el repaso	revision
seguro/a	sure
la sociedad	society
todavía	still
vale la pena	it's worth it, it's worthwhile

Key Verbs

Aprender To learn	Ir To go	Querer To want	Preparar To prepare	Dar To give
Aprendo I learn	Voy I go	Quiero I want	Preparo I prepare	Doy I give
Aprendes You learn	Vas You go	Quieres You want	Preparas You prepare	Das You give
Aprende He/she/it learns	Va s/he goes	Quiere He/she/ it wants	Prepara He/she/it prepares	Da He/she/it gives
Aprendemos We learn	Vamos They go	Queremos We want	Preparamos We prepare	Damos We give
Aprenden They learn	Van They go	Quieren They want	Preparan They prepare	Dan They give

11.1H ¿Vale la pena ir a la universidad?

a solas	on one's own
acabar de + infinitive	to have just
adecuado/a	adequate, decent
aislado/a	isolated
al final de	at the end of
apetecer	to appeal
aprender	to learn
así que	so
avanzado/a	advanced
el beneficio	benefit
bien pagado/a	well paid
la calidad	quality
la carrera (universitaria)	university course, career
claro	of course
conseguir	to get, to manage, to achieve
el consejo	advice
deber	to owe
devolver	to give back, to pay back
disfrutar	to enjoy
la edad	age
escoger	to choose
esperar	to wait for, to hope, to expect
estar a punto de	to be about to
la experiencia laboral	work experience
feo/a	ugly
el folleto	leaflet
el/la graduado/a	graduate
hacerse miembro	to become a member
inquietar	to worry, to concern
lejos de	far from
mejor	better, best

GCSE Unit 11 SPANISH Knowledge organiser.
Topic Education Post - 16

What we are learning this term:

A. Talking about options at 16
B. Discussing choices at 18: work or university?
C. Talking about different jobs
D. Looking for and applying for jobs
E. Using a variety of tenses
F. Using 'quisiera'

6 Key Words for this term

1. porcentaje
2. por ciento
3. la ama de casa
4. la empresa
5. el/la jefe/a
6. cuidar a

11.1G ¿Qué voy a hacer?

a tiempo completo _____
a tiempo parcial _____
el/la alumno/a _____
_____ to learn
el _____ apprenticeship
aprobar to _____
la asignatura _____
_____ advanced
el beneficio _____
_____ to look for
la carrera (universitaria),(university) course, career
carrera profesional
_____ to get, to manage, to achieve
el consejo _____
_____ to continue
dejar to_____
el _____ money
encontrar to _____
_____ to wait for, to hope, expect
los estudios _____
el examen _____
la experiencia _____
la experiencia laboral work _____
_____ ugly
la _____ information technology, IT
_____ better, best
mientras _____
la _____ grade, mark, result
la opción _____
la _____ opportunity
quedar to _____
el _____ result
Sacar _____to get good / to get bad grades
notas
seguir + gerund _____

11.1F ¿Trabajar o estudiar?

_____ to consider
_____ to show, demonstrate
la desventaja _____
_____ to be fed up with
estar obsesionado/a con to be obsessed with
furioso/a _____
_____ to earn, to win, to gain
la habilidad _____
horroroso/a _____
_____ to imagine
inútil _____
mundo _____
_____ to need
pedir _____
_____ worse, worst
por otra parte _____
la promoción _____
_____ to relate to, to get on with
repasar to _____
el repaso _____
_____ sure
la sociedad _____
todavía _____
vale la pena _____

Key Verbs

Aprender To _____	_____ To go	Querer To want	Preparar _____	Dar To give
_____ I learn	_____ I go	Quiero _____	_____ I prepare	_____ I give
_____ You learn	_____ You go	Quieres _____	Preparas You prepare	_____ You give
Aprende He/she/it learns	Va _____	Quiere He/she/ it wants	_____ He/she/it prepares	_____ He/she/it gives
Aprendemos _____	_____ They go	_____ We want	Preparamos We prepare	_____ We give
Aprenden They learn	Van They go	Quieren They want	_____ They prepare	Dan They give

11.1H ¿Vale la pena ir a la universidad?

el mundo laboral _____
ofrecer to _____
_____ to forget
pedir prestado to _____
_____ bit by bit
_____ to worry, to be concerned
_____ to pick up, to collect
la residencia de estudiantes _____
el resultado _____
_____ to follow
seguir + gerund to _____
tan pronto como _____
el título (university) _____
_____ to take a year out
_____ advantage

11.1H ¿Vale la pena ir a la universidad?

a solas _____
_____ to have just
adecuado/a _____
_____ isolated
al final de _____
_____ to appeal
aprender to _____
así que _____
avanzado/a _____
_____ benefit
bien pagado/a _____
la calidad _____
la _____ university course, career
claro _____
_____ to get, to manage, to achieve
el consejo _____
deber _____
_____ to give back, to pay back
disfrutar to _____
la edad _____
_____ to choose
_____ to wait for, to hope, to expect
estar a punto de to _____
la experiencia laboral _____
_____ ugly
el _____ leaflet
el/la graduado/a _____
_____ to become a member
_____ to worry, to concern
lejos de _____
mejor _____

GCSE Unit 12 SPANISH Knowledge organiser.
Topic Jobs, Career choices and Ambitions

What we are learning this term:

A. Talking about different jobs
B. Looking for and applying for jobs
C. Recognising percentages and fractions
D. Learning useful phrases
E. Using a variety of tenses

6 Key Words for this term

1. buscar
2. una entrevista
3. anuncios
4. empezar
5. ganar
6. desafiante

12.1G Los trabajos

el ama de casa (fem.)	housewife
el banco	bank
el/la cajero/a	cashier
el/la cliente/a	customer
el cocinero/a	cook
estar en paro	to be unemployed
el ingeniero/a	engineer
el jardinero/a	gardener
limpiar	to clean
la mitad	half
la oficina	office
la peluquería	hairdresser's
el peluquero/a	hairdresser
el/la policía	police officer
por ciento	per cent
el/la porcentaje	percentage
quisiera	I would like
resolver	to solve, resolve
salvar	to save
temporal	temporary
el/la veterinario/a	vet
la vida	life

12.1F Buscar trabajo

a principios de	at the beginning of
el/la administrativo/a	clerk, office worker
ambicioso/a	ambitious
anciano/a	elderly
animado/a	lively
arreglar	to sort, fix, arrange
el aspecto	appearance, aspect
atender a	to attend to
la caja	till, check-out
el camping	campsite
el carnicero/a	butcher
el carpintero/a	carpenter
la carta	letter
los conocimientos	knowledge
el correo electrónico	email
cortés	polite, courteous
cuidar a	to care for, look after
el/la dependiente/a	shop assistant
el detalle	detail
dominar + language	to be fluent in
el/la electricista	electrician
el empleado/a	employee
la empresa	company, firm
en seguida	straightaway
la energía	energy
fiable	reliable
la gente	people
el/la hombre / mujer de negocios	businessman / business woman
el juego	game
el/la maestro/a	primary school teacher
mayor	older
organizado/a	organised
paciente	patient
la panadería	bakery
el panadero/a	baker
práctico/a	practical
el problema	problem
el/la recepcionista	receptionist
servir	to serve
sincero/a	honest
el sitio web	website
el sobre	envelope
sueldo	wage
trabajador/a	hard-working
el traductor/a	translator
el trimestre	term
la variedad	variety

Key Verbs

Tener To have	Ir To go	Buscar To look for	Hacer – to do/make	Encontrar To find
Tengo I have	Voy I go	Busco I'm looking for	Hago I do	Encuentro I find
Tienes You have	Vas You go	Buscas You're looking for	Haces You do	Encuentras You find
Tiene He/she/it has	Va s/he goes	Busca He/she/it is looking	Hace s/he does	Encuentra He/she/it finds
Tenemos We have	Vamos They go	Buscamos We're looking for	Hacemos We do	Encontramos We find
Tienen They have	Van They go	Buscan They're looking	Hacen They do	Encuentran They find

12.1H El trabajo ideal

el/la abogado/a	lawyer
el/la albañil	builder, bricklayer
el/la amo/a de casa	house husband/housewife
ascender	to move up
el/la azafato/a	flight attendant
el/la cajero/a	cashier
el/la camionero/a	lorry driver
la capacidad	ability, capacity
el/la cartero/a	postal worker
el/la cliente/a	customer
la compañía aérea	airline
compartir	to share
el/la contable	accountant
la cuenta	account
diseñar	to design
fijo/a	fixed, permanent
físico/a	physical
la formación	training
funcionar	to function
el/la gerente	manager
el/la granjero/a	farmer
las horas de trabajo flexibles	flexitime, flexible working hours
el/la jardinero/a	gardener
el/la jefe/jefa	boss
limpiar	to clean
la lluvia	rain
mejorar	to improve
la peluquería	hairdresser's
el/la peluquero/a	hairdresser
la perspectiva	prospect
el proyecto	project
el rincón	corner

12.1H El trabajo ideal

temporal	temporary
utilizar	to use
el viento	wind
ya que	as, since

GCSE Unit 12 SPANISH Knowledge organiser.
Topic Jobs, Career choices and Ambitions

What we are learning this term:

A. Talking about different jobs
B. Looking for and applying for jobs
C. Recognising percentages and fractions
D. Learning useful phrases
E. Using a variety of tenses

6 Key Words for this term

1. buscar	4. empezar
2. una entrevista	5. ganar
3. anuncios	6. desafiante

12.1G Los trabajos

el ama de casa (fem.)	_____
el banco	_____
el/la cajero/a	_____
_____	customer
_____	cook
_____	to be unemployed
el ingeniero/a	_____
el jardinero/a	_____
_____	to clean
la mitad	_____
la oficina	_____
_____	hairdresser's
el peluquero/a	_____
_____	police officer
por ciento	_____
el/la porcentaje	_____
_____	I would like
resolver	_____
salvar	_____
temporal	_____
el/la veterinario/a	_____
_____	life

12.1F Buscar trabajo

a principios de	_____
el/la administrativo/a	_____
_____	ambitious
_____	elderly
animado/a	_____
_____	to sort, fix, arrange
el _____	appearance, aspect
atender a	_____
la _____	till, check-out
el _____	campsite
el carnicero/a	_____
el carpintero/a	_____
_____	letter
los conocimientos	_____
el correo electrónico	_____
_____	polite, courteous
_____	to care for, look after
el/la dependiente/a	_____
el detalle	_____
dominar + language	to be fluent in
el/la electricista	_____
_____	employee
la _____	company, firm
_____	straightaway
la energía	_____
_____	reliable
la gente	_____
el/la hombre / mujer de negocios	businessman / business woman
el juego	_____
_____	primary school teacher
mayor	_____
organizado/a	_____
_____	patient
la panadería	_____
el panadero/a	_____
_____	practical
el problema	_____
el/la recepcionista	_____
_____	to serve
_____	honest
el sitio web	_____
el sobre	_____
_____	wage
trabajador/a	_____
el traductor/a	_____
el _____	term
la _____	variety

Key Verbs

Tener To _____	Ir To _____	_____ To look for	_____ to do/make	Encontrar _____
_____ I have	Voy _____	_____ I'm looking for	Hago _____	Encuentro _____
_____ You have	Vas _____	_____ You're looking for	Haces _____	_____ You find
Tiene He/she/it has	Va _____	_____ He/she/it is looking	Hace _____	Encuentra _____
_____ We have	_____ They go	Buscamos _____	Hacemos _____	Encontramos _____
Tienen _____	_____ They go	_____ They're looking	_____ They do	Encuentran _____

12.1H El trabajo ideal

el/la abogado/a	_____
_____	builder, bricklayer
_____	house husband/housewife
_____	to move up
el/la azafato/a	_____
el/la cajero/a	_____
el/la camionero/a	_____
la _____	ability, capacity
el/la cartero/a	_____
el/la cliente/a	_____
la compañía aérea	_____
_____	to share
_____	accountant
la cuenta	_____
_____	to design
_____	fixed, permanent
físico/a	_____
la formación	_____
_____	to function
el/la gerente	_____
el/la granjero/a	_____
las horas de trabajo flexibles	flexitime, flexible working hours
el/la jardinero/a	_____
_____	boss
_____	to clean
la lluvia	_____
_____	to improve
la peluquería	_____
el/la peluquero/a	_____
la perspectiva	_____
el _____	project
el _____	corner

12.1H El trabajo ideal

temporal	_____
_____	to use
el viento	_____
_____	as, since

GCSE Business. Paper 1. Understanding External Influences on Business

39. Stakeholder

Stakeholders are the people or groups with an interest in the success or failure of an organisation.

Types of stakeholders & their typical objectives:

Business owners & shareholders
Interested in the business being successful and making a profit.

Staff/managers
Interested in having job security, career development, fair wages etc.

Customers
Interested in getting an honest and fair deal from a business.

Local Community
Interested in honest and fair dealing/co-operation with the organisation with regards to local employment and environment.

Local Government
Interested in employment plans, location plans and business ability to pay tax.

Pressure Groups
Interested in fair and ethically correct business practices.

42. Retail Legislation

Legislation	Law's passed by acts of parliament. Too many rules that impact on a business from operating as the owner would like are known as "**Red Tape**".
Consumer Rights Act 2015	• Goods must be fit for purpose and free from defects. • The buyer has the right to get their money back or have their product repaired at the seller's expense. • Any issues are to be dealt with by the seller and not the manufacturer.
Trade Descriptions Act	• Trader's can not use false or misleading statements. • Labels must not be misleading.
Other acts of legislation:	Consumer credit act 1974, The weights and measures act 1985, The food safety act 1990.

43. Recruitment Legislation

Employees are protected from being exploited in the work place.

Equality Act 2010	Organisations must consider all job applicants equally in regards to gender, age, skin colour etc.
Equal Pay Act 1970	Organisations must pay workers fairly and can not discriminate in regards to gender, age or skin colour etc.

40. Types of technology used in business

Technology is used in different aspects of business:

E-commerce: Allows businesses to sell their products online and reach a wider audience of potential customers with lower costs.

Social Media: Allows a business to communicate and interact directly with customers.

Digital Communication: E-mail allows customers to contact a business personally and directly.

Payment Systems: Online payment systems (eg. Paypal) allow all types of businesses to access their payments fast and easily.

41. How does technology influence business activity?

Sales can increase as a result of e-commerce because customers can access products or services 24 hours a day, 7 days a week. New technology drives innovation to create new products or services and this can increase sales of new products.

Costs can be reduced through advertising online through websites, e-mail newsletters, and via social media. Costs can also be reduced through manufacturing efficiency and being able to find the best deal on raw materials online.

The 4 P's are affected by different types of technology.
Product = New technologically advanced product or a new method of production.
Promotion = Digital marketing can improve the effectiveness of marketing and is cheap.
Place = Products can be sold online and can be accessed by customers worldwide.

44. The Economy

The economy is the collection of business transactions that take place throughout the country, throughout the year.

Interest rates.	The amount that a lender charges per year to someone who has borrowed money. This is measured as a percentage.
Exchange rates	The value of the pound (£) measured by how much foreign currency can be bought per pound (£).
Recession	A downturn in sales and output throughout the economy, often leading to rising unemployment.
Inflation	The rate in which prices are rising from the same time last year.

GCSE Business. Paper 1. Understanding External Influences on Business

39. Stakeholder

Stakeholders are the people or groups with an interest in the success o failure of an organisation.

Types of stakeholders & their typical objectives:

40. Types of technology used in business

Technology is used in different aspects of business:

E-commerce:

Social Media:

Digital Communication:

Payment Systems:

41. How does technology influence business activity?

42. Retail Legislation

Legislation	
Consumer Rights Act 2015	
Trade Descriptions Act	
Other acts of legislation:	

43. Recruitment Legislation

Employees are protected from being exploited in the work place.

Equality Act 2010	
Equal Pay Act 1970	

44. The Economy

The economy is the collection of business transactions that take place throughout the country, throughout the year.

Interest rates.	
Exchange rates	
Recession	
Inflation	

GCSE Business. Paper 1. Understanding External Influences on Business

45. Changes in interest rates

Interest rates change depending on how confident a lender is on the state of the economy. If the economy is strong the % rates are low, if the economy is weak then % rates are high.

Effects of lower interest rates:

Increased customer spending:
Customers are happy to spend money more confidently because they will pay less in interest and are more likely to have an excess in disposable income.

More favourable borrowing:
Businesses can borrow money from lenders at a lower rate of interest.

Effects of higher interest rates:

Reduced customer spending:
Customers are unlikely to spend money confidently because they will pay more in interest on loans and mortgages. Customers are more likely to have a lack of disposable income.

Less favourable borrowing:
Businesses will be charged higher interest rates on any money they have borrowed.

46. Changes in exchange rates

Exchange rates change depend on the supply and demand for different currencies. This is based on how well a country's economy is performing.

Effects of a strong pound (£):

Imported goods become cheaper to buy, Products being exported become more expensive abroad.

Effects of a weak pound (£):

Imported goods become more expensive to buy, products being exported become cheaper abroad.

47. External Influences

External influences can impact a business significantly. Business owners are often powerless to control how and when these influences can impact on business.

Typical external influences

- **Technology –** Technology changes all the time and it can affect how customers buy from a business, how products are made or even how a business is expected to communicate with customers.
- **Legislation –** New laws are created by government to protect consumers, employees and business activities from unethical, unsafe or undesirable working practices. Some legislation can be perceived as being a barrier to easy business and is known as "Red Tape".
- **Economic Climate –** Businesses need to be able to react to changes in the economy. If customers are feeling unconfident in their ability to spend money because of a weak economy, then this could affect a business's ability to generate sales. If exchange rates change, a business will need to deal with the consequences of higher costs or lower demand abroad.

GCSE Business. Paper 1. Understanding External Influences on Business

45. Changes in interest rates

Interest rates change depending on how confident a lender is on the state of the economy. If the economy is strong the % rates are low, if the economy is weak then % rates are high.

Effects of lower interest rates:

Increased customer spending:

More favourable borrowing:

Effects of higher interest rates:

Reduced customer spending:

Less favourable borrowing:

46. Changes in exchange rates

Exchange rates change depend on the supply and demand for different currencies. This is based on how well a country's economy is performing.

Effects of a strong pound (£):

Effects of a weak pound (£):

47. External Influences

External influences can impact a business significantly. Business owners are often powerless to control how and when these influences can impact on business.

Typical external influences

- **Technology –**
- **Legislation –**
- **Economic Climate –**

Y10 COMPUTER SCIENCE – TERM 5 & 6 COMPUTER SYSTEMS

Hardware and Software

Hardware:
The physical, electrical/mechanical parts of a computer. This consists of internal components such as the CPU and graphics card, and additional hardware which allows the users to communicate with the system through input and output devices, such as a monitor and a keyboard.

Externally attached hardware are known as peripherals.

Software:
The programs, data and applications in a computer system. Any parts of a computer system that aren't physical.

Software can be classified as either application or system software.
Application – Programs which perform specific end-user tasks. E.g. web browser, spreadsheet, games.
System – Programs which help to run or maintain the computer system.

System Software:

Operating Systems -
Manages processes.
Manages memory.
Manages I/O (input/output) devices.
Manages applications.
Manages security (access levels, user accounts)
Controls hardware components.
Provides a platform for software to run on.
Provides a user interface.

Utility Programs -
Programs which help to maintain or manage the computer system. E.g. Disk Defragmenters, Antivirus, Compression, Encryption, Registry Cleaners, Driver Updaters,

Translators -
Translate source code from a high-level language or assembly code into machine code (binary). There are three types, Compilers, Interpreters and Assemblers.

Compilers – Does the translation all at once and creates an exe file containing the machine code.

Interpreters – Does the translation line by line.
Assembler – Converts assembly code.

Boolean Logic Gates

AND Gate.
Both inputs need to be true for the output to be true.

Input A	Input B	Output Q
0	0	0
0	1	0
1	0	0
1	1	1

OR Gate.
Either of the two inputs needs to be true for the output to be true.

Input A	Input B	Output Q
0	0	0
0	1	1
1	0	1
1	1	1

NOT Gate.
Inverts the input.

Input A	Output Q
1	0
0	1

Y10 COMPUTER SCIENCE – TERM 5 & 6 COMPUTER SYSTEMS

CPU Components

Control Unit (CU) – fetches, decodes and executes instructions. Sends control signals to the system and peripherals. Moves data around the system.

Arithmetic Logic Unit (ALU) – performs arithmetic and logical operations. Acts as a gateway between primary memory and secondary storage.

Cache – Small amount of high-speed memory to store frequently used data and instructions.

Clock – Synchronises all computer's components by sending out regular electrical pulses. The more pulses per second, the more calculations and operations can be performed. This is measured in Hz.

Buses – Collections of parallel wires for high speed internal communication within the CPU.

Address Bus – Carries memory addresses.
Data Bus – Carries data between components.
Control Bus – Carries control signals.

Registers – Small amounts of high-speed memory within the CPU. Special purpose ones listed below.

Program Counter – Holds the memory address of the next instruction.
Memory Address Register – Holds the address of the current instruction.
Memory Buffer/Data Register – Holds the data that is either being retrieved or stored.
Current Instruction Register – Holds the current instruction which needs to be decoded and executed.
Accumulator – Holds the result of calculations from the ALU.

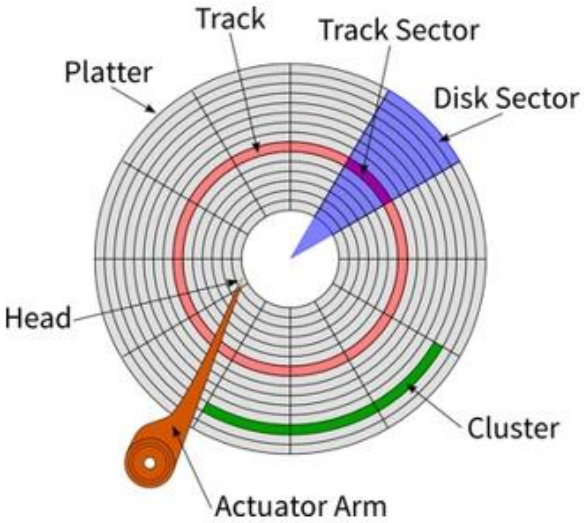
Fetch-Decode-Execute Cycle

1. The memory address held in the program counter is copied into the MAR.
2. The address in the program counter is then incremented (increased by 1) so it now holds the address of the next instruction to be fetched.
3. The processor sends a signal along the address bus to the memory address held in the MAR.
4. The instruction/data in that memory address is carried by the data bus to the MBR/MDR.
5. The instruction/data in the MBR/MDR is copied to the CIR.
6. The instruction/data in the CIR is decoded and executed. Results of processing are stored in the ACC.
7. The cycle then returns to step one.

Secondary Storage

Secondary Storage is long-term, non-volatile storage. Without secondary storage, all programs and data would be lost when the computer is turned off.

Magnetic
Hard disks spin.
Actuator arm moves a read/write head over the disk to access parts of it. The head can detect the magnetisation of the disk and either magnetise (1's) or demagnetise (0's) parts of it.



Optical
Optical disk spins and has a spiral track.
Laser head is moved over the disk and shines the laser down onto it.
Disk has pits (scatters light 0's) and lands (reflects light 1's).
Writeable disks have photosensitive dye which is burned to represent 1's and 0's.

Solid State
A collection of semiconductor chips which can be accessed and written to extremely quickly.
No moving parts, so they are more reliable than disks.

KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER

Name: Date:

Macronutrients, fibre and water

Macronutrients
Macronutrients provide energy. The macronutrients are:
- carbohydrate;
- protein;
- fat.

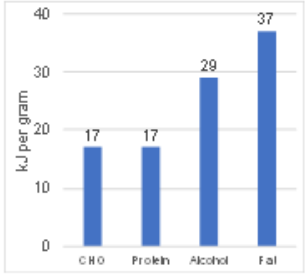
Macronutrients are measured in grams (g).

Alcohol
Alcohol is not considered a nutrient, but is a source of energy in the diet.

The government recommends no more than 14 units of alcohol per week for both men and women.

Energy from food
- Energy intake is measured in joules (J) or kilojoules (kJ), but many people are more familiar with Calories (kcal).
- Different macronutrients, and alcohol, provide different amounts of energy.

	Energy per gram
Carbohydrate	16kJ (3.75 kcals)
Protein	17kJ (4 kcals)
Alcohol	29kJ (7kcals)
Fat	37kJ (9 kcals)



Protein
- Made up of building blocks called amino acids.
- There are 20 amino acids found in protein.
- Eight amino acids have to be provided by the diet (called essential amino acids).

The essential amino acids are isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine.
In young children, additional amino acids, e.g. histidine and tyrosine, are sometimes considered to be essential (or 'conditionally essential') because they may be unable to make enough to meet their needs.

Recommendations
- 0.75g/kg bodyweight/day in adults.

Sources:
Animal sources: meat; poultry; fish; eggs; milk; dairy food.

Plant sources: soya; nuts; seeds; pulses, e.g. beans, lentils; mycoprotein.

Protein complementation
Different food contains different amounts and combinations of amino acids.

Vegans and vegetarians can get all the amino acids they need by combining different protein types at the same meal. This is known as protein complementation.

Examples are:
- rice and peas;
- beans on toast;
- hummus and pitta bread;
- bean chilli served with rice.

Carbohydrate
All types of carbohydrate are compounds of carbon, hydrogen and oxygen. They can be divided into three main groups according to the size of the molecule.

These three types are:
- monosaccharides (e.g. glucose);
- disaccharides (e.g. lactose);
- polysaccharide (e.g. sucrose).

The two types main of carbohydrate that provide dietary energy are starch and sugars. Dietary fibre is also a type of carbohydrate.

Starchy carbohydrate is an important source of energy.

Starchy foods - we should be choosing wholegrain versions of starchy foods where possible.

Recommendations
- Total carbohydrate - around 50% of daily food energy.
- Free sugars include all sugars added to foods plus sugars naturally present in honey, syrups and unsweetened fruit juice (<5% daily food energy).
- Fibre is a term used for plant-based carbohydrates that are not digested in the small intestine (30g/day for adults).

Fibre
- Dietary fibre is a type of carbohydrate found in plant foods.
- Food examples include wholegrain cereals and cereal products; oats; beans; lentils; fruit; vegetables; nuts; and, seeds.

Dietary fibre helps to:
- reduce the risk of heart disease, diabetes and some cancers;
- help weight control;
- bulk up stools;
- prevent constipation;
- improve gut health.

Fat
Sources of fat include:
- saturated fat;
- monounsaturated fat;
- polyunsaturated fat.

Fats can be saturated, when they have no double bonds, monounsaturated, when they have one double bond, or polyunsaturated, when they have more than one double bond.

Recommendations
- <35% energy, Saturated fat <11% energy.

A high saturated fat intake is linked with high blood cholesterol levels.

Sources:
Saturated fat: fatty cuts of meat; skin of poultry; butter; hard cheese; biscuits, cakes and pastries; chocolate.
Monounsaturated fat: edible oils especially olive oil; avocados; nuts.
Polyunsaturated fatty acids: edible oils especially sunflower oil; seeds; margarine; spreadable fats made from vegetable oils and oily fish.

Dietary reference values (DRVs) are a series of estimates of the energy and nutritional requirements of different groups of healthy people in the UK population. They are not recommendations or goals for individuals.

Reference Intakes are guidelines for the maximum amount of energy (calories), fat, saturated fat, sugars and salt consumed in a day (based on a healthy adult female).

Key terms
Dietary reference values: Estimated dietary requirements for particular groups of the population.
Essential amino acids: 8 of the different amino acids found in proteins from plants and animals that have to be provided by the diet.
Macronutrients: Nutrients needed to provide energy and as the building blocks for growth and maintenance of the body.
Protein complementation: combining different protein types at the same meal to ensure all EAAs are ingested.
Reference Intakes: Guidelines for the maximum amount of nutrients consumed.

Hydration
- Aim to drink 6-8 glasses of fluid every day.
- Water, lower fat milk and sugar-free drinks including tea and coffee all count.
- Fruit juice and smoothies also count but should be limited to no more than a combined total of 150ml per day.

20% of water is provided by food such as soups, yogurts, fruit and vegetables.

The other 80% is provided by drinks such as water, milk and juice.

Drinking too much water can lead to 'water intoxication' with potentially life threatening hyponatraemia.

This is caused when the concentration of sodium in the blood gets too low.

KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER

Micronutrients

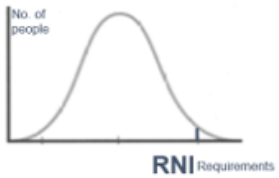
Micronutrients are needed in the body in tiny amounts. They do not provide energy, but are required for a number of important processes in the body.

There are two main groups of micronutrients:
- vitamins;
- minerals and trace elements.

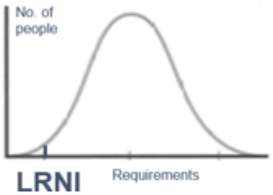
Micronutrients are measured in milligrams (mg) and micrograms (µg) with 1mg = 0.001g and 1µg = 0.001mg.

Micronutrient recommendations

The recommendations for vitamins and minerals are based on the **Reference Nutrient Intake (RNI).**



When looking at low intakes of micronutrients, the Lower Reference Nutrient Intake (LRNI) is used.



For more information, go to: https://bit.ly/36KUnji

Micronutrient recommendations

People have different requirements for each micronutrient, according to their:
- age;
- gender;
- physiological state (e.g. pregnancy).

Vitamins

Vitamins are nutrients required by the body in small amounts, for a variety of essential processes.

Most vitamins cannot be made by the body, so need to be provided in the diet.

Vitamins are grouped into:
- fat-soluble vitamins (vitamins A, D, E and K);
- water-soluble vitamins (B vitamins and vitamin C).

Minerals

Minerals are inorganic substances required by the body in small amounts for a variety of different functions.

The body requires different amounts for each mineral.

Some minerals are required in larger amounts, while others are needed in very small amounts and are called 'trace elements'.

Vitamins

Nutrient	Function	Sources
Vitamin A	Helps the immune system to work as it should and with vision.	Liver, cheese, eggs, dark green leafy vegetables and orange-coloured fruits and vegetables.
B vitamins	Thiamin, riboflavin, niacin, folate, and vitamin B12 have a range of functions within the body.	Different for each B Vitamin.
Vitamin C	Helps to protect cells from damage and with the formation of collagen.	Fruit (especially citrus fruits), green vegetables, peppers and tomatoes.
Vitamin D	Helps the body to absorb calcium & helps to keep bones strong.	Oily fish, eggs, fortified breakfast cereals and fat spreads.
Vitamin E	Helps to protect the cells in our bodies against damage.	Vegetable and seed oils, nuts and seeds, avocados and olives.
Vitamin K	Needed for the normal clotting of blood and is required for normal bone structure.	Green vegetables and some oils (rapeseed, olive and soya oil).

Minerals

Nutrient	Function	Sources
Calcium	Helps to build and maintain strong bones and teeth.	Dairy, calcium-fortified dairy-alternatives, canned fish (where soft bones are eaten) and bread.
Iron	Helps to make red blood cells, which carry oxygen around the body.	Offal, red meat, beans, pulses, nuts and seeds, fish, quinoa, wholemeal bread and dried fruit.
Phosphorus	Helps to build strong bones and teeth and helps to release energy from food.	Red meat, poultry, fish, milk, cheese, yogurt, eggs, bread and wholegrains.
Sodium	Helps regulate the water content in the body.	Very small amounts found in foods. Often added as salt.
Fluoride	Helps with the formation of strong teeth and reduce the risk of tooth decay.	Tap water, tea (and toothpaste).
Potassium	Helps regulate the water content in the body and maintain a normal blood pressure.	Some fruit and vegetables, dried fruit, poultry, red meat, fish, milk and wholegrain breakfast cereals.
Iodine	Helps to make thyroid hormones. It also helps the brain to function normally.	Milk, yogurt, cheese, fish, shellfish and eggs.

Key terms

Micronutrients: Nutrients needed in the diet in very small amounts.
Lower Reference Nutrient Intake (LRNI): is the amount of a nutrient that is enough for only the small number of people who have low requirements (2.5%). The majority of people need more.
Reference Nutrient Intake (RNI): the amount of a nutrient that is enough to ensure that the needs of nearly all the group (97.5%) are being met. The RNI is used for recommendations on protein, vitamins and minerals.

Vitamin D

Vitamin D is a pro-hormone in the body. It can be obtained in two forms:
- ergocalciferol (vitamin D_2);
- cholecalciferol (vitamin D_3).

Vitamin D_3 is also formed by the action of sunlight. Different to most vitamins, the main source of vitamin D is synthesis in the skin following exposure to sunlight. The wavelength of UVB during the winter months in the UK does not support vitamin D synthesis.

Frayer Model Key Words	
Protein	A macronutrient that is essential to building muscle mass.
Fat	A macronutrient which supplies the body with energy.
Carbohydrates	A macronutrient that is required by all animals. It is made in plants by the process of photosynthesis.
Vitamin	Vitamins are split into two categories, water soluble and fat soluble. Fat soluble vitamins (A, D E, and K) dissolve in fat. Water soluble vitamins (the B group and vitamin C) dissolve in water.
Nutritional	Providing or obtaining the food necessary for health and growth.
Energy	The strength and vitality required for sustained physical or mental activity.

KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER

QUIZ

Macronutrients
Macronutrients provide energy. The macronutrients are:
- .
- .
- .

Macronutrients are measured in…… ( ).

Micronutrients are needed in the body in …….amounts. They do not provide……., but are required for a number of important……in the body.

There are two main groups of micronutrients:
- .
- .

Micronutrients are measured in …… (mg) and …… (µg) with 1mg = 0.001g and 1µg = 0.001mg.

Key terms
Dietary reference values:

Essential amino acids:

Macronutrients:

Protein complementation:

Reference Intakes:

Protein
Made up of building blocks called ……..
There are ….. amino acids found in protein.
Eight amino acids have to be provided by the diet (called…….. amino acids).

Sources:
Animal sources:

Plant sources:

Vitamins
Vitamins are nutrients required by the body in small amounts, for a variety of essential processes.

Most vitamins cannot be made by the body, so need to be provided in the diet.

Vitamins are grouped into:
-

-

Protein complementation
Different food…

Vegans and vegetarians can get all the amino acids they need by combining different protein types at the same meal. This is known as protein complementation.

Examples are:
- .
- .
- .
- .
- .

Carbohydrate
All types of carbohydrate are compounds of carbon, hydrogen and oxygen. They can be divided into three main groups according to the size of the molecule.

These three types are:
-
-
-

The two types main of carbohydrate that provide dietary energy are starch and sugars. Dietary fibre is also a type of carbohydrate.

Starchy carbohydrate is an important source of energy.

Starchy foods –

Recommendations
- Total carbohydrate – around……..of daily food energy.
- Free sugars include ……plus sugars naturally present in honey, syrups and unsweetened fruit juice (<5% daily food energy).
- Fibre is a term used for plant-based carbohydrates that are not digested in the small intestine (30g/day for adults).

Fat
Sources of fat include:
saturated fat;
monounsaturated fat;
polyunsaturated fat.

Fats can be saturated, when they have no double bonds, monounsaturated, when they have one double bond, or polyunsaturated, when they have more than one double bond.

Recommendations
<35% energy, Saturated fat <11% energy.
A high saturated fat intake is linked with high blood cholesterol levels.

Sources:

Key terms
Micronutrients:
.

Lower Reference Nutrient Intake (LRNI):

Reference Nutrient Intake (RNI):

Year 10 PRODUCT DESIGN Term 5

What we are learning this term:

A. Modern Materials
B. Smart Materials
C. Polymers
D. Composite Materials
E. Technical Textiles
F. Textiles

A. Modern Materials

A modern material is a material that has been engineered to have improved properties.

Type	Properties	Common Uses
Graphene	Transparent. Very strong and light	Protective equipment and clothing
Metal Foams	Lightweight. Strong under compression. Absorbs energy well.	Prosthetics. Soundproofing and crash protection.
Titanium	High strength-to-weight ratio. Corrosion resistant.	Prosthetics. Aircraft and spacecraft.

B. Smart Materials

Materials that exhibit a physical change in response to some external stimuli and change back once that stimuli has been removed.

Shape-memory alloys (SMA) – spectacle frames	Thermochromic pigments – colour changing spoons
Photochromic pigments - colour changing lenses and windows	Self-healing materials – metals that resist corrosion, concrete that can heal cracks
Ferrofluids formed by magnetic field – hydraulic suspension pistons	Polymorph –modelling and ergonomic handles

C. Polymers – come from crude oil

Thermoforming can be heated and formed repeatedly, thermosetting can only be formed once

Thermoforming (pliable, recyclable)	Thermosetting (good insulators)
Acrylic (PMMA)	Epoxy resin (ER)
High impact polystyrene (HIPS)	Melamine formaldehyde (MF)
High density polythene (HDPE)	Phenol formaldehyde (PF)
Polypropylene (PP)	Polyester resin (PR)
Polyvinyl chloride (PVC)	Urea formaldehyde (UF)
Polyethylene terephthalate (PET)	These are resistant to heat and chemicals

D. Composite Materials

A composite material is a mixture of two or more materials to enhance properties.

Fibre-based	Materials	Common Uses
Glass-reinforced plastic (GRP)	Glass fibres and resin	Boats, instrument cases
Carbon-reinforced plastic (CRP)	Carbon fibres and resin	Formula 1 car bodies, crash helmets, sports equipment
Glass-reinforced concrete (GRC)	Glass fibres and concrete	Street furniture, urban features.
Particle-based	**Materials**	**Common Uses**
Concrete	Cement, sand and aggregate	Buildings, street furniture
Cement	Ceramic and metal	Electronic components

Sheet-based composite materials – look back to Term 4 – Manufactured Boards

Medium Density Fibreboard (MDF)	Plywood	Chipboard

E. Technical Textiles

Modern textiles can be engineered to have numerous properties.

Conductive Fabrics – touch screen gloves	Fire-retardant fabrics – furniture, furnishings, firefighter clothing.	
Kevlar – racing tyres and bullet proof vests	Microfibres – winter clothes and cleaning cloths	Microencapsulation – sports clothing and scratch and sniff perfume samples

F. Textiles

Textile materials can be found natural or can be formed synthetically

Natural – come from plants or animals	Synthetic – come from coal or oil
Cotton (plant)	Polyester
Wool (animal)	Polyamide (nylon)
Silk (animal)	Elastane

Blended – a mixture of fibres that combines and improves properties

Polycotton	Kevlar	Sympatex

Year 10 PRODUCT DESIGN Term 5

What we are learning this term:

A. Modern Materials
B. Smart Materials
C. Polymers
D. Composite Materials
E. Technical Textiles
F. Textiles

A. Modern Materials

A modern material is a material that has been engineered to have improved properties.

Type	Properties	Common Uses
Graphene		
Metal Foams		
Titanium		

B. Smart Materials

Materials that exhibit a physical change in response to some external stimuli and change back once that stimuli has been removed.

C. Polymers – come from crude oil

Thermoforming can be heated and formed repeatedly, thermosetting can only be formed once

Thermoforming (pliable, recyclable)	Thermosetting (good insulators)
	These are resistant to heat and chemicals

D. Composite Materials

A composite material is a mixture of two or more materials to enhance properties.

Fibre-based	Materials	Common Uses

Particle-based	Materials	Common Uses

Sheet-based composite materials – look back to Term 4 – Manufactured Boards

E. Technical Textiles

Modern textiles can be engineered to have numerous properties.

F. Textiles

Textile materials can be found natural or can be formed synthetically

Natural – come from plants or animals	Synthetic – come from coal or oil

Blended – a mixture of fibres that combines and improves properties

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:

A. Key words
B. What are the different types of health care services?
C. What are the different types of social care services?
D. What barriers are there to accessing care services?

A.	Key words for this Unit
Primary care	First point of contact when seeking health care
NHS	National Health Service – Tax funded health care in the UK.
Secondary care	Specialist health treatment and/or care
Tertiary care	Advanced specialist health treatment and/or care.
Allied health professionals	Professionals who are involved in patient care from diagnosis to recover
Clinical support staff	Support allied health professionals with the treatment and care of patients.
Foster care	A stable family home where care is provided on either a short or long-term basis.
Residential care	Accommodation and care for a number of children, young people or adults living together in one building.
Respite care	Short-term care which provides relief for family member who are carers.
Domiciliary care	Care received in the person's own home.
Sensory impairment	Difficulties with senses, most commonly vision and hearing.
Braille	Raised lettering to help visually impaired.
Occupational therapist	Offers support to develop independence for daily living activities.

B	What are the different types of health care services?
Primary Care	• Primary care is the first point of contact a patient is likely to have with the NHS – you can refer yourself to primary care providers. • Primary care providers include pharmacists, Registered GPs/doctors, walk-in centres, accident and emergency departments (A&E), dentists and Opticians.
Secondary Care	• Secondary care is specialist treatment or care. A primary care provider will refer a patient for secondary care if they feel it is necessary for the patient to receive further advice, tests or treatment. • Secondary care providers include cardiologists (heart), gynaecologists (female reproduction), paediatrics (children), obstetrics (childbirth and midwifery), psychiatry (mental health) and dermatology (skin).
Tertiary Care	• Tertiary Care is advanced specialist treatment or care. A secondary care provider will refer a patient for tertiary care for long-term treatment and/or care. • Tertiary care areas include spinal, cardiac (heart), cancer care, chronic pain, burns and neonatal (premature and ill new born babies).
Allied Health Professionals	• Allied health professionals work in a range of specialities They support patients through all stages of care – from diagnosis to recovery. To work with the public they must register with the Health and Care Professions Council (HCPC). • Allied health professionals include art therapists, dieticians, paramedics, physiotherapists, speech and language therapists and radiographers.
Clinical Support Staff	• Clinical support staff work within a range of departments under the guidance of allied health professionals. They are trained in their roles but are not required to register with the HCPC. • Clinical support staff include theatre support workers, prosthetic technicians, dietetic assistant, phlebotomist (collects blood samples), hearing aid dispensers and maternity support workers.

C.	What are the different types of social care services?
Children and young people	• Children and young people may need support on a temporary or permanent basis because their parent of carer is ill; they have family problems, they have behavioural issues or additional needs. • Types of support for children and young people include foster care, residential care and youth work.
Children or adults with specific needs	• Children and adults may need support with specific needs including learning disabilities, sensory impairments and long-term health issues. • Types of support for children and adults with specific needs include residential care, respite care and domiciliary care.
Older Adults	• Older adults may need support with a range needs including arthritis, cardiovascular disease, dementia and depression. • Types of support for older adults include residential care, carers and personal assistants.
Informal Social Care	• Not all carers get paid for what they do – they are known as informal carers and social services would really struggle without them. • Informal carers include a spouse or partner, children, friends and neighbours. • Informal carers do practical household duties, shopping, laundry, walk the dog and help with personal care.

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

D.	What barriers are there to accessing care services?
Physical Barriers 	• Difficulty accessing care due to mobility and/or disability. • Obstacles include uneven and rough pavements and services, narrow doorways, no lift and transport. • Access could be improved by planning journeys in advance and reporting any problems to the council.
Sensory Barriers 	• Sensory impairments can be a barrier to accessing care. • A person with poor vision may need glasses or documents in large print. Profound sight problems may benefit from Braille. • A person with a hearing impairment may benefit from a hearing aid or sign language interpreter.
Social, Cultural and Psychological Barriers 	• Social, cultural and psychological barriers may leave people feeling nervous about accessing support. • These can include: religion/cultural barriers, negative experience, self-diagnosis, substance misuse, opening hours. • Care services can give individuals opportunities to share their concerns, offer different gender practitioners, facilities to worship and show respect and understanding.
Language Barriers 	• Language can be a barrier to accessing care services because individuals and care providers may struggle to understand each other. • Support for individuals could include translated documents, translators and interpreters and support from family members.
Geographical Barriers 	• Individuals may struggle to reach care services because public transport may not run regularly, specialist treatments may require long distance travel and travel can be expensive. • Support could include being provided with direct travel or having travel costs reimbursed.
Intellectual Barriers 	• If an individual has a learning disability is can cause difficulty in them accessing care services. • Support might include a learning disability nurse, speech and language therapist or occupational therapist.
Resource Barriers 	• As the population ages and more disorders are being successfully treated, there is a huge strain on health and social care resources – at times it might seem that not everyone can access what they need. • There are huge staff shortages which puts strain on people that work in the health and social care sector.
Financial Barriers 	• Seeing a GP or using emergency services are free but some services, such as optical and dental care, often involve some payment. • This can be difficult for people if they are from a low-income household as they may not feel they can afford to access the care they need.

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:

E. Define the key words
F. What are the care values and how can they be implemented?

E.	Define the key words
Self-respect	Valuing yourself
Person centred approach	Planning care around the wants and needs of a service user
Empowerment	Supporting people to take control of their lives and futures by involving them decisions on their care and treatment
Confidentiality	Not passing on information or discussing a private conversation to anyone
Dignity	Being respected and treated with care
Safeguarding	Policies to ensure children and vulnerable adults are protected from harm, abuse and neglect
Discrimination	Treating a person or group of people unfairly or less well than others
Compassionate	Feeling or showing sympathy and concern for others
Competence	The ability to do something successfully and efficiently
Consequences	A result or effect, typically one that is unwelcome or unpleasant
Review	Involves assessing or inspecting something with the intention of making change if necessary
Empathy	Being able to understand and share feelings and views of another person.
Insomnia	Difficulties in sleeping

F.	What are the care values and how can they be implemented?
Empowering and promoting independence 	• Empowerment is when an individual feels in control of their own life and have a say in what happens to them. • Some people might need help with empowerment because of their age, circumstances or confidence e.g. elderly people, children, adult with learning disabilities. • You can promote empowerment and independence by involving individuals, where possible, in making choices about their treatment.
Respect for others 	• You can show respect for the individual by respecting their privacy, needs, beliefs and identity. • Show respect by being patient when someone takes longer to perform simple tasks due to their age, disability or injury. • Do not leave personal files around for others to see or discuss your patients' case with friends. • Gain permission before entering a room, provide private place for personal conversations.
Maintaining confidentiality 	• It is a person's right by law to have information about them kept confidential. • Care workers and not allowed to talk about one service user to another, or someone who is not involved in helping them get better. This involves not having those private conversations in public places where other can overhear. • Paper and electronic files are to be kept confidential and only shared with care workers which are involved in the treatment of the patient.
Preserving dignity 	• Preserving the dignity of individuals to help them maintain self-worth, privacy and self-respect. • You do this by involving the person in their own care; helping them go to the bathroom; giving the person time they need, checking what they would like to be called; closing door or curtain when they are changing; making sure their clothes are clean; dealing with embarrassing situations sensitively and professionally.
Effective communication 	• In health and social care it is important to communicate effectively with service used in order to build trusting relationships. These can be lost of the care worker appears not to care or listen. • Recognising different communication needs and trying to overcome them shows that cares respect the individual e.g. when visually impaired providing a leaflet in braille; if can't speak English well, have a translator organised beforehand. • Show you value the person through showing empathy, asking questions, not judging, smiling, using their name, giving appropriate eye contact, open body language, giving time to process.
Safeguarding and duty of care 	• Health and social care workers have a legal duty to protect service users from harm, neglect or abuse. They must recognise the signs and symptoms of abuse so they can protect people. • Signs of abuse include low self-esteem, STDs, unexplained injuries or bruises, insomnia, change in appetite, change of personality, self-harming, fear of being alone etc. • What to do: report the abuse, never promise to keep the abuse secret, make it clear that you will have to tell someone e.g. your supervisor or the police. DUTY OF CARE • Care workers must work in ways that never put individuals at any risk or harms. They need to know their responsibilities, procedures, deliver care as the care plan states and always report and record any concerns about the service user even if they appear minor.
Promoting anti-discriminatory practice 	• Discrimination can be obvious but sometimes it can be subtle and hidden, and The Equality Act 2010 makes it illegal to discriminate against people because of their e.g. age, gender, race, disability, religion, sexual orientation, marital status etc. • You can promote anti-discriminatory practice by: having patience with someone who doesn't speak English well; communicating in a way that the person will understand; showing tolerance towards people who have different beliefs and values from you; challenging unkind behaviour.

Year 10 BTEC Health and Social Care- Component 2: Health and Social Care Services and Values.

What we are learning:
G. How to apply care values in a compassionate way. H. Identifying own strengths and areas for improvement against the care values

G	How to apply care values in a compassionate way?
Show empathy and care by:	• Being patient • Showing sensitivity • Understanding • Actively listening • Having a positive outlook • Being encouraging • Having genuine concern for other people.
Care workers can check themselves against the '**Six C's of Compassionate Care**' checklist to make sure they are applying care values with compassion.	
Care	Helps to improve an individual's health and wellbeing. Care should be tailored to each person's needs and circumstances
Compassion	Shows the care worker understands what the individual is experiencing. Being empathetic to their situation shows care and value to the individual
Competence	Shows that care workers can safeguard and protect individuals from harm
Communication	How to adapt to individuals and their circumstances to ensure important information is given and shared- keeping the individual at the heart of everything that is done
Courage	Protecting individuals by speaking up if you think something is wrong; being brave enough to own up if you have made a mistake.
Commitment	Carrying out your duties to care for others to the best of your ability.

H	Identifying own strengths and areas for improvement against the care values
Working together	• All care works have the responsibility to uphold care values. If everyone works together, doing their 'bit', service users and colleagues alike will all be able to have positive experiences. • Put any feelings aside, some clients can show anger or aggressions towards you, continues to work in a way that respects each of the care values. Staff training: • Staff training keeps everyone updated. Even if they also ready had care values training it is important to have it again and remind them of their importance.

Making mistakes	• Everyone sometimes make mistakes. It is crucial that staff own up to mistakes that they have made, not matter how small. This is part of the duty of care to safeguard individuals, it demonstrates respect.
	• You need to be honest about your mistake, do not pretend it never happened and do not blame someone else.
	• You can:
	  • Tell your supervisor, admit it and apologise
	  • Be honest and accurate about what happened,
	  • Suggest ways to avoid it happening again
	  • Earn back the trust of the person involved
	  • Prove you can do the job
	  • Do no be too hard on yourself; seek help and guidance from others.

Reviewing own applications of care values	• One way to improve skills is to look carefully at the areas you are good at, what you are able to do well and things that you find difficult. • Knowing your strengths will allow you to take on task with ease and make you feel confident that you are doing a good job. • Knowing your weaknesses and what needs improving will help you work on them and develop. It is important to be open with yourself and others in order to progress further and be better at your job. • Regularly review your strengths and weaknesses because they change overtime
Receiving feedback	• The purpose of feedback is to let you know what you are doing well and the areas you need to improve. • This can be formal- like reports and following an observation at work and Informal- like chatting to colleagues at break time. • Both types encourage you to feel pleased with what you have done well and motivate you to improve in weaker areas, perhaps even provide a way forward. • Remember: when giving and receiving feedback, positives must be noted so that you know what you are doing well and continue to do so. Negatives are hard to uncomfortable to hear, but do not take them personally, you need them to get better at your job and feel more confident.
Using feedback	• Create yourself a SMART action plan to set yourself Specific, Measurable, Achievable, Realistic and Time-related targets or goals to help plan for your improvements

Year 10 Cambridge National- Media and Sport- Term 5

What we are learning this term:

A. Type of media outlet
B. Competition with other media outlets
C. Who is the target audience
D. Targeting of media coverage
E. What does the coverage consist of

Main assessment objectives

Learning outcome: Be able to evaluate media coverage of sport

What is the difference between a tabloid and broadsheet newspaper?

A tabloid paper focuses on gossip stories and the lives of celebrities. Whereas broadsheet papers looks at more serious news stories like the economy and finance.

How may stories be reported differently in broadsheet and tabloid newspapers?

Broadsheet	Tabloid
More informative stories	More likely to look at the lives of athletes outside of sport

A. Key question from Assessment objectives?

Key word	Key definition
Broadsheet	A paper that focus on more serious news such as politics and finance
Tabloid	A paper that focus on celebrity gossip and news about famous people
Bias	Prejudice for or against one person or group, especially in a way considered to be unfair
Target audience	A group at which a product such as a film or advertisement is aimed
Format	The way in which something is arranged or set out
Organisation	An organised group of people with a particular purpose

A. How do positive and negative stories get presented differently in the media?

Negative stories may appear in prominent places in the paper (front page).
They may appear with big headlines and photos
Negative stories may run for longer than positive ones.

A. What sports and clubs are likely to get more media coverage?

Big clubs such as Man UTD, Real Madrid, Barcelona and Liverpool get more coverage than smaller clubs.

Football gets lots of media coverage.

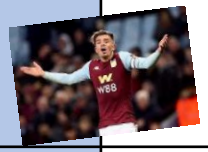
High profile athletes that generate lots of income

A. Who would be the target audience for different media forms?

Social media- Younger fans
Magazines- Younger fans
Newspapers-Adults

G. How could potential bias be shown in the media?

Negative bias	Focus on negative stories around certain clubs, players, managers and executives. Continuing to focus on stories for days/weeks
Positive bias	Continued focus on certain clubs/managers/players and executives. Larger clubs/organisations/owners may not be targeted with negative stories



Key Sections

Type and brand of media outlet

Competition with other outlets

Target audience

Timing of the event

Popularity of athlete/club

Features of the coverage

Representation of the issue

Method of reporting

Format and presentation

Potential bias

Extent of the coverage

Duration of the coverage

Year 10 Cambridge National- Media and Sport- Term 5

What we are learning this term:

A. Type of media outlet
B. Competition with other media outlets
C. Who is the target audience
D. Targeting of media coverage
E. What does the coverage consist of

Main assessment objectives

Learning outcome: Be able to evaluate media coverage of sport

What is the difference between a tabloid and broadsheet newspaper?

How may stories be reported differently in broadsheet and tabloid newspapers?

A.	Key question from Assessment objectives?
Key word	**Key definition**
Broadsheet	
Tabloid	
Bias	
Target audience	
Format	
Organisation	

A. How do positive and negative stories get presented differently in the media?

A. What sports and clubs are likely to get more media coverage?

A. Who would be the target audience for different media forms?

G. How could potential bias be shown in the media?

Negative bias

Positive bias

Key Sections

- Type and brand of media outlet
- Features of the coverage