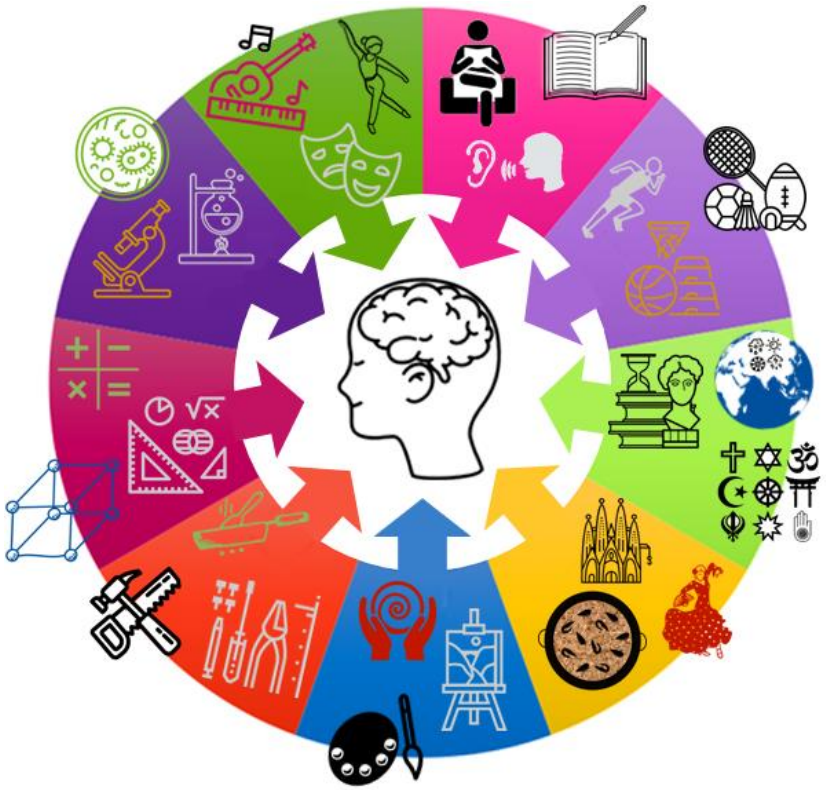
100% book - Year 11 booster

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



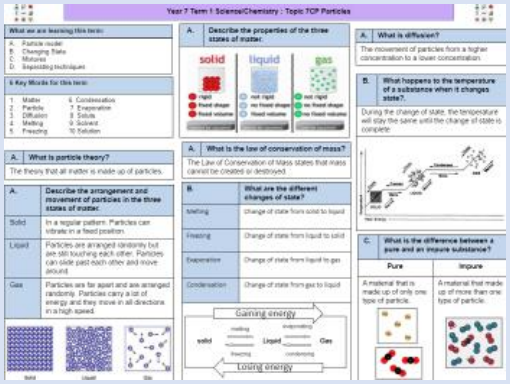
Term 1

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."

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

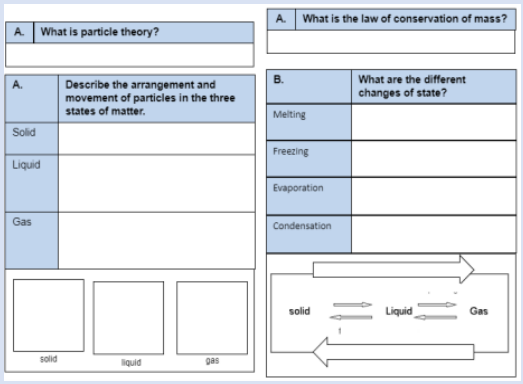
Knowledge Organisers



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!

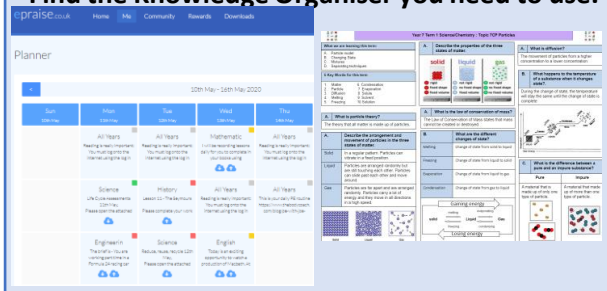
Expectations for Prep and for using your Knowledge Organisers

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?

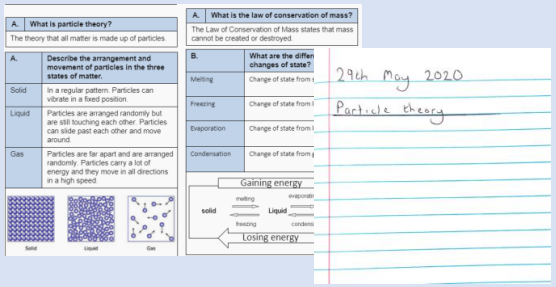
Step 1

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



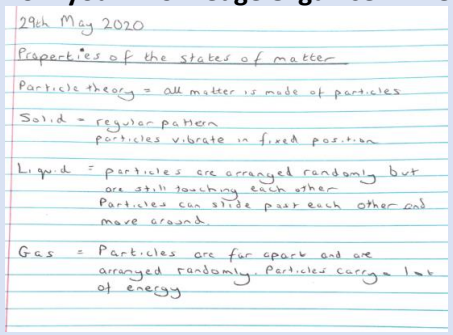
Step 2

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



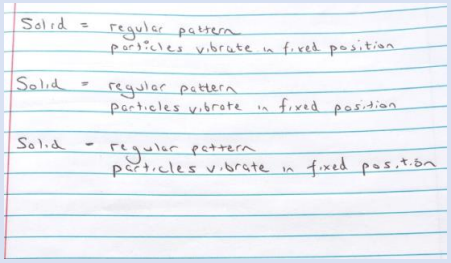
Step 3

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



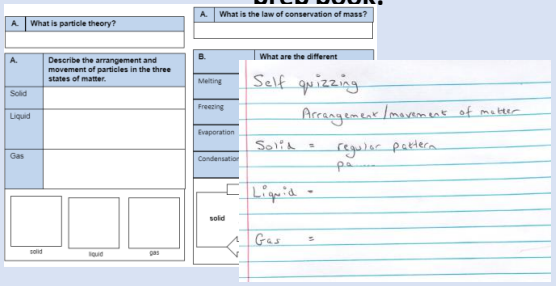
Step 4

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



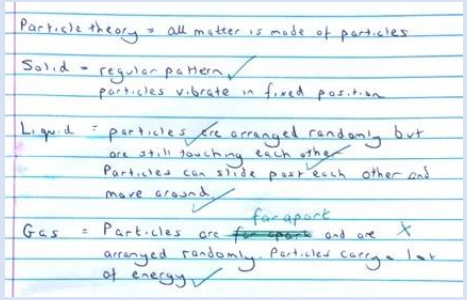
Step 5

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.

Year 11 English: ENGLISH –ENGLISH –Poetry cluster 2: The Problem with Power- Sets 6-7

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.

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 said to be 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.	• 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 decides to turn back and sketches out the consequences for the rest of his life. • He shunned (rejected) by his neighbours, but his wife refuses to speak to him or look at him. • 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 • It 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 meaning to life, 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 consequences for those around him.	Kamikaze is a narrative poem. It begins as a report, summarising another conversation 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 (crush) 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 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 (original) 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 highlight the oppressive (harsh) 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 blinds or hides colonized people to their own histories and argues that in order to understand their own identity they must learn their own history.	• No one has the right to oppress (treat others badly)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. • 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 shape 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.	The open form highlights Agard's rebellion against the status quo (reality) 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 (useless)things whilst his own history was omitted (not mentioned)
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 (forced to move) • Emigrants are people who have left the country of their birth to live elsewhere in the world.	• A displaced person(someone who has moved) person pictures the country where they were born. • The city and country are never named to increase the poem's relevance. • The speaker's home country appears to be at war or under the control of a dictatorial government that has banned the language the speaker 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.	• Rumens presents the importance of empathy (understanding the feelings of others). She reminds us of how traumatic conflict can be. • 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 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 (not caring) to the pain that can lead to people moving to a new home.	The use of enjambment (see key words) 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 (not as good as others) and were discriminated against • This resulted in strong political warfare movements to try 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.	• 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 ((rule) can leave people accepting their 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	Heaney's use of iambic pentameter may appear strange given its use in traditional British poems. However he changes 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.

Year 11 English: ENGLISH –ENGLISH –Poetry cluster 2: The Problem with Power- Sets 6-7

Key Vocabulary

Patriotism	
Colonialism	
Dominate	
Defiance	
Isolated	
Dictatorial	
Nostalgia	
Fragility	

Poem	Context	Events in the poem	Message	Form/ structure
Kamikaze- Beatrice Garland	• During _____, the term 'kamikaze' was used for… They were expected to… The _____made the Kamikaze missions sound like… It was claimed that…	• The narrator of this poem is… • The poem explores the moment… • His neighbours _____ and his wife… • His children and grandchildren…	• The poem explores the conflict… • Through the pilot, Garland may be expressing how… • The poem explores… • It also deals with the…	Kamikaze is a … Sections of the poem are presented in…
Checking Out Me History- John Agard	• Since the early _____, the country of • For centuries, nations would … • They did this to… • Born in…	• The poem focuses on how… • Not only does the poem call attention to the how oppressive colonial education was, but it also… • The poem suggests the curriculum deliberately…	• Knowledge should not be… • There is a sense of… • There is a warning that,…	His use of italics… The sing-song rhyme scheme…
The Émigrée- Carol Rumens	• Carol Rumens was born… • Published her own… • She has a 'fascination with… • The Émigrée is not autobiographical poem, but… • The poem sympathises with … • Emigrants are…	• An emigrant… • The speaker's home country appears to be… • Despite this, the émigrée's childhood memories are…	• Rumens presents the importance of… • The poem highlights the importance of… • Memories are shown to be…	The use of enjambment reflects the… The poem consists of…
Storm on the Island- Seamus Heaney	• For many centuries, … • The majority of Northern Ireland's population were … • Seamus Heaney was…	**There are two interpretations of this poem- _____ and _____.** _____: The narrator describes how well prepared they are for… _____: Heaney uses the storm as a metaphor for…	• Heaney portrays nature as… • Heaney presents the idea that life under… • He warns that the enemy can …	Heaney's use of _____ _____ ___ may appear
Tissue- Imtiaz Dharker	• Imtiaz Dharker was… • Tissue is from…	• Tissue explores… • It is written from the point of view of … • The poem remarks how…	• Human power… • Our relationship with paper is … • Human life is…	

T1 Y11 P3.8 – Mainstream Higher Forces and balance

Vocabulary: displacement, velocity

Scalar and Vector Quantities

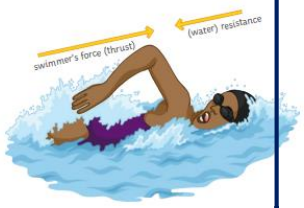
Scalar quantities – have **magnitude** only
e.g. temperature, mass and speed.
Vector quantities – have both **magnitude** and **direction** e.g. velocity – speed in a given direction
displacement – the change in position of an object

Vectors can be shown using **arrows:**
Size of arrow = magnitude of the quantity
Direction of arrow = direction of quantity

Contact and Non-Contact Forces

Force = a push or pull that acts on an object due to interaction with another object.

All forces are either:
- **Contact forces** – objects are physically touching
e.g. friction, air resistance, tension and normal contact force.
- **Non-Contact forces** – objects are physically separated
e.g. gravitational force, electrostatic force and magnetic force.



- Forces are **vectors** – shown by arrows.

QUESTIONS

1. What is a scalar quantity?
   Give 2 examples of a scalar quantity.
   Give 2 examples of a vector quantity.
2. What is a force?
   Describe what is meant by a 'contact force'
3. Give 2 examples of contact forces.
4. Give 2 examples of non-contact forces.
5. Are forces scalar or vectors?
6. What is a resultant force?
7. What happens to a moving object if the forces are balanced?
8. What does 'decelerate' mean?
9. If an object is stationary and there is a 0N resultant force, what happens to the object?
10. What is needed to make an object accelerate?

Resultant Forces

Resultant force = The sum of all forces or overall force acting on an object

Bike is being pushed forward with a force of 13N but there are resistive forces of 13N backwards.
Resultant force = 0N

What happens to the motion depends on what the bike was doing before these forces were applied:
- If the bike was stationary, it will stay stationary
- if the bike was moving, it will continue to move at a constant velocity

Car is being pushed to the left by a force of 350N. It is also pushed to the right by 500N.
Resultant force is: 500N – 350N = 150N

What happens to the motion depends on what the car was doing before these forces were applied:
- If the car was stationary, it will **accelerate** to the right
- If the car was already moving to the right, it will move faster **(accelerate)**
- If the car was moving to the left (ie reversing), it will slow down (**decelerate)**

T1 Y11 P3.9 – Mainstream Foundation - Motion

Distance and Displacement

Distance

- How far an object moves
- Does not involve direction
- Distance = scalar quantity

Displacement

- Includes both the **distance** an object moves, measured in a straight line, from start to finish point and the **direction** of that straight line.
- Displacement = vector quantity

Speed

You should be able to recall the following typical speeds:

Activity	Typical Speed (m/s)
Walking	1.5
Running	3
Cycling	6
A car	25
A train	55
Speed of sound	330

Calculating speed:

speed = distance x time

E.g. A car travels 100 metres in 3.8 seconds. What is the average speed?

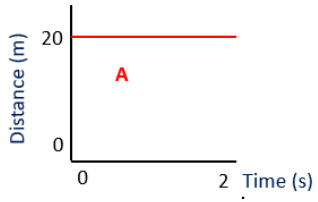
v=s/t

v = 100 m / 3.8 s

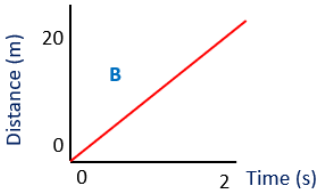
v= 26 m/s

Distance time graphs

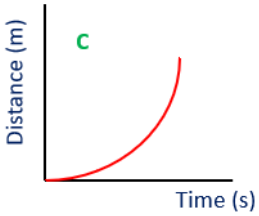
Distance time graphs show the motion of an object
The gradient tells us the speed of the object



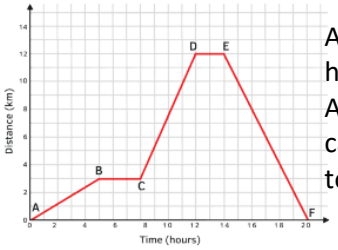
Object is stationary (distance not changing)



Object is travelling at constant speed
v = 20/2
v = 10 m/s



Object is accelerating



A journey generally has different speeds. Average speed can be calculated by using total distance ÷ time

Velocity and Acceleration

Velocity & acceleration = vector quantities

1. Velocity = **speed** in a given **direction**
- positive velocity = forwards (eg +5 m/s)
- negative velocity = backwards (eg -5 m/s)

2. Acceleration is a **change in velocity**
- positive acceleration = speeding up
- negative acceleration = slowing down

Average acceleration of an object can be calculated using:

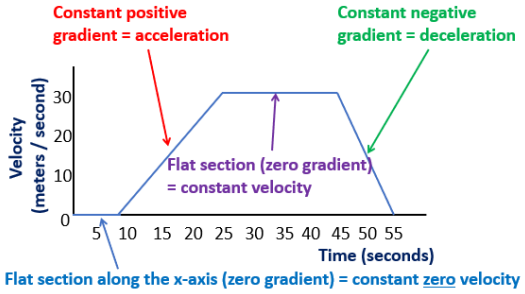
acceleration = final velocity – initial velocity

time taken

Units for acceleration are m/s^2

Velocity time graphs

Show how velocity changes during a journey
The gradient shows the acceleration



T1 Y11 P3.9 – Mainstream Foundation - Motion

1. What type of quantity is distance?
2. What is 'displacement'?
3. Why is displacement a vector quantity?

Speed

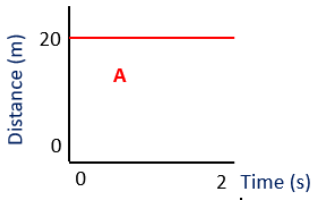
1. Complete the table:

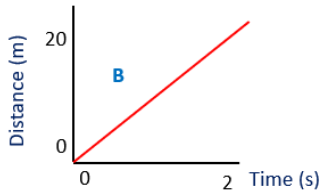
Activity	Typical Speed (m/s)
Walking	
Running	
	6
A car	
	55
Speed of sound	

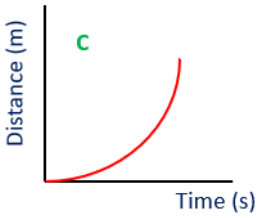
2. What is the equation linking distance, speed and time?

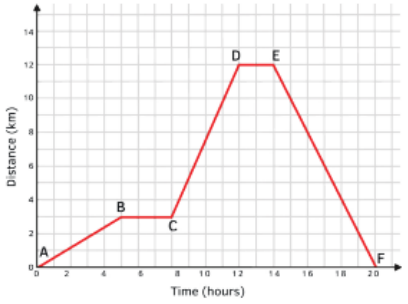
3. What are the units for speed?

1. Describe the motion of the objects:

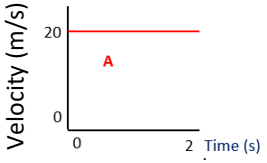


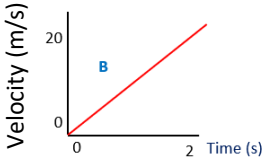


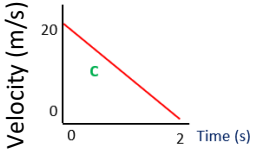




1. Define velocity and acceleration. Give the units.
2. What does a negative velocity indicate?
3. What does a negative acceleration indicate?
4. What is the equation linking acceleration, final velocity, initial velocity and time?
5. Describe the motion of the objects shown in the graph (include numbers if you can!)





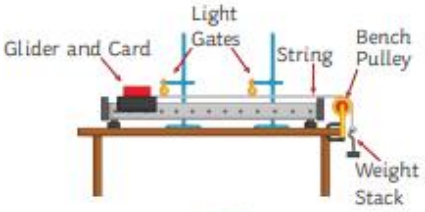


5. How do you calculate acceleration from a velocity time graph?

T1 Y11 P3.10 – Mainstream Foundation – Force and motion - Required Practical – Acceleration

Aim: To investigate the effect of **varying force** on the acceleration of an object of constant mass.
You may be given any of the following apparatus set-ups to conduct these investigations:

Independent variable = force applied
Dependent variable = acceleration
Control variables = mass of toy car and surface car is on.



or

or

Method (using toy car)
1) Place the car on a ramp. Incline the ramp until the car just does not move. This is to remove as much of the effect of friction as possible.

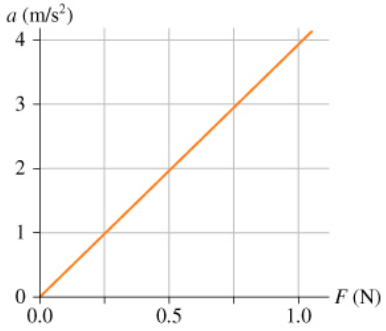
2) Set up a light gate at the end of the ramp

3) Place a 1N weight on the pulley attached to the toy car.

4) Allow the weight to drop and read the acceleration of the car from the light

5) Repeat the experiment several times, decreasing the weight on the pulley each time (e.g. 0.8N, 0.6N, 0.4N etc.) Place the removed mass onto the car to keep the mass of the system constant

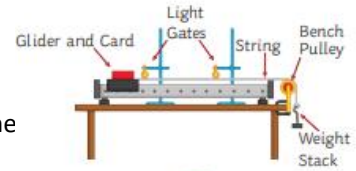
Results
Acceleration is proportional to force applied



Aim: Investigate the effect of **varying mass** of an object on the acceleration produced by a constant force.
You may be given any of the following apparatus set-ups to conduct these investigations:

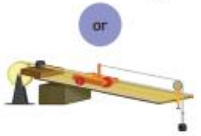
Independent variable = mass of glider
Dependent variable = acceleration of glider
Control variables = force applied and surface car is on

Method (using glider)
1) Place the glider on the track. Switch on the air blower and adjust until the glider just doesn't move. This is to remove as much of the of friction as possible.



or

or



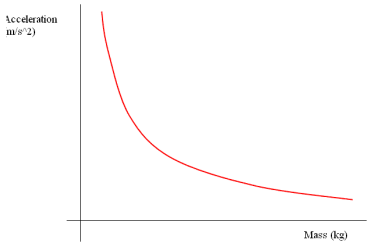
2. Set up a light gate at the end of the air track

3) Add a 10g mass onto the glider. Place a 1N weight on the pulley attached to the glider and let go.

4) Record the acceleration from the light gate

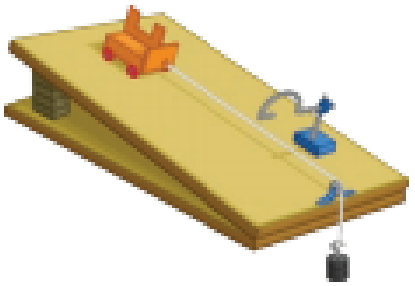
5) Repeat the experiment several times, increasing the mass on the glider each time (e.g. 20g, 30g, 40g etc.) whilst keeping the weight (1N) on the pulley constant.

Results
Acceleration is inversely proportional to mass



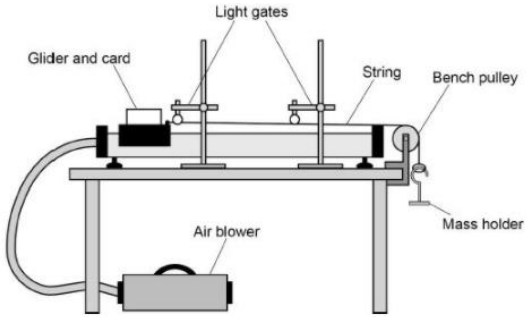
T1 Y11 P3.10 – Mainstream Foundation – Force and motion – Required Practical - Acceleration

A student was investigating the effect of changing the force on the acceleration of a toy car down a ramp, using the equipment shown below:



1. What provides the force for the car to move?
2. Why is the ramp tilted?
3. What is the independent variable in the investigation?
4. What is the dependent variable?
5. How is force changed during the experiment?
6. What is the name of the piece of equipment shown that measures the acceleration?
7. How is mass kept constant throughout the experiment?
8. What relationship do you expect to see between force and acceleration?

A student was investigating the effect of changing the mass of an object on the acceleration, using the equipment shown below



1. What is the independent variable?
2. What is the dependent variable?
2. What variables need to be controlled?
4. Why is the air blower switched on?
5. Describe the relationship you would expect to find between mass and acceleration

T1 Y11 P3.10 – Mainstream Foundation – Force and motion

Stopping Distance

Stopping distance = thinking distance + braking distance

- Greater the speed of vehicle – greater the stopping distance.

Thinking Distance (reaction time)

Thinking distance = distance travelled before driver reacts and presses brakes.

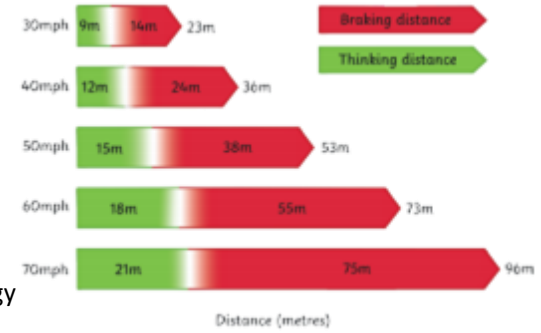
Reaction times are typically 0.2s to 0.9s

Factors that affect a driver's reaction time:

- Tiredness
- Drugs
- Alcohol
- Age
- Distractions (e.g. phone/music)

Braking Distance

Braking distance = the distance travelled by a vehicle once with **brakes are applied** until it reaches a full stop.



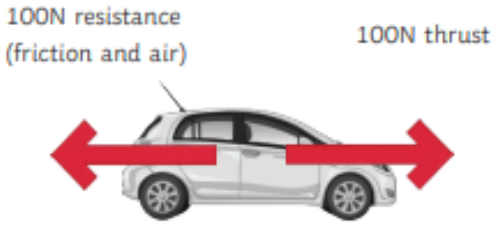
It can be affected by:
- wet/icy roads
- poor vehicle conditions (brakes/tyres)

When a force is applied to brakes, **work is done** by the friction between the car wheels and the brakes.

Work done – reduces the **kinetic energy store** and energy is transferred to **the thermal store of the brakes**, increasing their temperature.
Increased speed = increased force required to stop the vehicle
Very large decelerations can lead to brakes overheating and/or loss of control of the car.

Newton's First Law

If resultant force acting on object is zero:
- Stationary object will remain stationary
- Moving object will continue at a steady speed and in the same direction.



Newton's Second Law

Acceleration of an object is proportional to resultant force acting on it and inversely proportional to the mass of the object

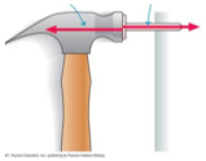
Resultant force = mass x acceleration

F = m x a

Newton's Third Law

When two objects interact, forces acting on each other are always equal and opposite.

e.g. a hammer hitting a nail
The hammer exerts a force on the nail, and the nail exerts an equal and opposite force on the hammer.



T1 Y11 P3.10 – Mainstream Foundation - Force and motion

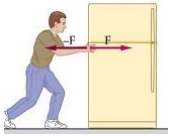
1. What is stopping distance?
2. What is the equation linking braking distance, stopping distance and thinking distance?
3. What is the typical reaction time range of a human?
4. What factors may affect a driver's reaction time?

1. What is 'braking distance'?
2. What factors affect braking distance?
3. Describe the energy transfers when brakes are applied to stop a moving car
4. Why are large decelerations dangerous?

1. What happens to a stationary object when the resultant force acting on the object is zero?
2. What happens to a moving object when the resultant forces are zero?

1. State Newton's second law.
2. What is the equation linking acceleration, force and mass?
3. What is inertial mass? (HT)

1. State Newton's third law.
2. Describe the forces acting in the picture



T1 Y11 P3.10 – Mainstream Foundation - Force and motion

Work done and Energy Transfer

- When a force acts on an object and makes it move – **work is done**.
Work done = energy transferred

Work done is calculated by:

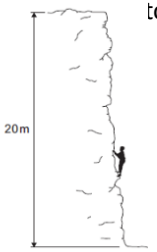
work done = force x distance

$$W = F \times s$$

Joules (J) ← Newtons (N) ← Metres (m)

- One joule of work is done when a force of one newton causes a displacement of one metre.
  - 1 joule = 1 newton-metre

e.g A climber and his gear weigh 750N. Calculate the energy transferred to the top of the cliff



W = F s
W = 750 x 20m
W = 15000J

- Work done against the frictional forces acting on an object causes a rise in the temperature.

Gravity

Weight = the **force** acting on an object due to gravity.

- Gravity close to Earth is due to the gravitational field.

- Weight of an object depends on the gravitational field strength at the point where the object is.

Weight can be calculated using:

weight = mass x gravitational field strength

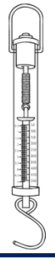
$$W = m \times g$$

Newtons (N) ← Kilograms (kg) ← Newtons per kilogram (N/kg)

- Earth's gravitational field strength = 9.8 N/kg

- Weight of an object can be considered to act at a single point = object's '**centre of mass**'
-
  - Weight can be measured using a **newton meter**.

Newton meter →



Forces and Elasticity

- When work is done on an elastic object (e.g. stretching or compressing a spring), energy is stored as elastic potential energy.

Elastic deformation:
- When force is applied, object changes shape and stretches.
- When the force is no longer applied, object returns to original shape.

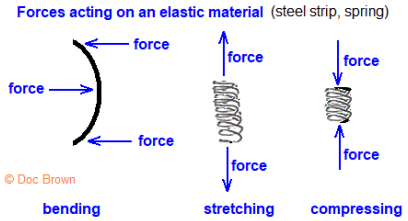
Inelastic deformation = stretched beyond limit – will not return to original shape and size.

Force = spring constant x extension

$$F = k \times e$$

Newtons (N) ← Newtons per metre (N/m) ← Metres (m)

Two forces are needed to stretch or compress



Work done in stretching (or compressing) a spring:

elastic potential energy = 0.5 x spring constant x (extension)^2

$$E_e = \tfrac{1}{2} \times k \times e^2$$

T1 Y11 P3.10 – Mainstream Foundation - Force and motion

1. When is work done?
2. Give the equation which links distance, force and work done?
3. What is work done the same as?
4. Complete this sentence: One joule of work is done when…
5. What is the relationship between joules and newton-metres?
6. What does work done against the frictional forces acting on an object cause?

1. Define weight.
2. What does the weight of an object depend on?
3. Give the equation which links gravitational field strength, mass and weight?
4. What is ‘centre of mass’?
5. How can weight be measured?
6. What is the value for Earth’s gravitational field strength?

1. When an elastic object is stretched or compressed, which energy store is filled?
2. What is ‘elastic deformation’?
3. What is ‘inelastic deformation’?
4. What happens to a stretched spring when the force is removed?
5. What is the equation linking extension, force and spring constant
6. How many forces are needed to stretch or compress an object?

T1 Y11 P3.10 – Mainstream Foundation - Force and motion

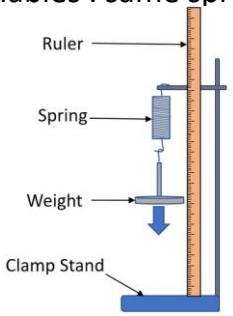
Required Practical

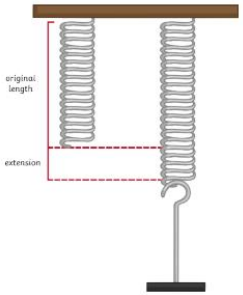
Aim: Investigate the relationship between force and extension for a spring (or any elastic object, eg elastic band)

Method

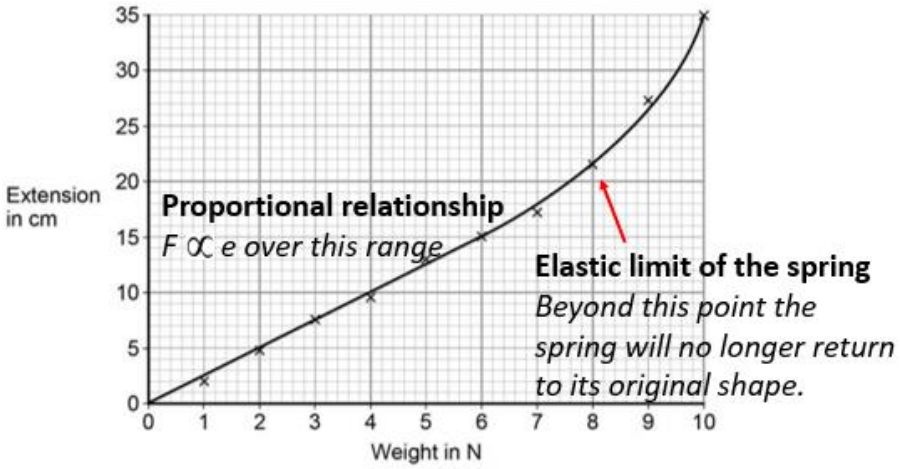
1. Hang a spring from a clamp and stand
2. Measure original length of the spring and record this.
3. Attach a 100g mass – record the new length of the spring.
4. Continue adding 100g masses recording the length each time, up to a total of 500g.
5. Work out the extension for each mass using:
   final length – original length
6. Repeat steps 1-5 twice and calculate a mean
7. Plot a line graph with extension (m) on the x-axis and force (N) on the y-axis.

Independent variable : mass on the spring
Dependent variable : extension of the spring
Control variables : same spring

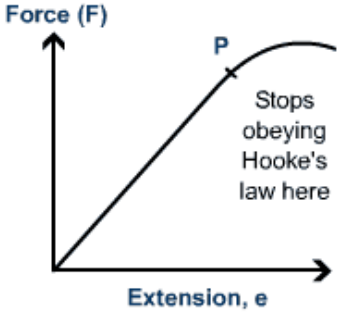




Results :



- There is a proportional relationship (shown by a straight line through the origin) at first.
- This means: **Force ∝ Extension** (F ∝ E)
- However, there comes a point when the 'elastic limit' of the spring is reached. This is also known as the **limit of proportionality**.
- If more force is applied after this, relationship is **no longer proportional**.
- After this point, the spring will not return to its original shape and size when the force is removed.

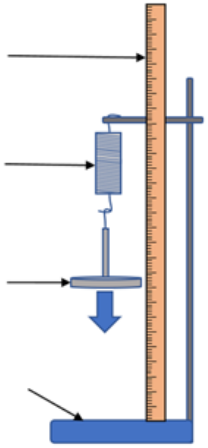


You may see the graphs with the axes switched – with extension on X and force on Y.

gradient of linear part = spring constant, k, for the spring being used.

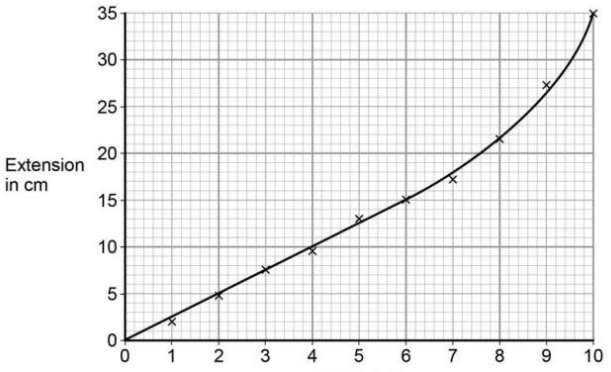
T1 Y11 P3.10 – Mainstream Foundation - Force and motion

1. What is the independent variable in the investigation into the effect of force on extension of a spring?
2. What is the dependent variable?
3. How is the dependent variable measured?
4. What range of masses could be used?
5. Label the equipment used to investigate the stretching of a spring below:

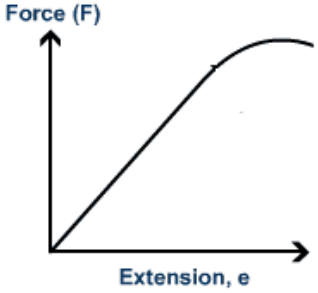


6. Why are repeated readings taken for each mass?

1. Label the X axis for the graph below, including units



2. Label the part of the graph that shows force is directly proportional to extension
3. Label the limit of proportionality for this spring
4. What is the symbol for ‘proportional’?
5. How could you use a graph like this to calculate the spring constant of this spring?



Year 11 OCR A Term 1 – People of the world

A.	How can we measure development?
Life expectancy	The average lifespan of someone born in that country
Birth rate	Number of live births per 1000 per year
GDP per capita	An average of the national gross domestic product per person per year in $
Literacy rate	Percentage of people over the age of 15 who can read and write
Death rate	Number of deaths per 1000 people per year
HDI	Measures life expectancy, education and income per capita. Scored 0-1, 0 is low.
Internet users	Percentage of people who have access to the internet

A.	How can we measure development?	
	POSITIVE	NEGATIVE
Life expectancy	Shows condition of healthcare and quality of services	Does not consider political factors such as war
Birth rate	Shows development of healthcare (e.g., contraception)	Does not consider how long babies survive in the country
GDP per capita	Shows how wealthy a country's population is (quality of life)	Very small/ large populations can disrupt data (e.g. China)
Literacy rate	Shows the quality of education received in a country	Does not consider other factors that disrupt education (e.g. water collection)
Death rate	Shows the quality of healthcare/ disease/ food/water	Can be disrupted if country has an elderly population (Japan)
HDI	Uses a combination of measures= more accurate	
Internet users	Shows the development of infrastructure in a country	Does not consider the quality of this infrastructure

D.	How does aid promote and hinder development?
Promote	Aid can help a country improve it's healthcare, communications rapidly by using ready developed technology from more developed nations. It can also help a country recover quickly after a natural disaster.
Hinder	Aid can hinder a country's development by encouraging dependence on money from more developed nations. If a government is corrupt, money given in aid could be used in the wrong places (e.g. armament). Tied aid can put a country into more debt as they spend money buying goods from wealthy nations,

B.	What has caused uneven development?
Natural resources	Fuel sources (oil, gas) can be traded. Access to clean, safe water
Colonialism	One country goes into another country and claims they are in power. They can steal their raw materials.
Industrialisation	Factories are built, increasing trade and increasing economic development
Trade	Can be fair or unfair. Helps a country increase their economy.
Climate	Extreme climate (too hot or too cold) will limit industry and affect health

C.	The different types of aid
Aid	When a country or organisation gives resources to another country (e.g. Money, products or technologyp
Bi lateral aid	International aid given by one country to another. Often has 'strings' attached.
Multilateral aid	Given by many different countries or charity organisations (e.g. Oxfam, red cross)
Short-term aid	Aid given to support a country following a disaster (e.g. after an earthquake)
Long-term aid	Aid given over a long period of time to support a country's development (e.g. Oxfam goat aid)

E. What is Nigeria like?

Nigeria's environmental,/ political/ economic context

- Nigeria is an EDC in west Africa. It borders Niger to the north and Benin to the west. Nigeria lies on the Atlantic Ocean.
- Nigeria has a tropical climate in the South (near the Niger delta) and semi-desert climate in the North.
- Nigeria was colonised by the UK and became independent in 1960
- It has high levels of international migration due to jobs in the oil industry
- Agriculture in Nigeria provides a stable food supply for much of West Africa
- Nigeria has had a stable government since 2015

What has enabled Nigeria to develop?

- **With a population of 182 million, Nigeria has** the largest population of any African country.
- Nigeria has grown mainly through the export of raw materials such as oil, oil palm and cocoa.
- They export
- In 2014 it has the **highest GDP in Africa**

	Factors contributing to Nigeria's economic growth
Imports	Goods coming into a country
Exports	Goods leaving a country
International investment	When one country (e.g. UK) funds businesses in another country (e.g. Nigeria)
Population structure	The 'make-up' of the population. E.g how old or young/ males and females.
Employment structure	How the workforce is divided up (primary/ secondary/ tertiary)

Year 11 OCR A Term 1 – People of the world

A.	How can we measure development?
Life expectancy	
Birth rate	
GDP per capita	
Literacy rate	
Death rate	
HDI	
Internet users	

A.	How can we measure development?	
	POSITIVE	NEGATIVE
Life expectancy		
Birth rate		
GDP per capita		
Literacy rate		
Death rate		
HDI		x
Internet users		

B.	What has caused uneven development?
Natural resources	
Colonialism	
Industrialisation	
Trade	
Climate	

C.	The different types of aid
Aid	
Bi lateral aid	
Multilateral aid	
Short-term aid	
Long-term aid	

D.	How does aid promote and hinder development?
Promote	
Hinder	

E.	What is Nigeria like?
Nigeria's environmental,/ political/ economic context	
What has enabled Nigeria to develop?	

	Factors contributing to Nigeria's economic growth
Imports	
Exports	
International investment	
Population structure	
Employment structure	

Year 11 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

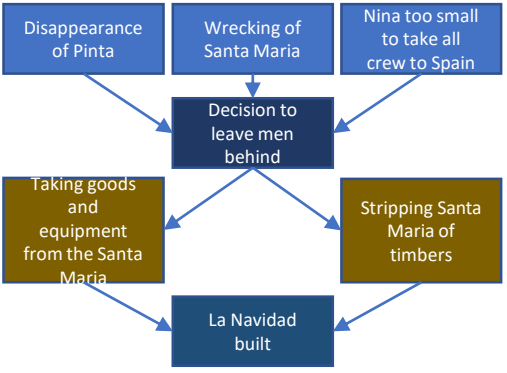
Why did Spain agree to sponsor Columbus?

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.

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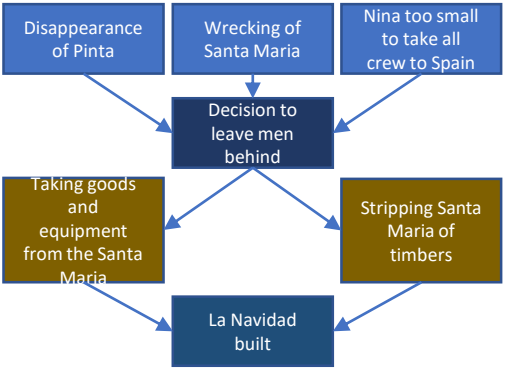
  - Spread Christianity to new lands

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.

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.

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.

Year 11 Religious Education: Peace and Conflict

A.	*Can you define these key words?*
Key word	**Key definition**
Forgiveness	Pardoning someone for wrongdoing
Holy War	A war that is fought for religious reasons, usually backed by a religious leader
Just War	A Christian theory that asks whether a war is fought justly
Justice	Bringing about what is right and fair, according to the law or God's will or moral values
Pacifism	A belief that all forms of violence are wrong, commonly held by Quakers
Conflict	A serious disagreement
Jihad	The struggle to defend against that which threatens Islam/ the internal struggle to defend against temptation that might lead you away from God
Protest	A public expression of disapproval, often in a big group, can be peaceful or violent
Reconciliation	Restoring a elationship after conflict
Retaliation	Deliberately harming someone as a response to them harming you
Self-Defence	Protecting yourself or others from harm
Terrorism	Using violence in order to further a political or religious message and to achieve an aim

What we are exploring this term: Pacifism . Protest. Terrorism. Weapons of mass destruction Just war

C	**Is violent protest or terrorism acceptable?**	
	1. A small minority of Christians may say yes if it truly brings an end to suffering- love thy neighbour and 'free the oppressed' 2. A small minority of Muslims may agree due to the duty of jihad to defend the faith against true oppression. 3. A humanist may agree in a rare occasion if it truly had the best consequences for humanity as a whole 4. Hindus may point to their warrior class to justify a god given right to fight if needed	1. Most Christians consider terrorist acts of violence to be wrong, as Jesus did not accept violence. He said 'put your sword pack in its place' when his disciple tried to protest against his arrest. 2. Muslims do not agree with terrorism because terrorist acts of violence are considered to be wrong and against the wishes of God, especially as the victims are usually innocent people. There is no justification for terrorist acts in the teachings of Islam- Qur'an says that innocents much not be harmed. 3. Humanists might say that it does not help human wellbeing as it created disorder and fear. As such the consequences are rationally seen to be not worth it. 4. Hindus might argue that all violence is wrong (Ahimsa) as it causes bad karma and keeps us in the cycle of samsara

E	**Is pacifism wrong? Yes**	***No***
	1. The Muslim duty of Jihad suggests pacifism can be wrong 2. Christians are called to 'free the oppressed' and 'protect the weak and needy 3. Humanists may argue that pacifism is not reasonable or realistic in a world of violence and may not help humanity protect each other	1. It works- see Ghandi and Martin Luther King 2. Christians believe 'blessed are the peacemakers' 3. Muslims believe that greater Jihad is the struggle to defend the faith against the internal struggle to fall from the right path 4. Innocent people should not be harmed in all religions and pacifism is the only way to truly ensure this

D	***What are the rules of the just war theory?***	***Can just war theory make war fair?***	
	1. There must be a just cause such as to defend 2. Intentions must be to do good and overcome evil 3. War must be started by legitimate authority 4. Innocents must not be harmed 5. Force and damage must be proportionate to the good done by the war 6. War must be the last resort 7. There must be a reasonable chance of success	1. Yes as it protects innocents 2. Yes as it allows us the right to self defence 3. Yes as it has to be the last resort so it is really is the only option left 4. It will mean the war is for a good/fair reason and not pointless greed 5. It means nuclear weapons can't be used	1. No as innocents will always be harmed in war 2. A 'legitimate' authority could still be corrupt 3. You never know the harm of war until many years later so you can't calculate whether it is proportionate 4. You cannot know whether it will be successful until you have fought it 5. For success someone will have to use a greater force so the 'proportionate ' rule will never be followed

B.	***Religious and non religious beliefs about weapons of mass destruction***
1	It is wrong to damage the environment which is God's perfect creation. It would be a form of blasphemy to destroy God's Sacred work.
2	They hurt many innocent people and this is against all religious teachings. Lif e is a sacred God given gift and only God has the right to take life.
3	For humanists, if their use means we can end more human suffering than the weapons cause, then there might be a possible circumstance in which they could be deemed acceptable.

Year 11 Religious Education: Peace and Conflict

What we are exploring this term: Pacifism . Protest. Terrorism. Weapons of mass destruction Just war

A.	*Can you define these key words?*
Key word	**Key definition**
Forgiveness	
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Just War	
Justice	
Pacifism	
Conflict	
Jihad	
Protest	
Reconciliation	
Retaliation	
Self-Defence	
Terrorism	

C	**Is violent protest or terrorism acceptable?**	
	1. 2. 3. 4,	1. 2. 3. 4.

E	**Is pacifism wrong? Yes**	***No***
	1. 2. 3.	1. 2. 3. 4.

D	***What are the rules of the just war theory?***	***Can just war theory make war fair?***	
	1. 2. 3. 4. 5. 6. 7.	1. 2. 3. 4. 5.	1. 2. 3. 4. 5.

B.	***Religious and non religious beliefs about weapons of mass destruction***
1	
2	
3	

Year 11 Religious Education: Peace and Conflict

Year 11 RE Christianity Quotes: Peace and Conflict	
"**Obey the authorities**, for God is the one who put it there. **All governments have been placed in power by God.**" Romans 13:1	Jesus said he was sent to **'free the oppressed'** **Old Testament** **'let justice roll down like the waters, and righteousness like an ever-flowing stream.**'
Genesis 9:5-6 From his fellow man I will require a reckoning for the life of man. "**Whoever sheds the blood of man, by man shall his blood be shed, for God made man in his own image**."	But I tell you, do not resist an evil person. If anyone slaps you on the right cheek, turn to them the other cheek also.
Beat your swords into ploughshares, and their spears into pruning hooks: **nation shall not lift up sword against nation,**	Old testament : **'When thou goest out to battle** against thine enemies, be not afraid of them: for the LORD thy **God is with thee'**

Christianity Quotes For religion, peace and conflict	
'And the soldiers likewise demanded of him, saying, And what shall we do? And Jesus said unto them, "**Put your sword back into its place; for all those who live by the sword, die by the sword."**	Thou shalt not kill.
Luke 6:27 "But I say to you who hear, **Love your enemies**, do good to those who hate you,	New testament **Blessed are the peacemakers: for they shall be called the children of God.**
The **catholic church and Church of England accept** war under the conditions of **just war** theory.	Many weapons destroy the environment eg nuclear weapons. The quote below can be applied to this issue; **'You shall not defile the land** in which you live, in the midst of which I dwell'
Jesus violently protested when '**he made a whip** out of cords, and **drove all from the temple** courts, he scattered the coins of the money changers and **overturned their tables** '	The Lord will fight for you; you have only to be still.'
'protect the weak and needy'	**Peace alone, not war, is holy** (said by Pope Francis in the 2000s)

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"…… **the authorities**, for God is the one who put it there. ……**have been……."** Romans 13:1	Jesus said he was sent to **'…… the oppressed'** **Old Testament** **'let ……roll down like……, and righteousness like an ever-flowing stream.**'
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Beat your …… into ……, and their spears into pruning hooks: **nation shall not ……against ……,**	Old testament **'When thou goest out to battle** against thine enemies, be not afraid of them: for ……**'**

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Luke 6:27 "But I say to you who hear, **Love your enemies**, do good to those who hate you,	New testament **…… are the peacemakers: for they shall be called the ……of God.**
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'protect the ……and needy'	**…… alone, not war, is holy** (said by Pope Francis in the 2000s)

GCSE Unit 3 SPANISH Knowledge organiser.
Topic Free Time Activities

What we are learning this term:

A. Talking about free time
B. Talking about your plans for the weekend
C. Talking about eating out
D. Talking about special occasion meals
E. Extending what you can say about sport
F. Talking about sport in the world

6 Key Words for this term

1. disfrutar
2. jugar
3. los deportes
4. campeones
5. formentar
6. a selección

3.1G ¿Qué te gusta hacer?

aburrido/a	boring
bailar	to dance
cantar	to sing
el cine	cinema
de vez en cuando	from time to time,occasionally
entretenido/a	entertaining
estimulante	challenging
jugar	to play (game, sport)
leer	to read
libre	free
odiar	to hate
la película	film
practicar	to practise
salir	to go out
la tarde	afternoon, evening
el teclado	keyboard
tocar	to touch, to play(an instrument)
ver	to see, watch

3.3G ¿Haces deporte?

activo/a	active
al aire libre	in the open air, outdoors
ayudar	to help
el baloncesto	basketball
el campo	countryside, playing field
la cancha	court
los deberes	homework
la equitación	horse riding
el estadio	stadium
montar a caballo	to ride a horse
montar en bicicleta	to ride a bike

3.1F ¿Qué haces en tu tiempo libre?

a veces	sometimes
bastante	quite
cada	each, every
cenar	to have an evening meal
charlar	to chat
el coro	choir
descansar	to rest
los dibujos animados	cartoons
el documental	documentary
el fin de semana	weekend
genial	great
las noticias	news
nunca	never
ocupado/a	occupied, busy
policíaco/a (adj.)	police, detective, crime
poner	to put
por lo general	in general
siempre	always
el teatro	theatre
la telenovela	soap opera
terminar	to finish
el tiempo	time
todo/a/os/as	all, every
tonto/a	silly, stupid
la vez	time, occasion

3.2G Comer y Beber

el (fem.) agua (mineral)	(mineral) water
beber	to drink
el bocadillo	sandwich
la carne	meat
la cena	evening meal
cenar	to have supper / to have an evening meal
comer	to eat
la comida	lunch, food, meal
desayunar	to have breakfast
el desayuno	breakfast
después	afterwards
el helado	ice cream
el huevo	egg
el jamón	ham
la leche	milk
las legumbres	pulses
la mantequilla	butter
la manzana	apple
la mermelada	jam, marmalade
las patatas fritas	chips, fries

Key Verbs

Salir To go out	Ir To go	Jugar To play	Hacer – to do/make	Tocar To play (ins)
Salgo I go out	Voy I go	Juego I play	Hago I do	Toco I play
Sales You go out	Vas You go	Juegas You play	Haces You do	Tocas You play
Sale He/she goes out	Va s/he goes	Juega He/she plays	Hace s/he does	Toca He/she plays
Salimos We go out	Vamos They go	Jugamos We play	Hacemos We do	Tocamos We play
Salen They go out	Van They go	Juegan They play	Hacen They do	Tocan They play

3.2G Comer y Beber

el perrito caliente	hot dog
el pescado	fish
el pollo	chicken
el postre	dessert, pudding
el queso	cheese
la sopa	soup
el té	tea
tomar	to take, to have (food, drink)
la tortilla	omelette
la tostada	toast
el vaso	glass
las verduras	vegetables

3.2F Vamos a comer fuera

el atún	tuna
el bacalao	cod
la barra	loaf
el bistec	steak
los calamares	squid
la cebolla	onion
el cerdo	pork
la cerveza	beer
los champiñones	mushrooms
el chorizo	chorizo
la chuleta	chop
el cordero	lamb
el filete	fillet
la fresa	strawberry
las gambas	prawns
el gazpacho	chilled tomato soup
los guisantes	peas
el jamón serrano	cured ham
las judías verdes	green beans

3.1H Hablando del tiempo libre y de los planes

aburrido/a	boring
agradable	pleasant
al aire libre	in the open air, outdoors
la batería	drums
la canción	song
dar un paseo	to go for a walk
de vez en cuando	from time to time, occasionally
desafiante	challenging
divertido/a	fun
emocionante	exciting

3.3F ¿Qué deportes harás?

el alpinismo	rock climbing
cansado/a	tired
la carrera	race
el concurso (contest)	competition
contestar	to answer
durante	during
el ejercicio	exercise
el entrenamiento	training
entrenar	to train
el equipo	team
el esquí	skiing
este, esta	this
ganar	to win
el jugador	player
mañana	tomorrow
el miembro	member
el partido	match
probar	to try, to test

GCSE Unit 3 SPANISH Knowledge organiser.
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_____	cinema
de vez en cuando	_____
entretenido/a	_____
_____	challenging
_____	to play (game, sport)
leer	_____
libre	_____
odiar	_____
la película	_____
_____	to practise
salir	_____
_____	afternoon, evening
el teclado	_____
_____	to touch, to play(an instrument)
ver	_____

3.3G ¿Haces deporte?

activo/a	_____
_____	in the open air,
outdoors	_____
ayudar	_____
el baloncesto	countryside, playing
_____	_____
field	homework
la cancha	_____
_____	to ride a horse
la equitación	to ride a bike
el estadio	
_____	
_____	

3.1F ¿Qué haces en tu tiempo libre?

a veces	_____
bastante	_____
cada	_____
_____	to have an evening meal
_____	to chat
_____	choir
descansar	_____
los dibujos animados	_____
el documental	_____
_____	weekend
_____	great
las noticias	_____
nunca	_____
ocupado/a	_____
policíaco/a	_____
_____	to put
_____	in general
_____	always
el teatro	_____
la telenovela	_____
_____	to finish
el tiempo	_____
todo/a/os/as	_____
_____	silly, stupid
_____	time, occasion

3.2G Comer y Beber

el (fem.) agua (mineral)	_____
beber	_____
_____	sandwich
la carne	_____
_____	evening meal
_____	to have supper / to have
an evening meal	_____
comer	_____
la comida	_____
desayunar	breakfast
_____	afterwards
_____	ice cream
_____	_____
el huevo	_____
el jamón	_____
la leche	_____
las legumbres	butter
_____	apple
_____	_____
la mermelada	chips, fries
_____	

Key Verbs

Salir _____	Ir _____	_____ To play	Hacer – to do/make	Tocar _____
_____ I go out	Voy _____	Juego I play	Hago _____	_____ I play
_____ You go out	_____ You go	Juegas _____	Haces You do	Tocas You play
Sale He/she goes out	Va s/he goes	Juega He/she plays	_____ s/he does	_____ He/she plays
Salimos _____	_____ They go	Jugamos We play	Hacemos _____	Tocamos _____
Salen _____	Van They go	_____ They play	Hacen They do	_____ They play

3.2G Comer y Beber

el perrito caliente	_____
el pescado	_____
el pollo	_____
_____	dessert, pudding
_____	cheese
_____	soup
el té	_____
_____	to take, to have (food,
drink)	_____
la tortilla	_____
la tostada	_____
el vaso	_____
_____	vegetables

3.2F Vamos a comer fuera

el atún	_____
el bacalao	_____
_____	loaf
_____	steak
los calamares	_____
la cebolla	_____
el cerdo	_____
_____	beer
_____	mushrooms
el chorizo	_____
la chuleta	_____
_____	lamb
el filete	_____
_____	strawberry
_____	prawns
el gazpacho	_____
los guisantes	_____
_____	cured ham
_____	green beans

3.1H Hablando del tiempo libre y de los planes

aburrido/a	_____
agradable	_____
al aire libre	in the open air,
outdoors	_____
la batería	_____
la canción	_____
_____	to go for a walk
de vez en cuando	from time to time,
occasionally	_____
desafiante	_____
divertido/a	_____
_____	exciting

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el alpinismo	_____
cansado/a	_____
la carrera	_____
el concurso	_____ (contest)
contestar	_____
_____	during
_____	exercise
_____	training
entrenar	_____
el equipo	_____
el esquí	_____
este, esta	_____
_____	to win
_____	player
_____	tomorrow
el miembro	_____
el partido	_____
_____	to try, to test

KS4 FOOD AND NUTRITION KNOWLEDGE ORGANISER T1

Name: Date:

Macronutrients, fibre and water

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

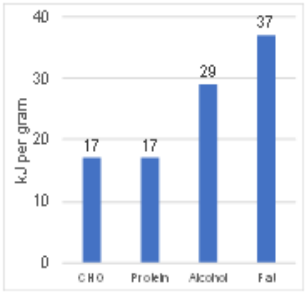
Macronutrients are measured in grams (g).

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 T1

Micronutrients

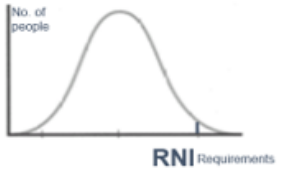
Micronutrients are needed in the body in tiny amounts. They do not provide energy, but are required for a number of important processes in the body.

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

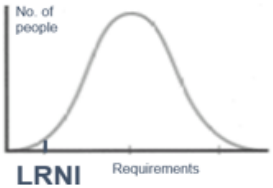
Micronutrients are measured in milligrams (mg) and micrograms (µg) with 1mg = 0.001g and 1µg = 0.001mg.

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 T1

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):

PRODUCT DESIGN – TERM 1 KNOWLEDGE ORGANISER

PRIMARY DATA

Information and data that are gathered from Primary sources is usually more specific to a design task as the investigation can be tailored to the design brief and/or design specification:

Primary Sources include

- **Interviews – User/Client**
- **Questionnaire – Target market**
- **Focus groups – Target market**
- **Product Analysis**
- **Material testing**

SECONDARY DATA

Secondary sources of information use data already found by other people or organisations that are relevant:

Secondary Sources include

- **Books**
- **Magazines**
- **Websites**
- **Statistics**
- **News radio**
- **Television**
- **Reviews**

MARKET RESEARCH

Gathering **Market Research** is an important exercise an any design process, by conducting market research you can find out whether your ideas are **commercially viable** and make the necessary amendments to your approach to suit the needs of the **user.**

INTERVIEWS AND QUESTIONNAIRES

Asking question sin the form of focus groups allows you to gather as much data as needed from a range of people. You may need to conduct a few interviews through out the design and manufacture of the product. Focus groups are often recorded and getting the user group to interact with prototypes to give feedback.

PRODUCT ANALYSIS

This involves looking at what is already available on the market and critically analysing to see how it performs functionally and aesthetically as well as how commercially viable it is. Reviews help pinpoint good and bad point to allow the designer to develop their idea

Anthropometric data

Anthropometric data is 'The study of human measurements'

Anthropometric data is used to ensure the **products and environments are the correct Size for the intended user.**

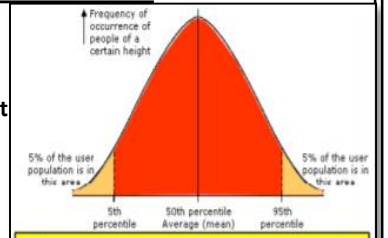
The data is split in to **3** categories

The 5th percentile (smallest)

The 50th percentile (mid)

The 95th percentile (largest)

Opposite are examples of the various percentiles could be used to ensure the maximum amount of people can use the space or product



5th Percentile – Fire Guard: If the smallest peoples fingers cant fit through neither can the mid or high.

50th Percentile – Public Bench: To ensure it's not too short and not too high for the average person to sit.

95th – Door Frame: If the tallest person can fit through then so can the smallest and mid.

DESIGN BRIEF

The design brief is written in consultation with the user/client. The deign brief should outline the **Problem, Need** and **Design Opportunity. Set out your design brief in**

- **Project name**
- **Problem/context**
- **Task and time-frame**

What is the aim of the design task

DESIGN SPECIFICATION

The design specification is a list of criteria that your design and final product must meet in order to be successful.

Your design specification points should be carefully thought out and justified. Specification points should include:

- User requirements
- Aesthetic requirements
- Function
- Size

Ergonomics

Take a look around your environment now. Everything that you can see that has ever been designed has been designed to fit the end user. From the handle of a coffee mug, to the shape and the size of the room that you are in

Ergonomics means special attention has been given to the design to make sure it is the best possible fit for the user. This is where they take to anthropometric data into consideration

USER CENTRED DESIGN

User centred design focuses specifically on the wants and needs of the end user. The end user is consulted at every stage of the design process to gather feedback on how they think the product is progressing

COLLABORATION

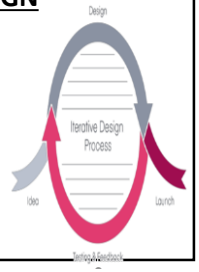
Working with others is a good way to get ideas flowing. By working with others in the 'design team' you can maximise initial ideas.

Designers can feed off the ideas of colleagues and inspire others around them

Key word	Definition
Analysis	Product analysis means asking questions about a product and forming answers.
Summary	A brief statement or account of the main points of something
Specification	A design specification is a detailed document providing a list of points regarding a product or process
Perspective	The art of representing three-dimensional objects on a two-dimensional surface to give the right impression of their height, width, depth, and position in relation to each other.
Modelling	A simple mock-up of an idea using basic materials to show an idea
Iterative	A flexible way of designing through reflection and evaluation then redesign

ITERATIVE DESIGN

Iterative design involves constant refining and development of ideas. Design, evaluate, Re-design



MATERIAL PROPERTIES

Strength - the ability of a material to withstand compression, tension and **Shear,** e.g., in woven fabrics cotton isn't as strong as wool when pulled
Hardness - the ability to withstand impact without damage, e.g., pine is easier to dent with an impact than oak; therefore, oak is harder
Toughness - materials that are hard to break, or snap are tough and can absorb shock, e.g., Kevlar in bulletproof vests is a very tough material
Malleability - being able to bend or shape easily would make a material easily malleable, e.g., sheet metal such as steel or silver is malleable and can be hammered into shape
Ductility - materials that can be stretched are ductile, e.g., pulling copper into wire shows it is ductile
Elasticity - the ability to be stretched and then return to its original shape, e.g., elastane in swimming costumes is a highly elastic material

SURFACE FINISHES

Finishing is usually one of the last stages of a making project. It will usually involve sanding and applying a surface coating to **protect** your material and **improve its visual appearance**

Some examples of finishes are:
Paint, Stain, Varnish, Oil, Wax, Polish & Dip coating

THE 6R'S

The term 'the 6 Rs' can be applied to the design of new products or when a product is finished with, used up or no longer wanted. Here are some questions to prompt 6-Rs thinking:
Reduce - Can the amount of material used be reduced? Can it be bought locally to reduce product miles?
Reuse - Can the material be reused for another purpose once a product is finished with?
Recycle - Can the material be disposed of correctly so that it can be recycled?
Rethink - Can the way a product is made be redesigned so that less material is used?
Refuse - Refusing to use material could be a consideration; could a material that is sustainable be used instead?
Repair - When a product is broken, can it be repaired rather than discarded?

TOLERANCE

Tolerance is the amount of 'error' that is allowed for a specific component.
Example
A part is to be produced for a TV set. It is intended to be **56.1mm** long.
The part has tolerance **56.1 + 0.4mm**
This means that the largest acceptable size for the part is **56.1 +0.4 = 56.5mm**
The smallest acceptable size for the part is **56.1mm** long.
The smallest acceptable size for the part is **56.1 -0.4 = 55.7mm**

QUALITY CONTROL

In manufacturing, quality control is a process that ensures customers receive products free from defects and meets their needs. went down the wrong way, it can put consumers at risk. For example, the recent defect found in takata airbags resulted in the biggest automotive recall in history. The recall includes almost 69 million airbag inflators.

Major recalls like these can be prevented through effective quality control in manufacturing. Customers expect and demand high quality products. When customers receive quality products you will:

- increase customer loyalty
- game repeat business
- game new customers from referral/reviews
- improve safety
- contribute to overall positive branding of your product

Manufacturers with quality control procedures in place are far less likely to face product recalls or place customers at risk from poorly made products.

CAD

There are many benefits to using CAD, for products produced as one-off prototypes right up to thousands of items made using mass production. Listed below are the advantages of CAD.

- Increases productivity bracket faster than manual workers closed bracket whilst decreasing errors.
- Often higher quality or more complex designs can be achieved .
- Designs can be edited/reused easily
- Designs can be easily understood
- CAD files can be easily shared
- No physical space required saves time and improves accuracy
- Links to CAM seamlessly

SCALES OF PRODUCTION

ONE OFF: when you make a unique item
BATCH: when you make a few/set amount
MASS: when you make thousands
CONTINUOUS: open ended production

SUSTAINABILITY

Our planet has to provide all of our basic human needs, such as food, shelter and warmth. designers know how a much better understanding of which materials are sustainable and which are not. The general principle is that resources fall into two categories
Finite resources – are ones which are limited supply or cannot be reproduced
Non-finite resources – I ones which are in abundant supply unlikely to be exhausted

PRODUCT DESIGN – TERM 1 KNOWLEDGE ORGANISER

Primary and secondary research

- What is primary research
- Give 3 examples of primary research
1.
2.
3.
- What is secondary research
- Give 3 examples of secondary research
1.
2.
3.

Market research

- Why would a designer conduct market research?
- Name 2 types of market research
1.
2.

Anthropometric data

- What is anthropometric data?
- What are the 3 categories that anthropometric data is split in to
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Ergonomics

- What is ergonomics?
- Name 3 ways in which a Dyson Vacuum has been ergonomically designed
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Sustainability

- Why is sustainability important?

Design brief

- What are the 3 sections of a design brief
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User centred design

- What is meant by a user centred design
- Explain collaboration in design

Iterative design

- What is meant iterative design
- Why is feedback important in iterative design?

Tolerance

Why is accuracy important in manufacturing –

What is the allowable tolerance for the following sizes –

a. 130 mm 2mm =
b. 10 mm 1mm =
c. 5 mm 0.1 mm =

Surface finish

- What is meant by a surface finish?
- Give 4 examples of a surface finish
1.
2.
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Material properties	Definition
Strength	
Elasticity	
Ductility	
Malleability	
Hardness	
Toughness	

CAD

Advantages	Disadvantages

6R's

- What are the 6 R's?
- What is it important for a designer to consider the 6R's

Scales of production

What are the 4 scales of production

1.
2.
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Key word	Definition
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YEAR 11 BTEC DRAMA KNOWELDGE ORAGNISER – TERM 1

Frantic Assembly – https://www.youtube.com/user/franticassembly

What we are learning this term:

A. How to develop our physical and visual story telling techniques.
B. The Frantic Assembly devising process through rehearsals.
C. How to interpret the director's creative intention in A Curious Incident of a Dog in the Night-time.
D. How to reflect, analyse and evaluate our development.

Key Words:

Synchronisation – movement or speech that happens at the same time.
Physical & Visual Theatre - a form of theatre that puts emphasis on movement rather than dialogue
Chorus - those who perform vocally in a group as opposed to those who perform singly.
Soundscape – layered voices and sounds to create a location or atmosphere Abstract – representational and symbolic, not life-like or naturalistic
Sequence – an order of events/movements Pattern – a repeated phrase/sequence of movements
Naturalism - 'A slice of life' on stage. Naturalistic performances should aim to look like real life and do not acknowledge the audience.
Motivation - the reason a character does anything Revelations – when information is disclosed
Thought-tracking - Actors speak the thoughts of the characters they are representing. This is a useful way of finding out more about a character's reactions to other characters of the events they are experiencing. Other characters cannot hear the thought tracking, only the audience.
Climax – is a play or a specific scene's point of highest tension and drama
Narrative – the storyline and character's trajectory
The story Motif – A symbolic movement that captures the essence of a character or moment Symbol – is something which stands for, or represents something else.
Symbols -are often used in drama to deepen its meaning and remind the audience of the themes or issues it is discussing.
Essence Machine – A group performance that combines symbolic movement and sound to capture the essence of a something – this could be anything, for example, a character, a place, a feeling.

Expand your knowledge and understanding!

BBC Bitesize - https://www.bbc.com/bitesize/subjects/zbckjxs - covers everything from creating to evaluating, and lots of handy videos.
Techniques, Practitioners, Video Links - https://www.bgsperformingarts.com/drama.html **Frantic Assembly** – https://www.youtube.com/user/franticassembly
National Theatre - https://www.youtube.com/user/ntdiscovertheatre

Who are Frantic Assembly?	Other Shows by Frantic Assembly:
Formed in 1994, Frantic Assembly's beliefs are built on the notion of collaboration. There is a great sense of ensemble work evident in all that they do They aim to make their work accessible. Frantic Assembly is one of UK's leading contemporary theatre companies producing thrilling, energetic and uncompromising theatre constantly attracting new theatre.	1. I think We're Alone 2. The Unreturning Beautiful Burnout 3. Pool No Water 4. Love Song 5. Little Dogs

	Key learning aims from Component 2
Learning aim A: Develop skills and techniques for performance	A1: Development of physical, vocal and interpretative skills. Introduction to developing skills and techniques; participation in physical and visual story telling workshops. Exploration of: **Chair Duets, Blind Hands, Round By Through, Push Hands, Fluff Picking, Lifts.**
Learning aim B: Apply skills and techniques in rehearsal and performance	B1: Interpretation of 45 minutes of A Curious Incident of a Dog in the Night-time through the use of physical and visual story telling. Application, through rehearsal, of Frantic Assembly physical and Visual storytelling techniques. Development of skills, techniques and interpretive skills leading to final performance in front of a live audience.
Learning aim C: Review own development and performance	C1: Review own development of skills and techniques for performance Evaluation of development of skills, responding to teacher/peer feedback and observations, identifying strengths and areas for development, setting actions and targets for improvement, referring to professional working practices.

FRANTIC ASSEMBLY

	Keywords linked to Assignment Brief
Physical skills	The physical attributes you need to be able to practically move with technical accuracy. Rehearsal – Practising to improve your performance.
Performance skills	The performance attributes you need to be able to practically perform applying confidence, a character, a narrative etc.
Reflect	Look over your current work and the work of others and be able to reflect and comment on your own and others practice. How does reflection lead to improvement?
Analyse	Watch and then analyse your own, and the group, performance by seeing where your strengths and weaknesses are and how these can be improved.
Apply	How you can then physically apply the physical and performance skills to a live performance to make a successful practical performance.

Component 2 – Key focus
This component is designed to give students a practical overview of the skills, techniques and practices required for the discipline of drama. You will explore the techniques of Frantic Assembly and apply them to the play: A Curious Incident of a Dog in the Night-time. You will apply Frantic Assembly's building blocks for devising as well as their recognisable style to a 45 minute section of the play. Through a series of workshops and rehearsals you will explore the different scenes of A Curious Incident of a Dog in the Nightime as well as the direction's creative intention. Using the physical and visual story telling techniques of Frantic Assembly you will bring to life the many facets of Christopher's brain.

YEAR 11 BTEC DRAMA KNOWELDGE ORAGNISER – TERM 1

Frantic Assembly – https://www.youtube.com/user/franticassembly

What we are learning this term:

A. How to develop our physical and visual story telling techniques.
B. The Frantic Assembly devising process through rehearsals.
C. How to interpret the director's creative intention in A Curious Incident of a Dog in the Night-time.
D. How to reflect, analyse and evaluate our development.

Who are Frantic Assembly?	Other Shows by Frantic Assembly:
Formed in 1994, Frantic Assembly's beliefs are built on the notion of _____ n. There is a great sense of _____evident in all that they do They aim to make their work a_____. Frantic Assembly is one of UK's leading contemporary theatre companies producing thrilling, energetic and uncompromising theatre constantly attracting new theatre.	

Key Words:

Synchronisation – _____
Physical & Visual Theatre - a form of _____

Chorus - those who perform _____

Soundscape – layered_____
Abstract – _____

Sequence – an order of
_____

Naturalism - 'A slice of life' on stage. Naturalistic
_____
Motivation - the _____

Thought-tracking - Actors
_____
. This is a useful way of finding out
_____
to other characters of the events they are experiencing. Other characters cannot hear the thought tracking, only the audience.
Climax – is a play or a specific scene's point of
_____
and drama
Narrative – the s_____
e and _____
The story Motif – A _____
that captures the essence of a character or moment Symbol – is something which stands for, or represents something else.
Symbols -are often used in drama to
_____
and remind the audience of the themes or issues it is discussing.
Essence Machine – A
_____
that combines symbolic movement and sound to capture the essence of a something – this could be anything, for example, a character, a place, a feeling.

Expand your knowledge and understanding!

BBC Bitesize - https://www.bbc.com/bitesize/subjects/zbckjxs - covers everything from creating to evaluating, and lots of handy videos.
Techniques, Practitioners, Video Links - https://www.bgsperformingarts.com/drama.html **Frantic Assembly** – https://www.youtube.com/user/franticassembly
National Theatre - https://www.youtube.com/user/ntdiscovertheatre

	Key learning aims from Component 2
Learning aim A: Develop skills and techniques for performance	
Learning aim B: Apply skills and techniques in rehearsal and performance	
Learning aim C: Review own development and performance	

FRANTIC ASSEMBLY

	Keywords linked to Assignment Brief
Physical skills	
Performance skills	
Reflect	
Analyse	
Apply	

Component 2 – Key focus

This component is designed to give students a practical overview of the skills, techniques and practices required for the discipline of drama. You will explore the techniques of Frantic Assembly and apply them to the play: A Curious Incident of a Dog in the Night-time. You will apply Frantic Assembly's building blocks for devising as well as their recognisable style to a 45 minute section of the play. Through a series of workshops and rehearsals you will explore the different scenes of A Curious Incident of a Dog in the Nightime as well as the direction's creative intention. Using the physical and visual story telling techniques of Frantic Assembly you will bring to life the many facets of Christopher's brain.

Year 11 BTEC Music – Unit 1 The music Industry

What we are learning during this unit:

A. Job Roles in the Music Industry
B. Employment Patterns
C. Record Labels (Pros and Cons)
D. Venues / Health and Safety / Security
E. Unions/Agencies/Trade Bodies
F. Publishing (Pros and Cons)

6 Key Words for this term

1 Employment
2 Major
3 Independent
4 Responsibility
5 Union
6 Publishing

A. Job Roles in the Music Industry

Key word	Key definition
✓ Musician	*Plays an instrument or voice*
✓ Composer	*Writes music e.g. films*
✓ Songwriter	*Writes songs*
✓ Record producer	*Directs recording sessions*
✓ Conductor	*Directs an orchestra / ensemble*
✓ Live Sound Technician	*Monitors sound at live events Moves equipment /sets up*
✓ Roadie	*Fixes stuff like guitars/drums*
✓ Instrument Technician	*The boss of the artist/band! Responsible for health/safety*
✓ Artistic Manager	*Book recordings/H&S*
✓ Venue Manager	*Sells tickets to live events!*
✓ Studio Manager	*Finds new talent to sign to labels*
✓ Promoter / Marketer	*Records the music in studio*
✓ A&R	*Plays in recordings or live shows*
✓ Sound Engineer	*Perfects finished recording*
✓ Session Musician	*Makes the CD's to sell*
✓ Mastering Engineer	*Writes about music / reviews*
✓ Manufacturer	*Blogs about music / reviews*
✓ Music Journalist	*E.g. Radio Presenters*
✓ Blogger/Vlogger	*Codes musical software*
✓ Broadcaster	*Mixes/plays live music*
✓ Software Programmer	*Sells merchandise!*
✓ DJ	*Gets finished CD's to shops to sell (now also done online!)*
✓ Retailer	*Works on the band/artist image*
✓ Distributer	*Attends auditions, plays for a solo musician e.g. piano*
✓ Stylist	
✓ Accompanist	

B. Employment Patterns

Fulltime	5 days a week, Contract (holidays/sick pay and pension)
Part time	1-4 days a week, Contract like full time.
Freelance	Self-employed, no long-term contracts! No work = no pay
Permanent Vs Casual	Permanent = guaranteed work / security whereas casual is not secure, varies but does give more flexibility

C. Record Labels (pros and cons)

Major	Independent
e.g. Warner, Sony, Universal	***Smaller labels***
Pros = lots of money, links with companies to promote and publish, lots of contacts, get the best deals for manufacturing, good links with advertising and media to promote and market artist/band Cons = difficult to stand out, less control over your music, contracts can be unfair	Pros = individual style of artist is important, more control over music, closer relationships, contracts more artist friendly Cons = not as much money, less publicity and promotion, not as organised/connected, less media contacts

D. Venues/Health and Safety/Security

Large Venue = Arena
Small Venue = school hall/pub

Health and Safety

Risk Assessment = to identify and minimise risks
HSE = health and safety executive

Security

ID/Bags/Crowd Control

E. Unions/Agencies/Trade Bodies

Agencies

MCPS / PRS
Mechanical-Copyright Protection Society and the Performing Right Society. *Collects royalties for musicians for physical formats like CD (MCPS) and live music (PRS)*

PPL = Phonographic Performance Limited.
Licenses the right to perform recorded music

Unions

Unions provide support for lots of people, they provide things like advice for freelancers on NI/TAX, handling disputes, and support in negotiating contracts

MU = Musicians Union
Equity
BECTU = Broadcasting Entertainment Cinematograph Theatre Union

Trade bodies

***MPG** = Music Producers Guild*
Represents people involved in producing recorded music

***PLASA** = Professional Lighting and Sound Association*
Represents those who work/supply technologies

***APRS** = Association of Professional Recording Services*
Represents those who work in the audio industry, e.g. recording studios/producers

F Publishing (pros and cons)

Major	Self-Publishing
Remember: Publishing Company = Composition OWNERSHIP	
Pros = good distribution, payment often upfront (in advance), marketing and promotion is good Cons = signed through an agent (which means they take a cut!), harder to get published when the company is huge, more editing done on your work so less control	Pros = no need for an agent, send work directly, done on social media, more in control of editing, stepping stone to a larger company Cons = less money, less marketing and promotion

Year 11 BTEC Music – Unit 1 The music Industry

What we are learning during this unit:

A. Job Roles in the Music Industry
B. Employment Patterns
C. Record Labels (Pros and Cons)
D. Venues / Health and Safety / Security
E. Unions/Agencies/Trade Bodies
F. Publishing (Pros and Cons)

6 Key Words for this term

1 E_____ 4 R_____
2 M_____ 5 U_____
3 I_____ 6 P_____

A. Job Roles in the Music Industry

Key word	Key definition
✓ M_____	*Plays an instrument or voice*
✓ C_____	*Writes music e.g. films*
✓ S_____	*Writes songs*
✓ Record p_____	*Directs recording sessions*
✓ C_____	*Directs an orchestra / ensemble*
✓ L_____ Technician	*Monitors sound at live events Moves equipment /sets up*
✓ R_____	*Fixes stuff like guitars/drums*
✓ I_____ Technician	*The boss of the artist/band! Responsible for health/safety*
✓ Artistic M_____	*Book recordings/H&S*
✓ V_____ Manager	*Sells tickets to live events!*
✓ S_____ Manager	*Finds new talent to sign to labels*
✓ P_____ / Marketer	*Records the music in studio*
✓ A&_	*Plays in recordings or live shows*
✓ Sound E_____	*Perfects finished recording*
✓ Session M_____	*Makes the CD's to sell*
✓ M_____ Engineer	*Writes about music / reviews*
✓ M_____	*Blogs about music / reviews*
✓ Music J_____	*E.g. Radio Presenters*
✓ B_____/Vlogger	*Codes musical software*
✓ B_____	*Mixes/plays live music*
✓ S_____ Programmer	*Sells merchandise!*
✓ D__	*Gets finished CD's to shops to sell (now also done online!)*
✓ R_____	
✓ D_____	
✓ S_____	*Works on the band/artist image*
✓ A_____	*Attends auditions, plays for a solo musician e.g. piano*

B. Employment Patterns

	__ days a week, Contract (holidays/sick pay and pension)
	___ days a week, Contract like full time.
	Self-employed, no long-term c_____! No work = no p____
	P_____ = guaranteed work / security whereas casual is not secure, varies but does give more flexibility

C. Record Labels (pros and cons)

M_____	I_____
e.g. _____	***Smaller labels***
Pros = lots of money, links with companies to promote and publish, lots of contacts, get the best deals for manufacturing, good links with advertising and media to promote and market artist/band Cons = difficult to stand out, less control over your music, contracts can be unfair	Pros = individual style of artist is important, more control over music, closer relationships, contracts more artist friendly Cons = not as much money, less publicity and promotion, not as organised/connected, less media contacts

D. Venues/Health and Safety/Security

L_____ Venue = _____
S_____ Venue = _____

Health and Safety

_____= to identify and minimise risks

HSE = health and safety _____

Security

_____

E. Unions/Agencies/Trade Bodies

Agencies

MCPS / PRS

_____and the Performing Right S_____. *Collects royalties for musicians for physical formats like CD (MCPS) and live music (PRS)*

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Unions provide support for lots of people, they provide things like advice for freelancers on _____, handling disputes, and support in _____

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***BECTU* = Broadcasting Entertainment Cinematograph Theatre Union**

Trade bodies

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Remember: Publishing Company = Composition O_____	
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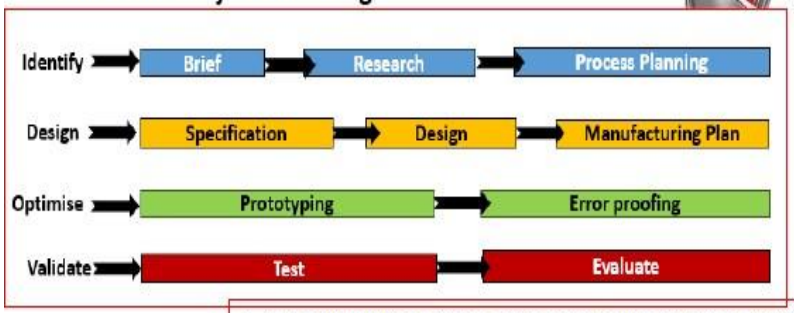
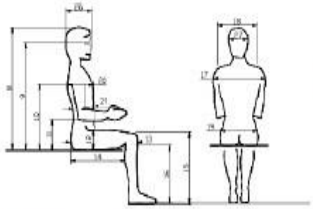
Year 11 BTEC Engineering

R105: OCR Engineering design Examination Subject Knowledge

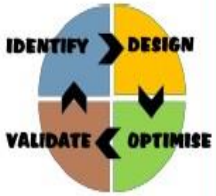
Quality Control: a system of maintaining standards in manufactured products by testing and checking throughout the making stages





Anthropometrics is the *study of measurements of the human body*
Ergonomics is the *application of anthropometrics in order to make products and places efficient, comfortable and safe to use*

Technology Push is when *new developments in materials and technologies improve existing products/ create new ones*
Market Pull is when consumers demand improvements/new products. Often found by conducting market research



- A **Design Brief** is a ***statement of how you are going to solve the Design Problem.***
- Research findings and Client feedback can be used to create a **Process Plan.**
- A **Design Specification** is a ***list of requirements your product has to meet in order to be successful.***
- After a Specification has been developed, the **designing** of the product will begin.
- Once the final design has been chosen, a **Manufacturing Plan** is then created.
- **Prototyping** is the creation of a **model or "mock-up"** of a product after the Design Process
- **Error Proofing** is ensuring that the product cannot be assembled or used in an incorrect way
- **Testing** and **Evaluation** happens because designers need to ensure the product is successful before being released, and is competitive with the market.

British Standards Kitemark shows that a product has consistently met the requirements of the British Standards Institute. These regulations are of a higher standards than European ones

European Conformity Symbol shows that a product has consistently met the minimum requirements of the EU

Sales and Supply of Goods Act 1994	All Products have to be of a "satisfactory quality. They have to be safe, fit intended purpose, not be faulty
Trade Descriptions Act	False or misleading information must not be given out about products. E.g. accurate information must be given out who made the product
Consumer Protection Act 1987	The right to claim compensation if a defective product causes death, damage or injury
The Waste Electrical and Electronic Equipment Regulations 2013	The government regulate the amount of electronics going to landfill as the chemicals and electronics can harm the environment and wildlife Companies must provide electronic disposal for their products

One-off Production
This is the manufacture of **one item**
This item can be custom made/ designed (bespoke manufacture)

Specification Points	Meaning
Aesthetics	What the product will look like, style, colour, etc.
Customer	Who the **Target Market** is, how it will appeal to them, what **Anthropometrics** and **Ergonomics** will be used, etc.
Cost	Cost to make, as well as cost to sell
Environment	Where it will be used
Safety	How it will be safe to use, what standards and regulations it will have to meet
Size	What dimensions it will be, as well as components and parts
Function	What the purpose of the product will be, and what **Features** it will have
Materials	What is will be made from
Manufacture	How it will be be made

Product requirements are what a product has to meet/ must do.
Common requirements are:
- Features – *what makes a product unique and sellable*
- Performance – *how well it completes its function*
- Target Market – *how it appeals to its customers*
- Working Environment – *how it is suitable for where it will be used*
- Constraints – *what is must do or must not do*
- Ergonomics – *how its comfortable and safe to use*
- Lifecycle – *what environmental impact it makes (and how that can be reduced)*

Mass Production (High-Volume Production)
This is where large quantities of products are made (10,000s-100,000s)
There are often assembly lines (for the main product) and sub-assembly (for small pieces and components)

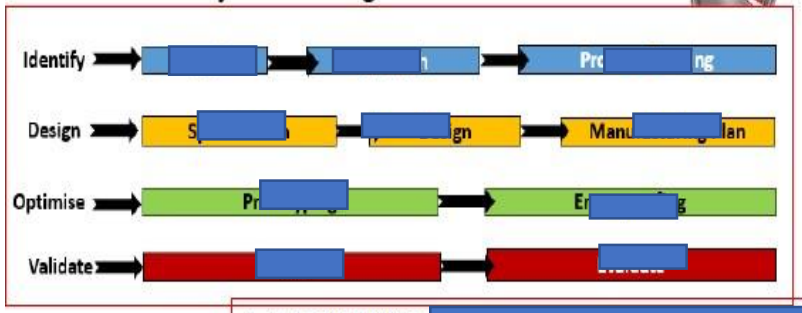
Continuous Production
This is when large quantities of products is produced (100,000s +)
However, unlike Mass Production this is **never ending** production e.g. power plants

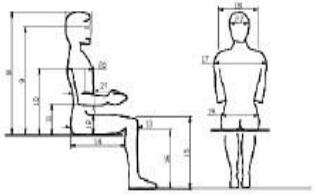
Batch Production
This is where small quantities of identical items are made (10s-1000s)
To ensure all items are identical, jigs, moulds and templates to aid workers

Just-in-time production (JIT)
This is when products made to order, but can be used in conjunction with any other scale of production

Year 11 BTEC Engineering

Examination Subject Knowledge





Anthropometrics is the *study of measurements of the human body*
Ergonomics is the *application of anthropometrics in order to make products and places efficient, comfortable and safe to use*

Technology Push is when *new developments in materials and technologies improve existing products/ create new ones*
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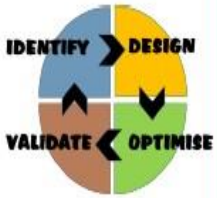

- A **Design Brief** is a [redacted] *Problem.*
- Research findings and Client feedback can be used to create a **Process Plan.**
- A **Design Specification** is a [redacted] *order to be successful.*
- After a Specification has been developed, t[redacted] begin.
- Once the final design has been chose[redacted] created.
- **Prototyping** is the [redacted]p" of a product after the Design Process
- **Error Proofing** is ensuring that the product cannot be [redacted]
- **Testing** and **Evaluation** happens because designers need to ensure the product is su[redacted], and is competitive with the market.

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One-off Production
This is the manufacture of **one item**
This item can be custom made/ designed (bespoke manufacture)

Specification Points	Meaning
[redacted]	What the product will look like, style, colour, etc.
	Who the **Target Market** is, how it will appeal to them, what **Anthropometrics** and **Ergonomics** will be used, etc.
	Cost to make, as well as cost to sell
	Where it will be used
	How it will be safe to use, what standards and regulations it will have to meet
	What dimensions it will be, as well as components and parts
	What the purpose of the product will be, and what **Features** it will have
	What is will be made from
	How it will be be made

Product requirements are what a product has to meet/ must do.
Common requirements are:
- [redacted] – *what makes a product unique and sellable*
- [redacted]ce – *how well it completes its function*
- T[redacted]et – *how it appeals to its customers*
- W[redacted]ronment – *how it is suitable for where it will be used*
- [redacted]s – *what is must do or must not do*
- [redacted] – *how its comfortable and safe to use*
- [redacted] – *what environmental impact it makes (and how that can be reduced)*

Mass Production (High-Volume Production)

[redacted]

Continuous Production

[redacted]

Batch Production

[redacted]

Just-in-time production (JIT)

[redacted]

Year 11 Cambridge National- Contemporary issues in sport- Term 1

What we are learning this term:

A. The different user groups who may participate in sport
B. The barriers which affect participation
C. The solution to these barriers
D. Factors affecting the popularity of a sport
E. Current trends in the popularity of sport
F. Growth of new and emerging sports

Main assessment objectives

Learning outcome: Understand the issues which affect participation in sport

A. Key question from Assessment objectives?

Key word	Key definition
Ethnic minorities	A group that has different national or cultural traditions
Disposable income	Money left over after paying all bills
Accessibility	How easy something is to access
Provision	Providing or supplying something
Infrastructure	The available space and facilities to take part in sport. EG- Tennis courts
Acceptability	How accepted and tolerated something is
Emerging	Becoming more mainstream
Concessions	Providing something cheaper for certain groups

A. *What sports are growing in popularity in the UK?*

1. Ultimate frisbee
2. American Football
3. Climbing
4. Handball

C. What are the most popular sports in the UK?

Football, Rugby, Cricket, Netball, Walking, Cycling and fishing

How the factors can impact on the popularity of sport in the UK

1. Climate- Lack of snow in the UK means the opportunities for snow sports are limited
2. Provision- Lack of facilities such as tennis courts limit who can access them
3. Elite success- cycling success at the Olympics leads to increased participation in cycling

A. The user groups who may participate in sport are…

1. Ethnic minorities
2. Retired people/ over 50
3. Families with young children
4. Single parents
5. Children
6. Teenagers
7. Disabled people
8. Unemployed/ economically disadvantaged
9. Working singles and couples

A. The possible barriers which affect participation…

1. Employment/time
2. Work restrictions
3. Disposable income
4. Accessibility of facilities
5. Lack of role models
6. Provision of activities
7. Awareness of activity provision
8. Portrayal of gender issues

G. *The possible solutions to barriers…*

Provision-

Programming of sessions
Appropriate activity for user groups
Timing of sessions

Promotion-

Targeted promotion
Using role models
Initiatives aimed at promoting participation

Access-

To facilities
To equipment
Sensible pricing and concessions

Factors affecting popularity

Participation	Football has high participation rates due to the infrastructure already in place
Provision	The available equipment and facilities required to play
Environment/ climate	The UK weather is suitable for certain sports and not suitable for others
Spectatorship	The amount of people going to watch the sport
Media coverage	How much coverage the sport gets across various media platforms
Elite level success	Olympic success usually increase participation
Role models	A lack of role models can restrict participation levels
Acceptability	Some sports are not accepted in UK culture due to the nature of the sport

Year 11 Cambridge National- Contemporary issues in sport- Term 1

What we are learning this term:

- ***A. The different user groups who may participate in sport***
- ***B. The barriers which affect participation***
- ***C. The solution to these barriers***
- ***D. Factors affecting the popularity of a sport***
- ***E. Current trends in the popularity of sport***
- ***F. Growth of new and emerging sports***

Main assessment objectives

Learning outcome: Understand the issues which affect participation in sport

A.	**Key question from Assessment objectives?**
Key word	**Key definition**
Ethnic minorities	
Disposable income	
Accessibility	
Provision	
Infrastructure	
Acceptability	
Emerging	
Concessions	

C.	**What are the most popular sports in the UK?**

How the factors can impact on the popularity of sport in the UK

1
2
3

A.	**The user groups who may participate in sport are…**
	1 2 3 4 5 6 7 8

A.	**The possible barriers which affect participation…**
	1 2 3 4 5 6 7 8

G.	***The possible solutions to barriers…***
	Provision- *1* *2* *3* *Promotion-* *1* *2* *3* *Access-* 1 2 3

A.	***What sports are growing in popularity in the UK?***
	1 2 3 4

	Factors affecting popularity
Participation	
Provision	
Environment/ climate	
Spectatorship	
Media coverage	
Elite level success	
Role models	
Acceptability	

What we are learning in LAA:

A. Key words
B. Definitions of health and wellbeing
C. Genetic inheritance

A.	Key words for this Unit
Genetic inheritance	The genes a person inherits from their parents
Predisposition	Someone is more likely to suffer from a particular condition
Chronic	Gradual illness that is long term (longer than 3 months) and generally can be treated but not cured
Acute	A short-term illness that can be cured
Monitor	To check progress over a period of time.
Person-Centred	Planning care around the wants and needs of a service user
Bereavement	The process of coming to terms with the death of someone close.
Circumstances	Events that change your life, over which you have no control
Physiological	Relates to how a person and their bodily parts function normally.
Interpret	understand an action, mood, or way of behaving as having a particular meaning
Collaboratively	Working well together with other poeple or services
Obstacles	Difficulties a person might face when they implement a plan.
Goal	What you want to achieve in the long term
Norm	Something that is usual, typical or standard
Targets	Challenges to help you reach your goal

B Definitions of heath and well-being

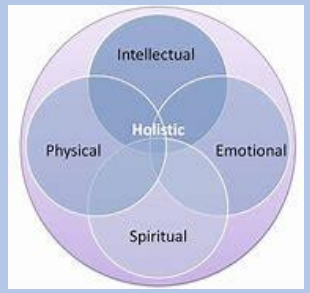
Positive Definition

Looks at how physically fit and mentally stable a person is. You have a positive attitude towards health and wellbeing if you realise that there is something you can do to improve your health and wellbeing and do it.

Negative definition

Looks at the absence of physical illness, disease, and mental distress. You have a negative attitude towards your health and wellbeing if you:
- Base your attitude on not having anything wrong with you.
- Continues as you are- Inc. keeping bad habits like smoking.
- Assume that because you currently feel fine you will stay healthy in the future.

Holistic definition



It is a combination of physical health and social and emotional wellbeing. It is not just the absence of disease or illness; it looks at all aspects of a person's health and wellbeing. You have a holistc attitude towards health and wellbeing if you look after your:

- **Physical Health:**
Be meeting the needs we have to keep our bodies working as well as they can, e.g. Food, water, shelter, warmth, clothing, rest, exercise and good personal hygiene.

- **Intellectual health:**
By meeting the needs we have to develop and keep our brains working as well as possible; these include mental stimulation to keep us motivated and interested.

- **Emotional aspects of wellbeing:**
By meeting the needs we have that make us feel happy and relaxed, e.g. being loved, respected and secure. Knowing how to deal with negative emotions, having positive self-concept and being respected by others.

- **Social aspects of wellbeing**:
By meeting the needs we have to help us develop and enjoy good relationships with others, including mixing with others in appropriate environments and having access to leisure facilities/ activities.

C. Genetic inheritance

Inherited physical Characteristics

- Children inherit their physical; characteristics from their parents e.g. height, skin and eye colour and hair type and colour.
- These characteristics can affect social and emotional welling because they influence a person's self-concept (self-image and esteem).

Genes and environment

- Chromosomes carry genes that determine aspects of persons physical makeup.
- Gene is a section of DNA that carries a code. Different versions of a gene are called **alleles** (they can be faulty).
- Environmental factors such as diet, also influence physical appearance. For example, a person may not grow to their full, genetically determined height if they do not have enough food.

Allele type

Dominant:
If a gene is dominant a child inheriting it from only one birth parent will have the condition, e.g Huntington's disease.

Recessive:
If the gene is recessive a child would only develop the condition if it was inherited from both birth parents, e.g. Cystic fibrosis.

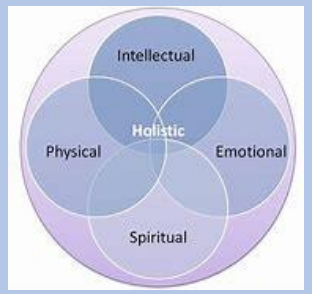
Effects of inherited disorders

- Physical health: Body systems, growth and mobility
- Intellectual welling: learning, thinking, problem solving and decision making.
- Emotional wellbeing: how people feel about themselves.
- Social wellbeing: the ability to build relationships and maintaining them.

What we are learning in LAA:

A. Key words
B. Definitions of health and wellbeing
C. Genetic inheritance

A.	**Define the key words for this Unit**
Genetic inheritance	
Predisposition	
Chronic	
Acute	
Monitor	
Person-Centred	
Bereavement	
Circumstances	
Physiological	
Interpret	
Collaboratively	
Obstacles	
Goal	
Norm	
Targets	

B	**Definitions of heath and well-being**
Positive Definition 	
Negative definition 	
Holistic definition 	**Definition:** • **Physical Health:** • **Intellectual health:** • **Emotional aspects of wellbeing:** • **Social aspects of wellbeing**:

C.	**Genetic inheritance**	
Inherited physical Characteristics		**Genes and environment**
• •		• • •
Allele type	Dominant:	Effects of inherited disorders • • • •
	Recessive:	

What we are learning in LAA:

D. Balanced diet
E. Chronic and acute illness
F. What are the effect of exercise?
G. What are the effect of excessive substance use?

D.	Balanced diet
What is a balanced diet?	• Diet that contains the correct nutrients in the right proportions to keep out bodies and minds healthy. • It is also a lifestyle choice • Choosing to eat too much or too little might make us less able to take all the opportunities that life offers.
Overweight or underweight may:	A person over weight or under weight may: • Be prone to illness and conditions • Have their life expectancy reduced • Be less able to exercise effectively • Miss out on learning experiences • Miss out on some sporting activities • Be less successful in job interviews • Feel embarrassed and self-conscious about their appearance in social situations.
Essential parts of a healthy diet:	• Fats (saturated and unsaturated) • Carbohydrates (sugars and starches) • Minerals • Vitamins • Proteins
Est well guide says you should eat:	• Eat at least 5 portions of a variety of fruit and vegetables every day. • Base meals on potatoes, bread, rice, pasta or other starchy carbohydrates; choosing wholegrain versions where possible. • Have some dairy or dairy alternatives (such as soya drinks); choosing lower fat and lower sugar options. • Eat some beans, pulses, fish, eggs, meat and other proteins (including 2 portions of fish every week, one of which should be oily). • Choose unsaturated oils and spreads and eat in small amounts. • Drink 6-8 cups/glasses of fluid a day.
If you eat <u>more</u> than you need:	• The body will store food as fat and this can lead to: • Obesity, heart disease, high blood pressure, Strokes, Tooth decay or cancer
If you eat <u>less</u> than you need	• The body does not get enough nutrients to grow and develop properly and this can lead to: • Eating disorders, stunned growth, anaemia, heart failure, depression, tiredness, cancer or rickets.

E	Chromic or Acute Illness
Chronic illness- Illness comes on gradually, is long term (more than 3 months) and generally can be treated but not cured. E.g Asthma, Diabetes, epilepsy, bipolar disease, Alzheimer's disease	**Acute illness-** Illness comes on quickly, is short term and can be cured. E.g. Cold, flue, broken bones, heartburn, appendicitis or Diarrhoea.
Some chronic conditions are acute but may develop because of chronic conditions. For example: osteoporosis (a chronic condition that weakness bones) masking their bones fragile and more likely to break. Broken bones are then an acute condition.	
Possible negative effects of chronic illness	
Physical: • poor rate of growth • Unusual physiological change during puberty • Restricted movement	Emotional: • Negative self-concept • Stress • Decision making
Intellectual: • Disturbed learning because of missing school • Difficulties in thinking and problem solving • Memory problems.	Social • Isolation • Loss of independence • Difficulties developing relationships

F.	What are the effect of exercise?
Positive effects of exercise 	**<u>Physical:</u>** maintain a healthy weight, reduce BMI, boosting energy levels. Improved flexibility, stamina, endurance and stronger bones and muscles. Reduce risk of heart disease and diabetes. **<u>Intellectual</u>**: improved brain function like mentor and thinking skills. **<u>Emotional:</u>** improves confidence and mood and reduces stress. Aid relaxation and sleep and lead to better self concept. **<u>Social</u>**: encourages social interaction, reducing isolation and improving social skills.
Negative effects of exercise	**<u>Physical:</u>** Obesity and associated health problems. **<u>Intellectual</u>**: Reduced pain performance, hard to concentrate and retain information. **<u>Emotional:</u>** poor self-concept and reduced ability to cope with stress. **<u>Social:</u>** Fewer opportunities for social interactions.

G.	What are the effect of excessive substance use?
Negative effects of excessive alcohol consumption 	**<u>Physical:</u>** Alcohol dependence, damage to major organs: liver, heart, kidneys, pancreas. Cancers: mouth, throat, oesophagus, liver, breast. Infertility and impotence, weight gain. **<u>Intellectual</u>**: difficulty in making decisions, depression and anxiety, chance of stroke and brain damage, impaired brain development of unborn baby. **<u>Emotional</u>**: poor self-concept, poor judgement leading to a risk of accidents and unsafe sex, can have an impact on relationships, depression. **<u>Social</u>**: breakdown of relationships, domestic violence, social isolation

What we are learning in LAA:
D. Balanced diet E. Chronic and acute illness F. What are the effect of exercise? G. What are the effect of excessive substance use?

D.	Balanced diet
What is a balanced diet?	
Overweight or underweight may:	
Essential parts of a healthy diet:	
Est well guide says you should eat:	
If you eat more than you need:	
If you eat less than you need	

E	Chromic or Acute Illness
Chronic illness-	**Acute illness-**
Explanation:	
Possible negative effects of chronic illness	
Physical:	Emotional:
Intellectual:	Social

F.	What are the effect of exercise?
Positive effects of exercise 	**Physical:** **Intellectual**:. **Emotional**: **Social**:
Negative effects of exercise	**Physical:** **Intellectual**:. **Emotional**: **Social**:

G.	What are the effect of excessive substance use?
Negative effects of excessive alcohol consumption 	**Physical:** **Intellectual**:. **Emotional**: **Social**:

What we are learning in LAA:

H. The effects of social interactions on wellbeing
I. What are the effects of stress on health and wellbeing
J. What are the hazards of smoking
K. What are the effects of personal hygiene

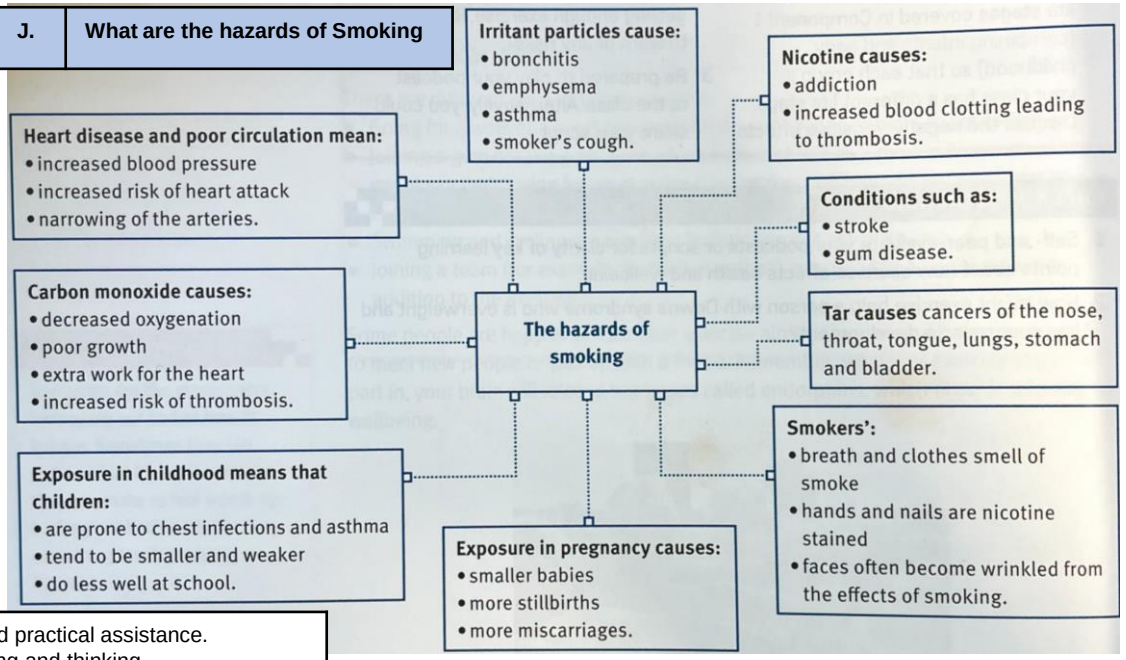
H. The effects of social interactions on wellbeing

Social integration	When people feel they belong to a group and can interact with others. Social interactions can happen between family members and friends, work colleagues, school learners, members of a community or interest groups.
Social isolation	Occurs when people do not have regular contact with others. This may be because they don't go out much because of physical illness, reduced mobility or unemployment. They might have a difficulty in communicating if they have a mental illness, depression or learning difficulties. Lastly, a person might be discriminated against because of culture, religion or disability.
Positive effects of relationships 	**Physical:** physical support and day to day care and practical assistance. **Intellectual:** shared experiences, supported learning and thinking **Emotional:** unconditional love, security and encouragement, positive self-concept, feeling content, ability to build relationships with people outside the family, independence and confidence. **Social:.** Companionship, social circle increases.
Negative effects of social isolation 	**Physical:** poor lifestyle choices like smoking and drinking, poor diet that can cause eating disorders. **Intellectual**: reduced ability to use thinking skills, missing school/work **Emotional**: feelings insecure, depression, anxiety, negative self-concept, feeling of hurt, loneliness and distrust, lack of independence, difficulty in controlling emotions. **Social**: difficulties in building relationships as lack skills.

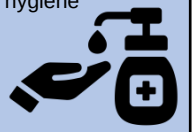
I. What are the effects of stress on health and wellbeing

Physical effects	Intellectual effects	Emotional effects	Social effects
Increased heartbeat Increased breathing rate Tense muscles Sweaty palms Dry mouth High blood pressure Loss of appetite Sleeplessness Digestive problems	Forgetfulness Poor concentration Difficulty in making decisions	Difficulty in controlling emotions Feeling insecure Negative self-concept Feeling anxious and frightened Loss of confidence	Difficulty in making friends and building relationships Breakdown of close relationships Social isolation

J. What are the hazards of Smoking



K. What are the effects of Personal Hygiene?

Positive effects of good personal hygiene 	• Helps prevent the spread of infection • Improves self-concept • Reduces number of bacteria that lives on us. **You must:** • Brush you teeth • Shower daily or bath • Wash your hair regularly • Keep fingernails and toenails clean and trimmed
Negative effects of poor personal hygiene	**Physical:** catching and spreading disease like food poisoning, sore throat, meningitis and athlete's foot. Bad body odour, bad breath and tooth decay. **Emotional:** loss of friendships and social isolation. Might be bullied and poor self-concept. **Social:** low social interactions as people don't want to be friends with someone that neglects their hygiene. Social isolation.
When caring for others:	• Bad hygiene can stop effect communication. • Negative effect on the person being cared for and their health and wellbeing- pass on infection • Discomfort for the person being cared for because of the odour or visible dirt under fingernails.

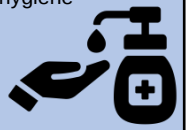
What we are learning in LAA:
H. The effects of social interactions on wellbeing I. What are the effects of stress on health and wellbeing J. What are the hazards of smoking K. What are the effects of personal hygiene

H.	The effects of social interactions on wellbeing
Social integration	
Social isolation	

Positive effects of relationships 	**Physical:** **Intellectual:.** **Emotional:** **Social:**
Negative effects of social isolation 	**Physical:** **Intellectual**:. **Emotional**: **Social**:

I.	What are the effects of stress on health and wellbeing		
Physical effects	**Intellectual effects**	**Emotional effects**	**Social effects**

J.	What are the hazards of Smoking- draw out the mind map in the space below:

K.	What are the effects of Personal Hygiene?
Positive effects of good personal hygiene 	• • • **You must:** • • • •
Negative effects of poor personal hygiene	**Physical:** **Emotional**: **Social**:
When caring for others:	• • •